

# Earth Observation for Business

## *Introduction to GIS* *(Geographic Information Systems)*



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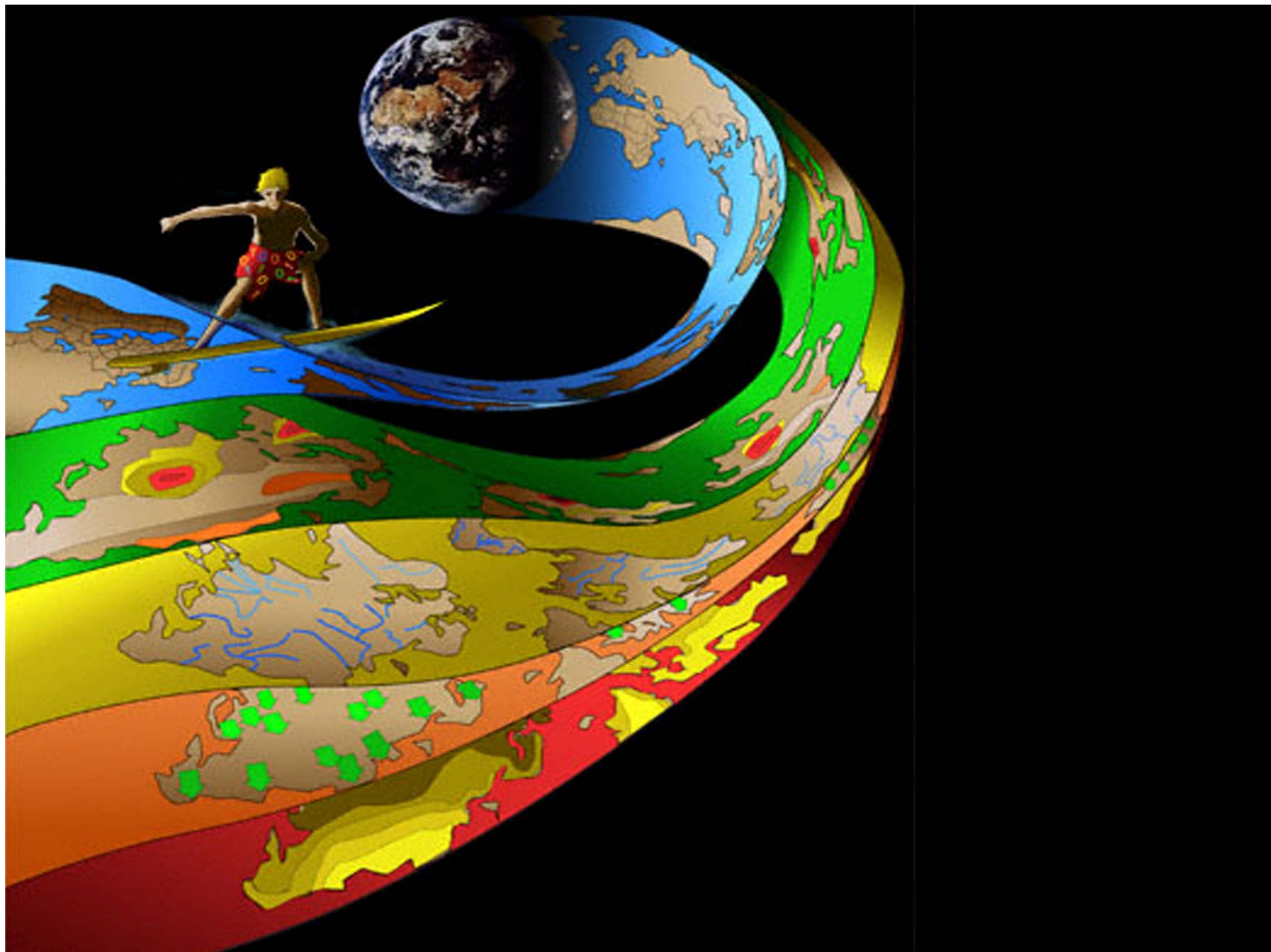


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European Regional  
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european regional development fund





# Basic Data Types for GIS



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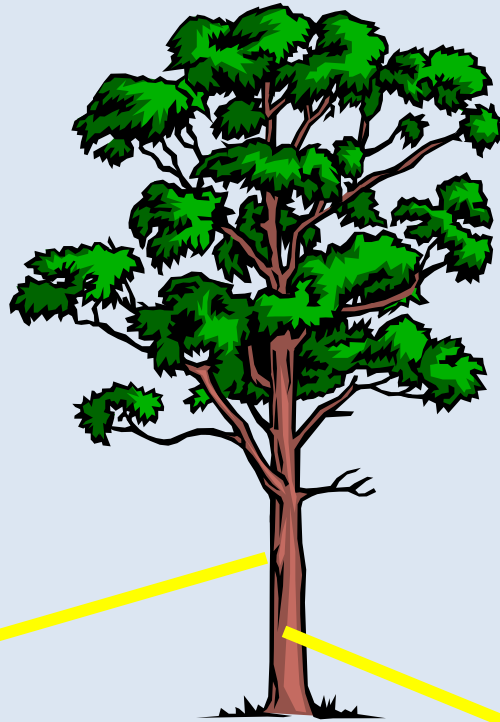
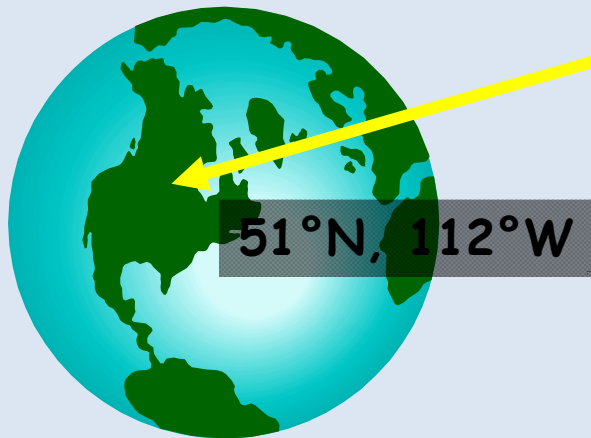
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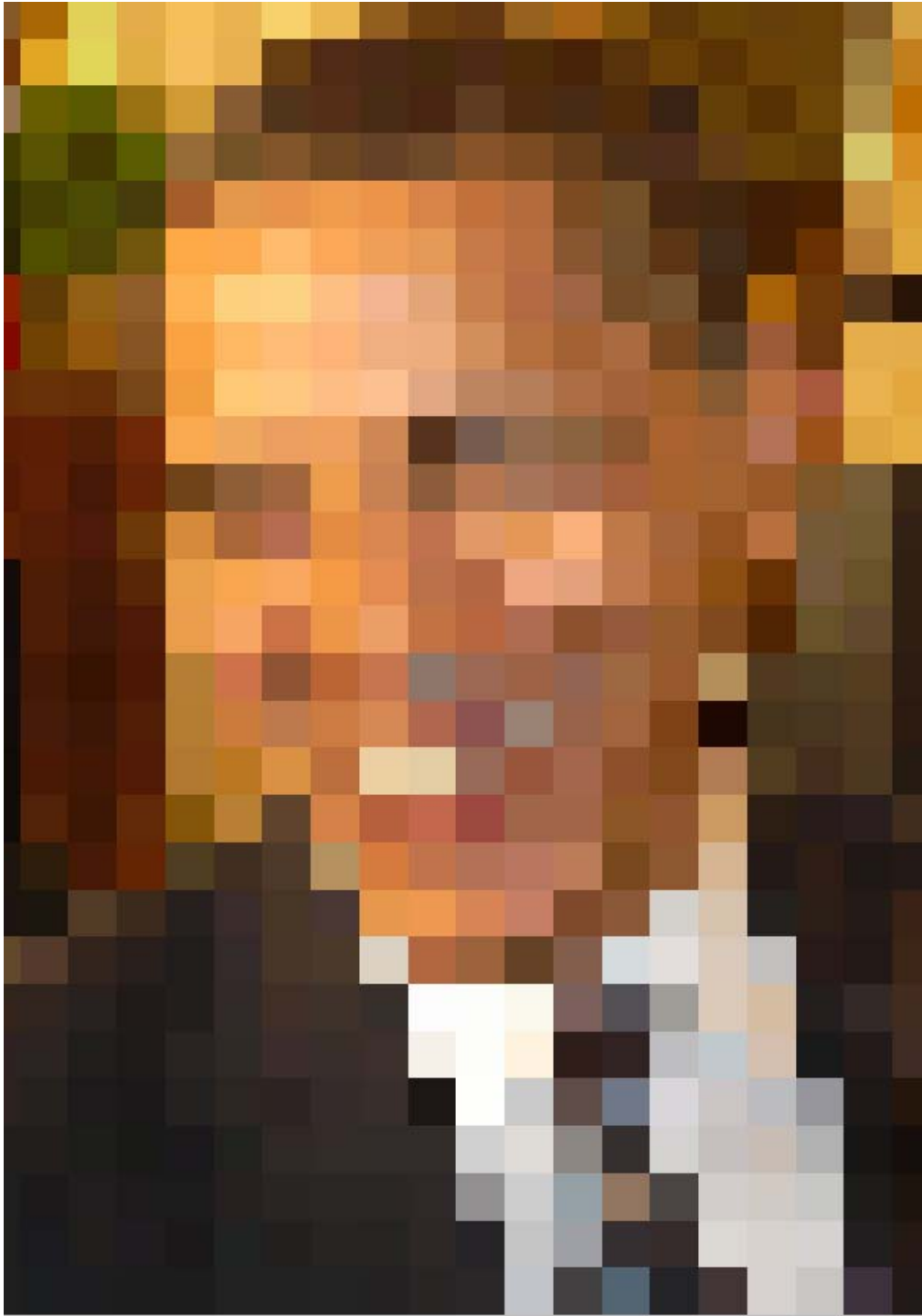


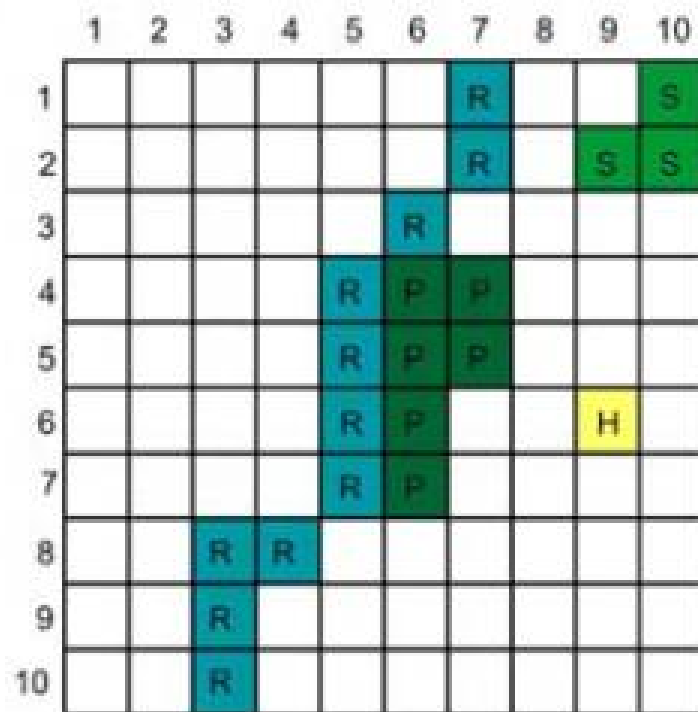
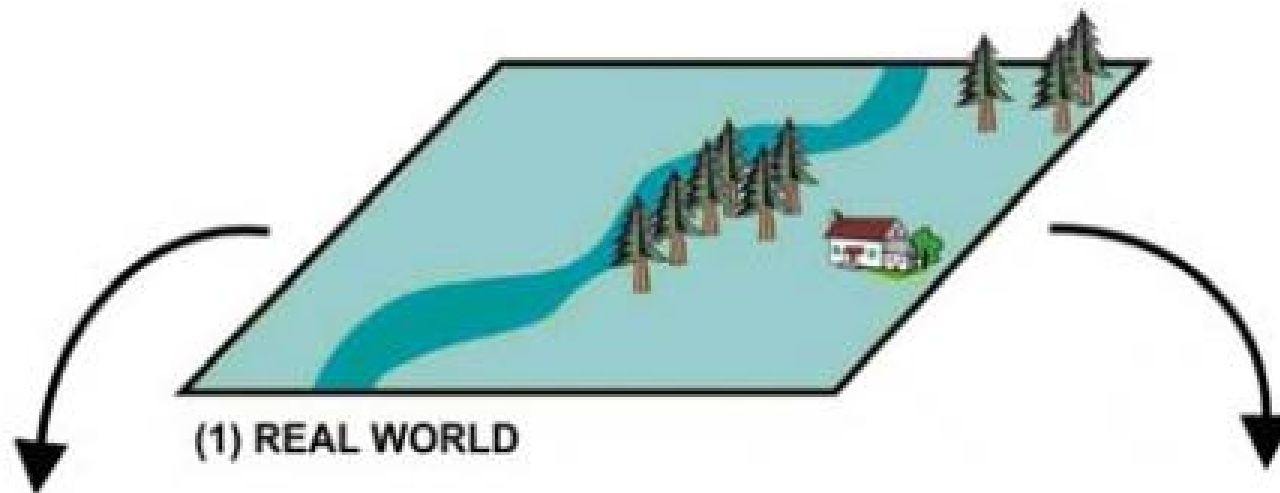
Location Information:  
Where is it?



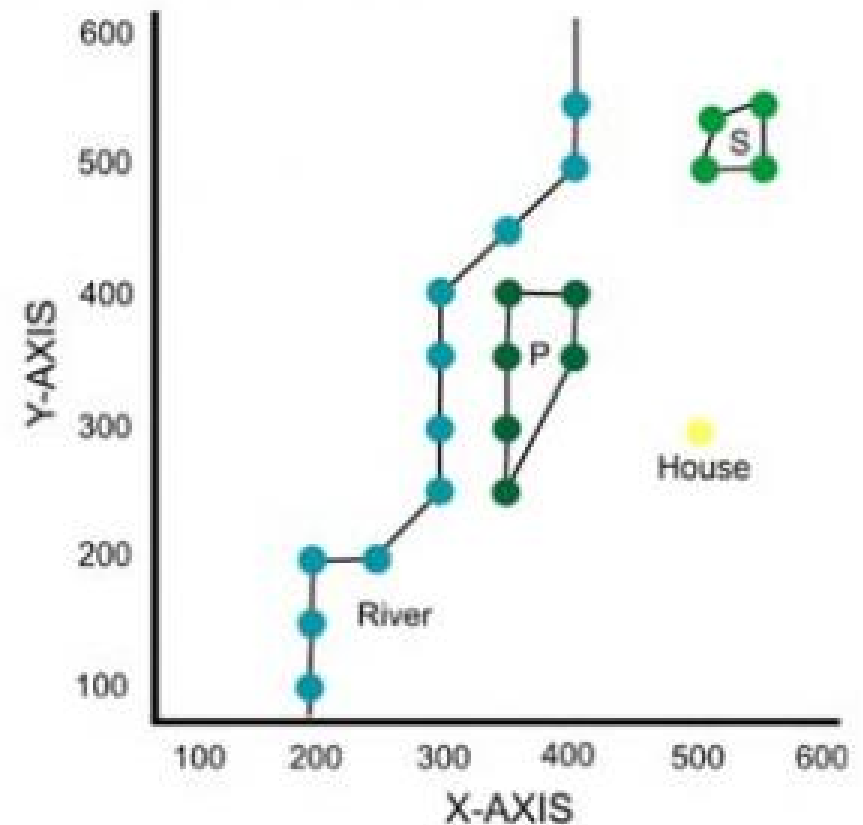
Attribute Information:  
What is it?



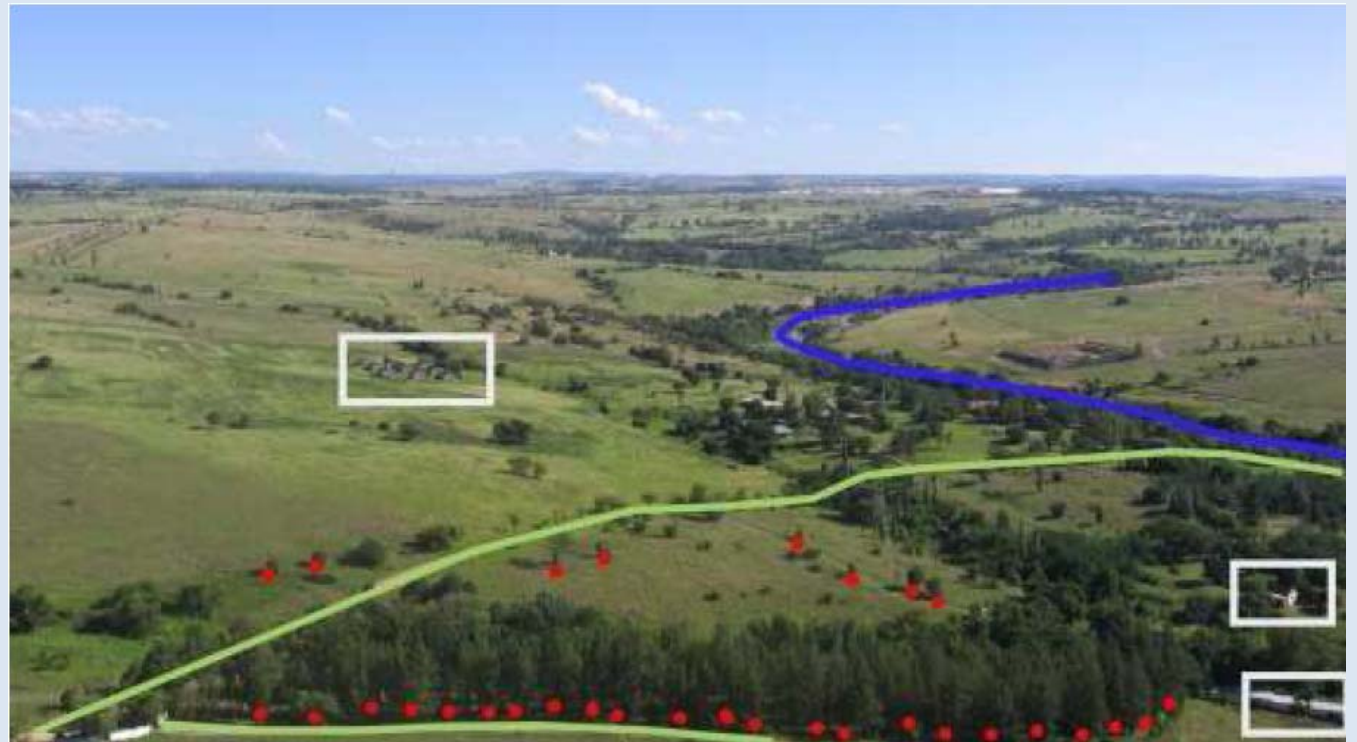


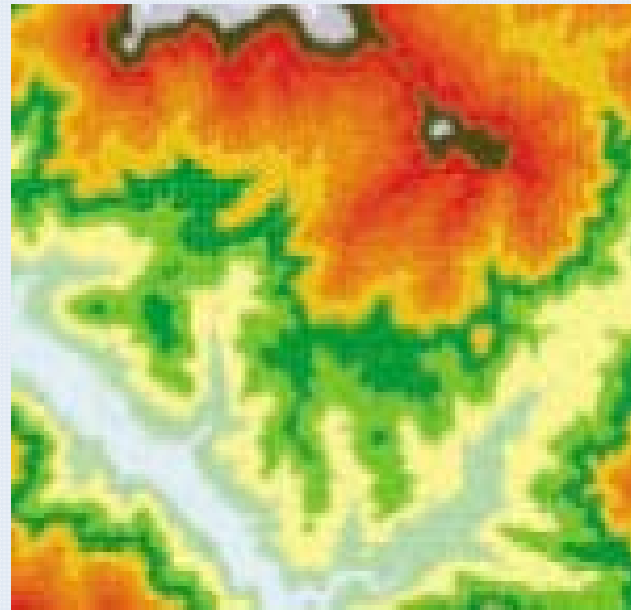
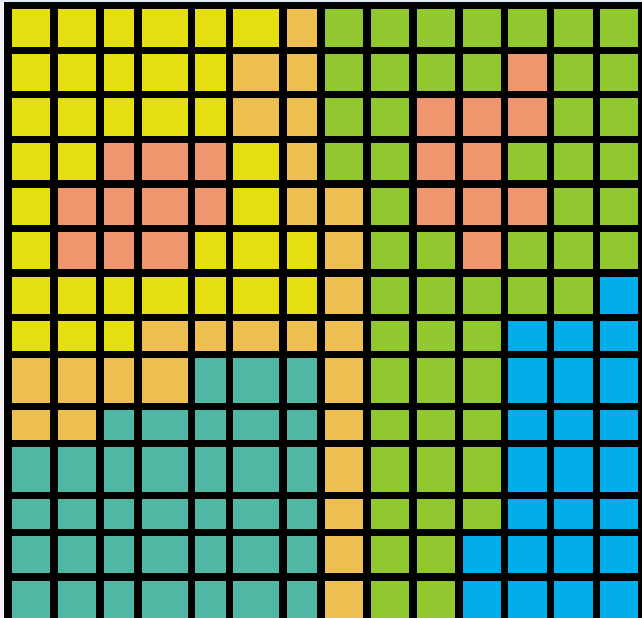


(2) RASTER REPRESENTATION

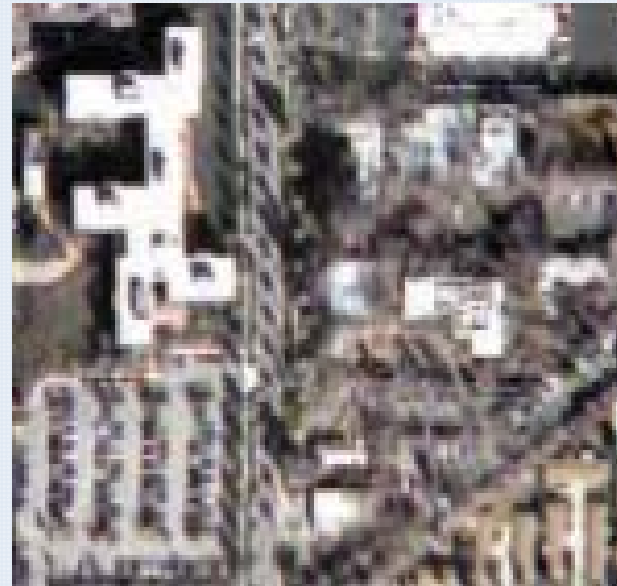


(3) VECTOR REPRESENTATION





# Raster



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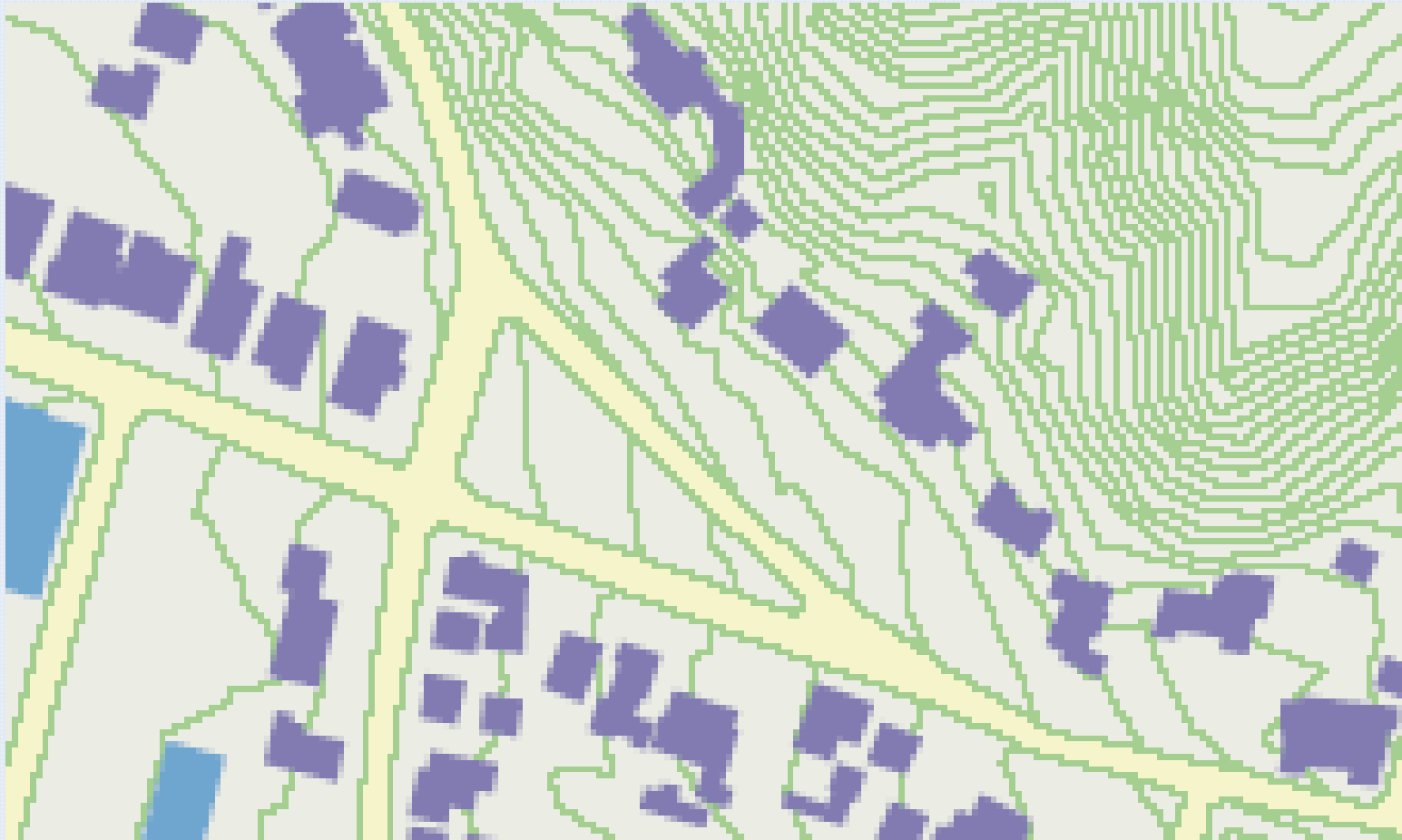
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# Vector



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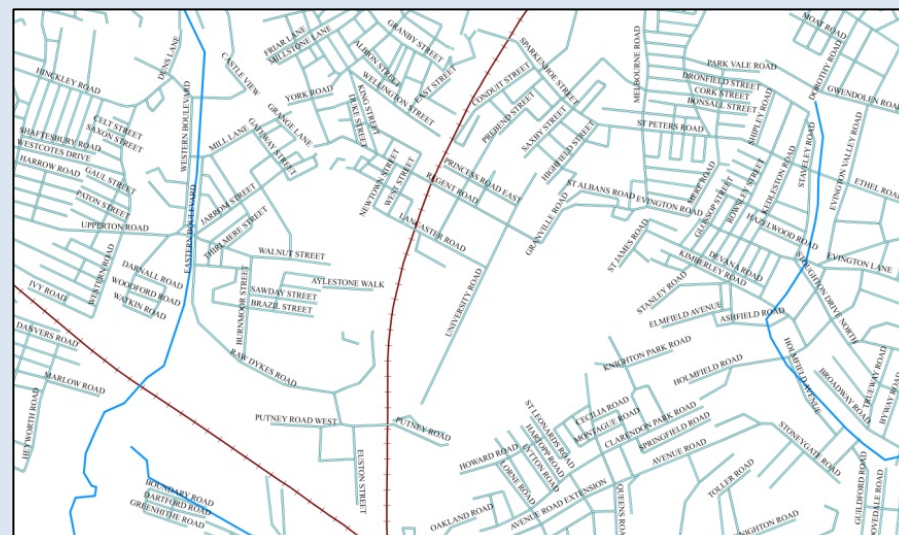
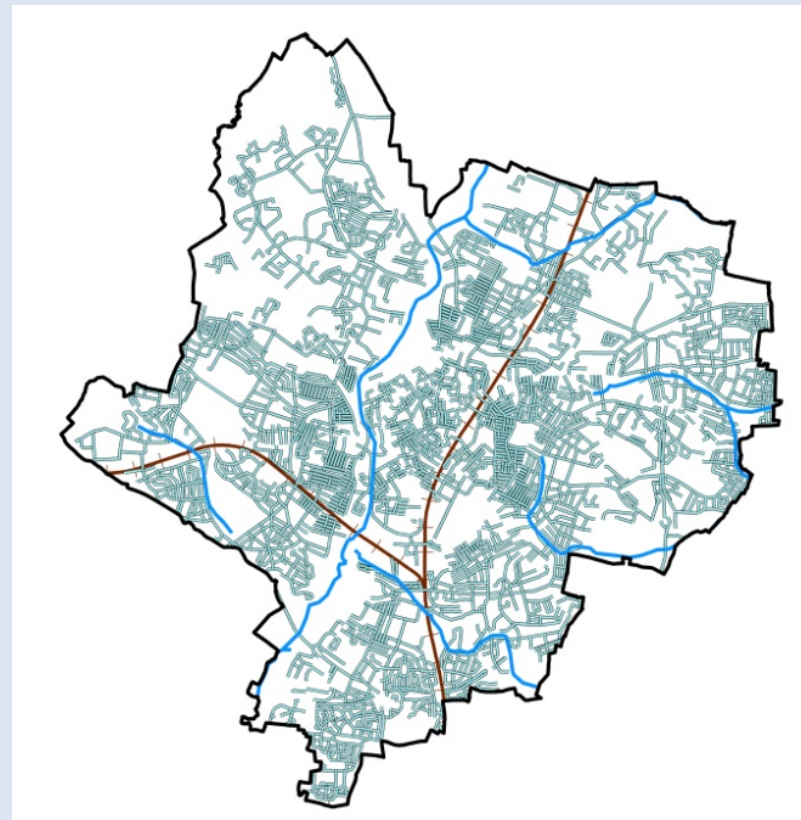
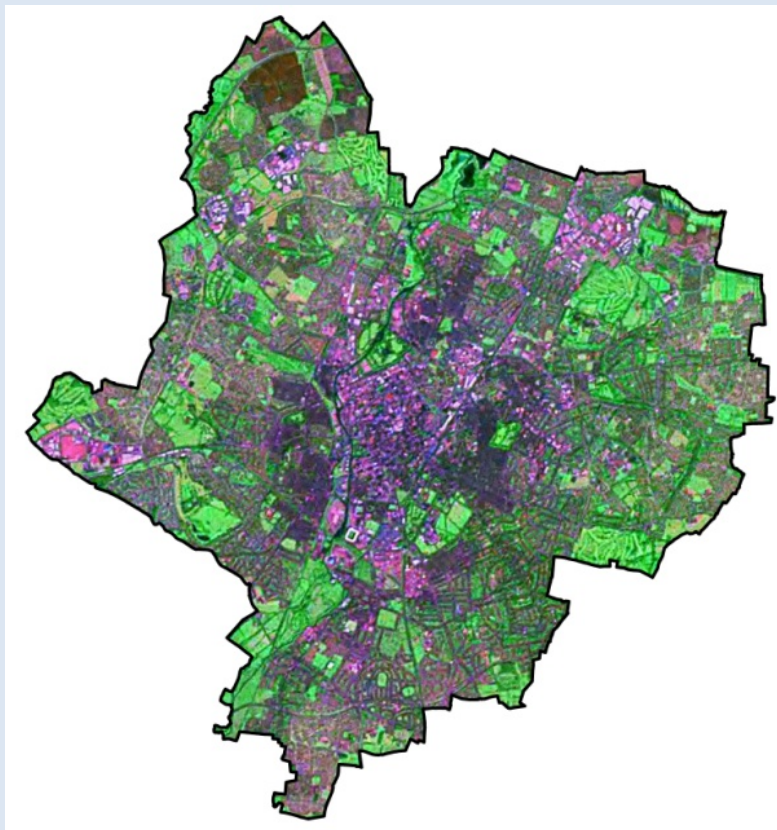


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# The GIS (Geographic Information System) Interface



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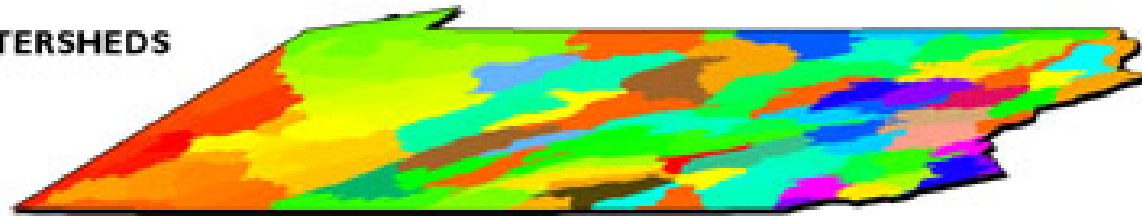
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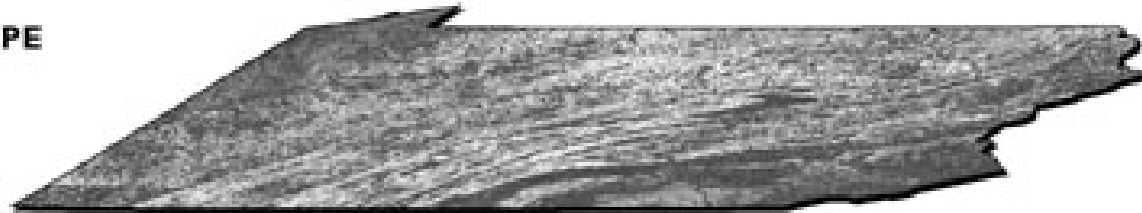
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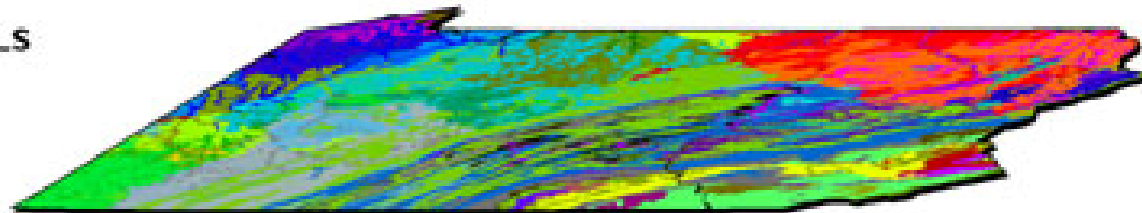
**WATERSHEDS**



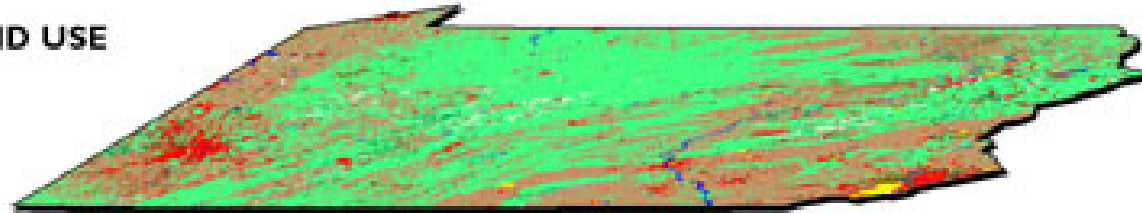
**SLOPE**



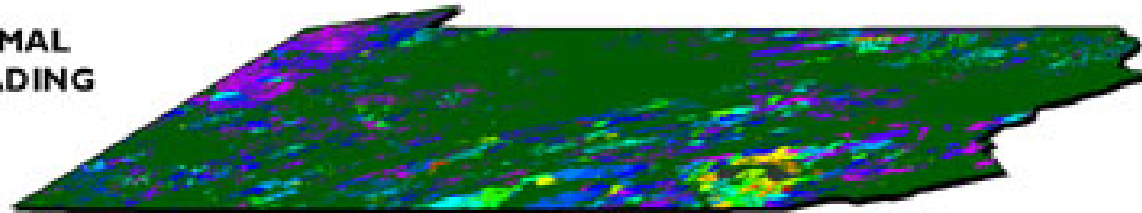
**SOILS**



**LAND USE**



**ANIMAL  
LOADING**



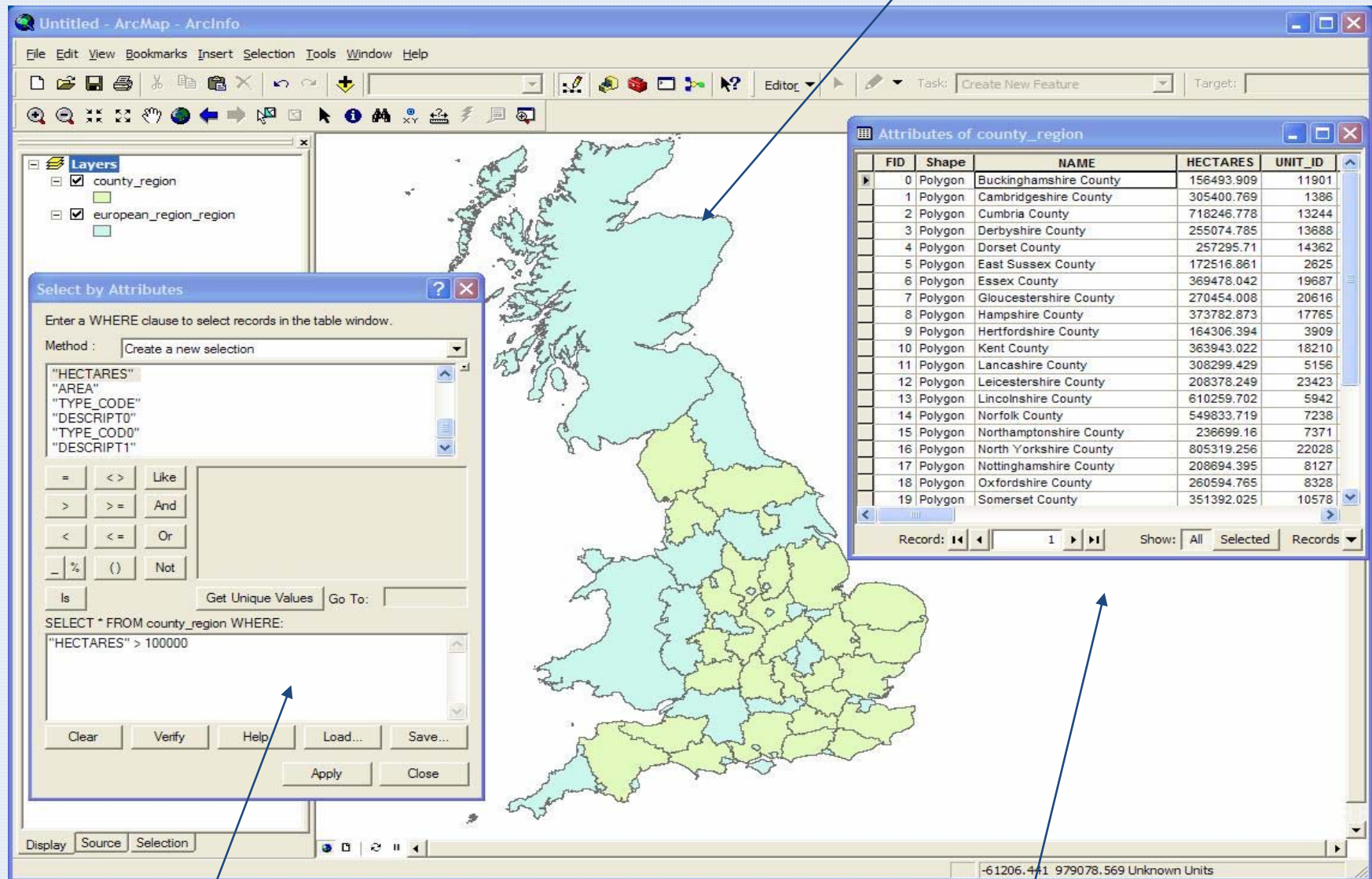
**AGRICULTURAL  
POLLUTION  
POTENTIAL**





Address	Built	Square footage	Number of bedrooms
816 High Street	1888	2200	4 bedrooms





**Spatial data**

**SQL Query Manager**

**Linked database table**



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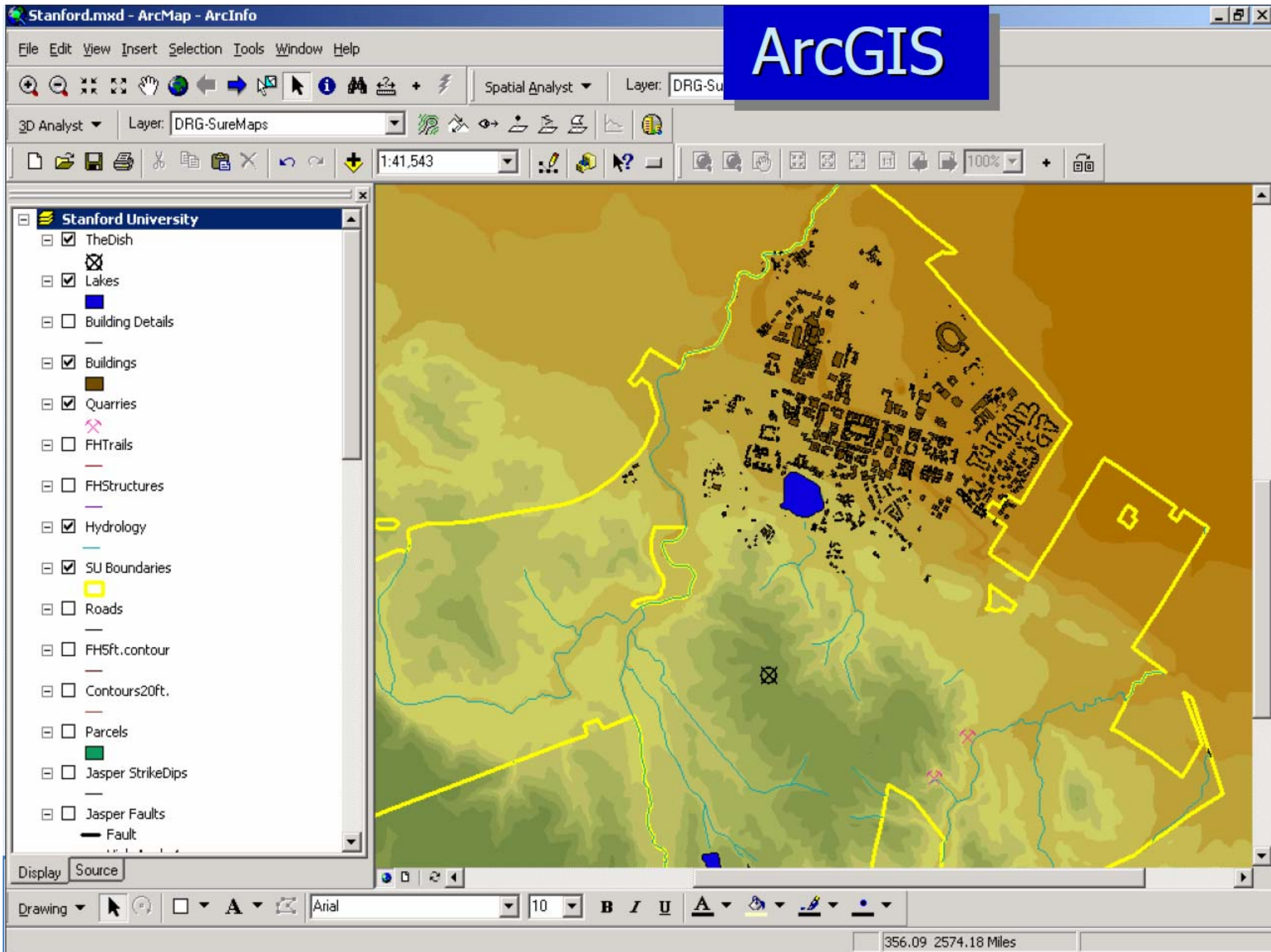


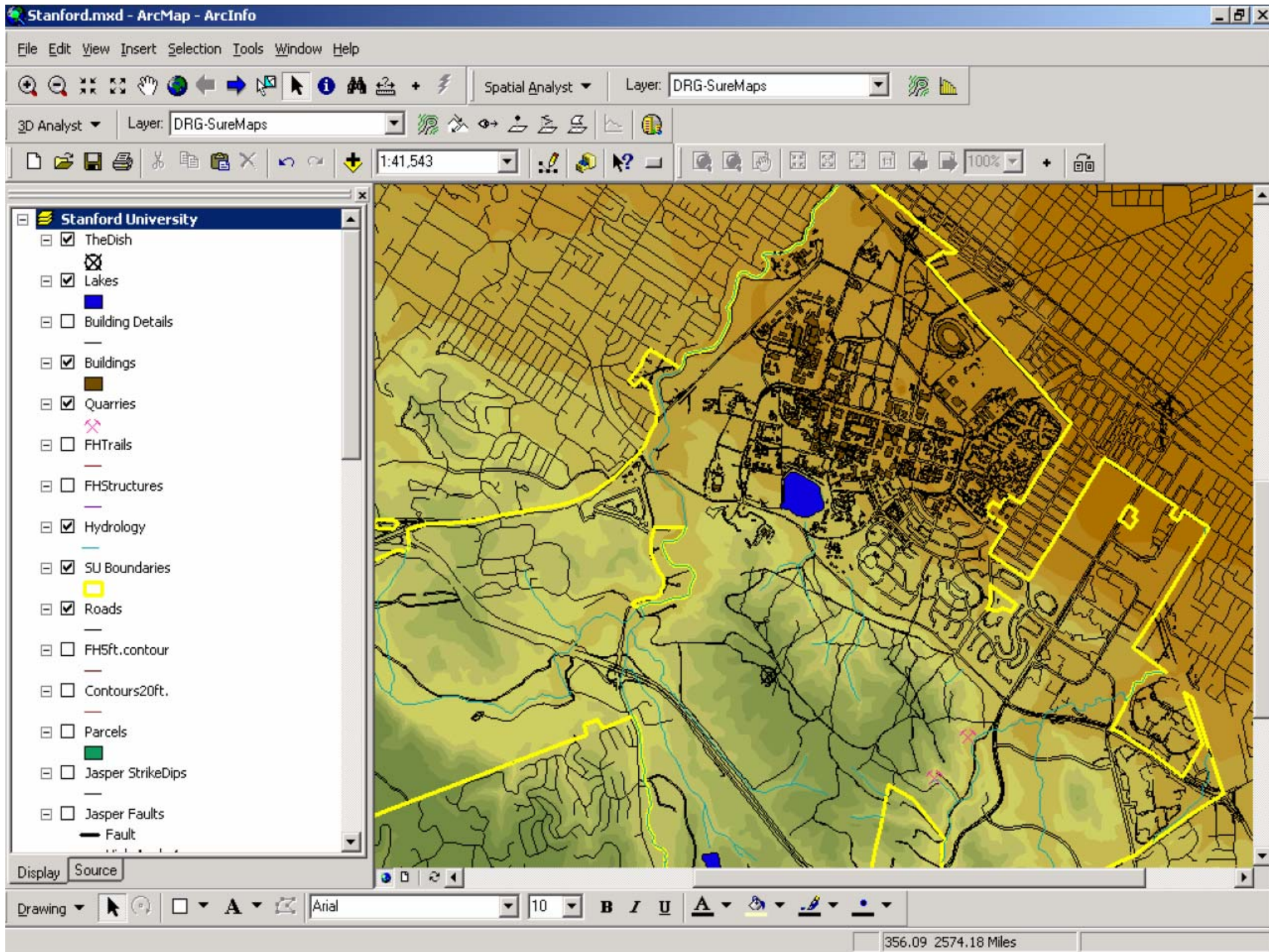
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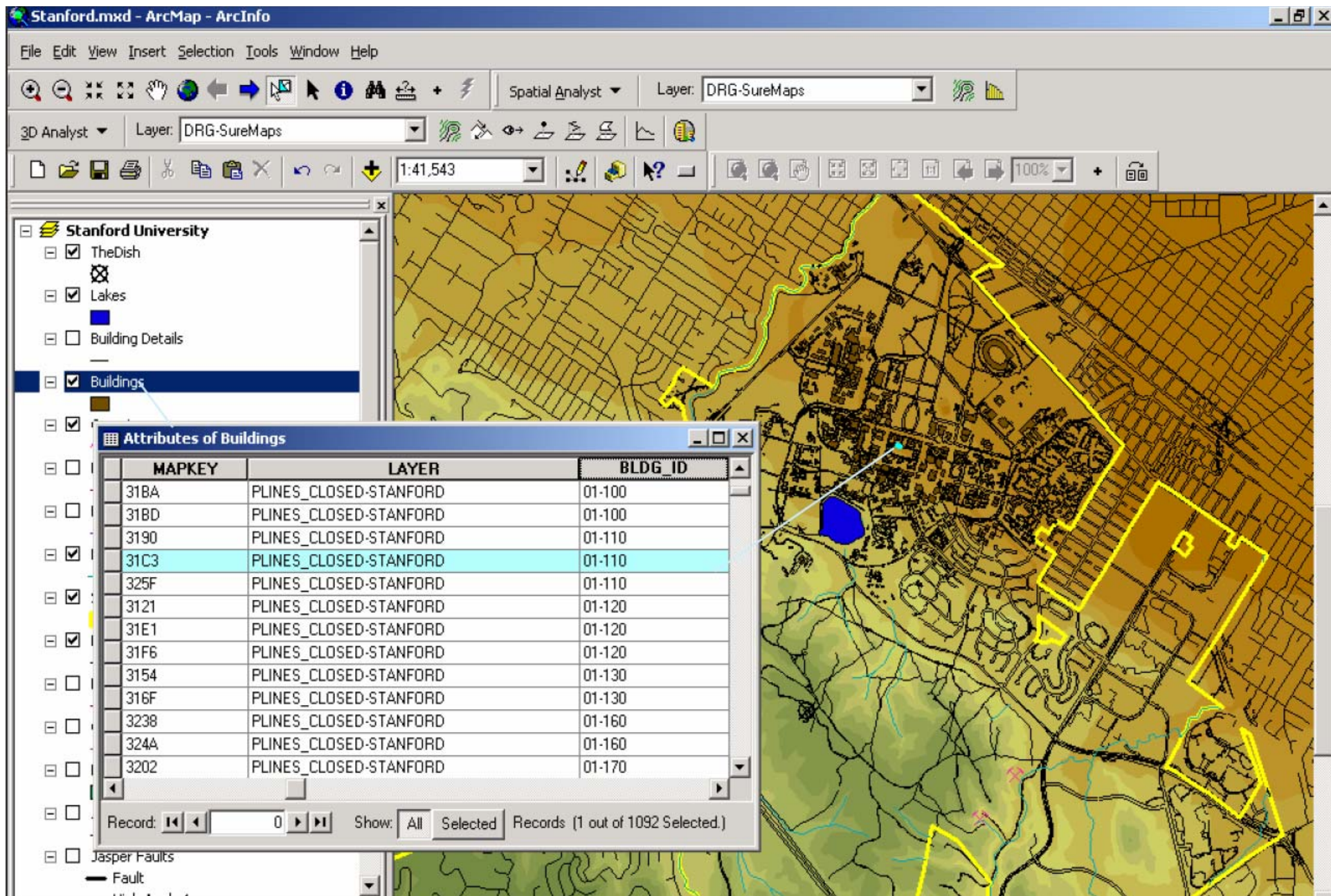


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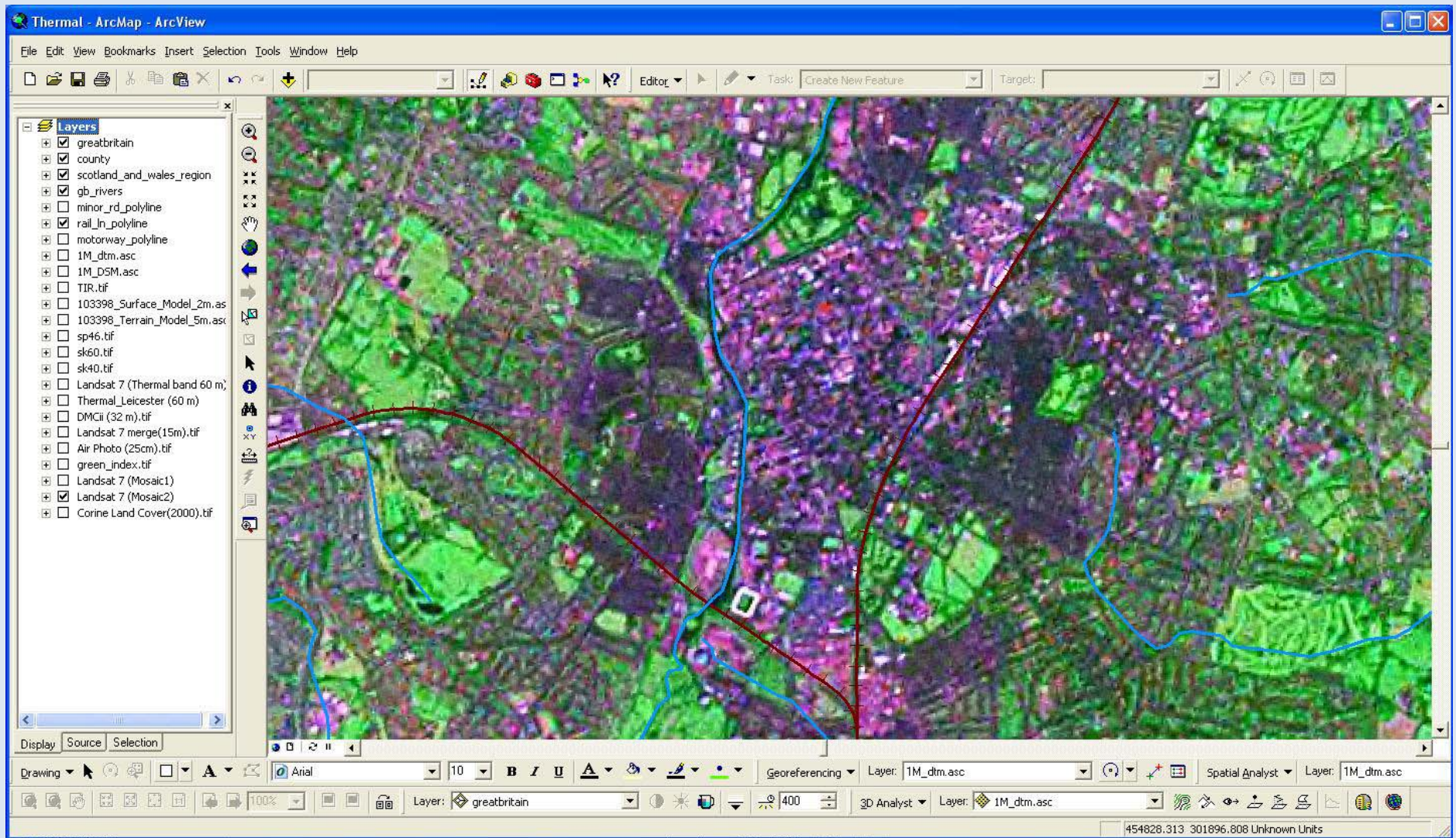


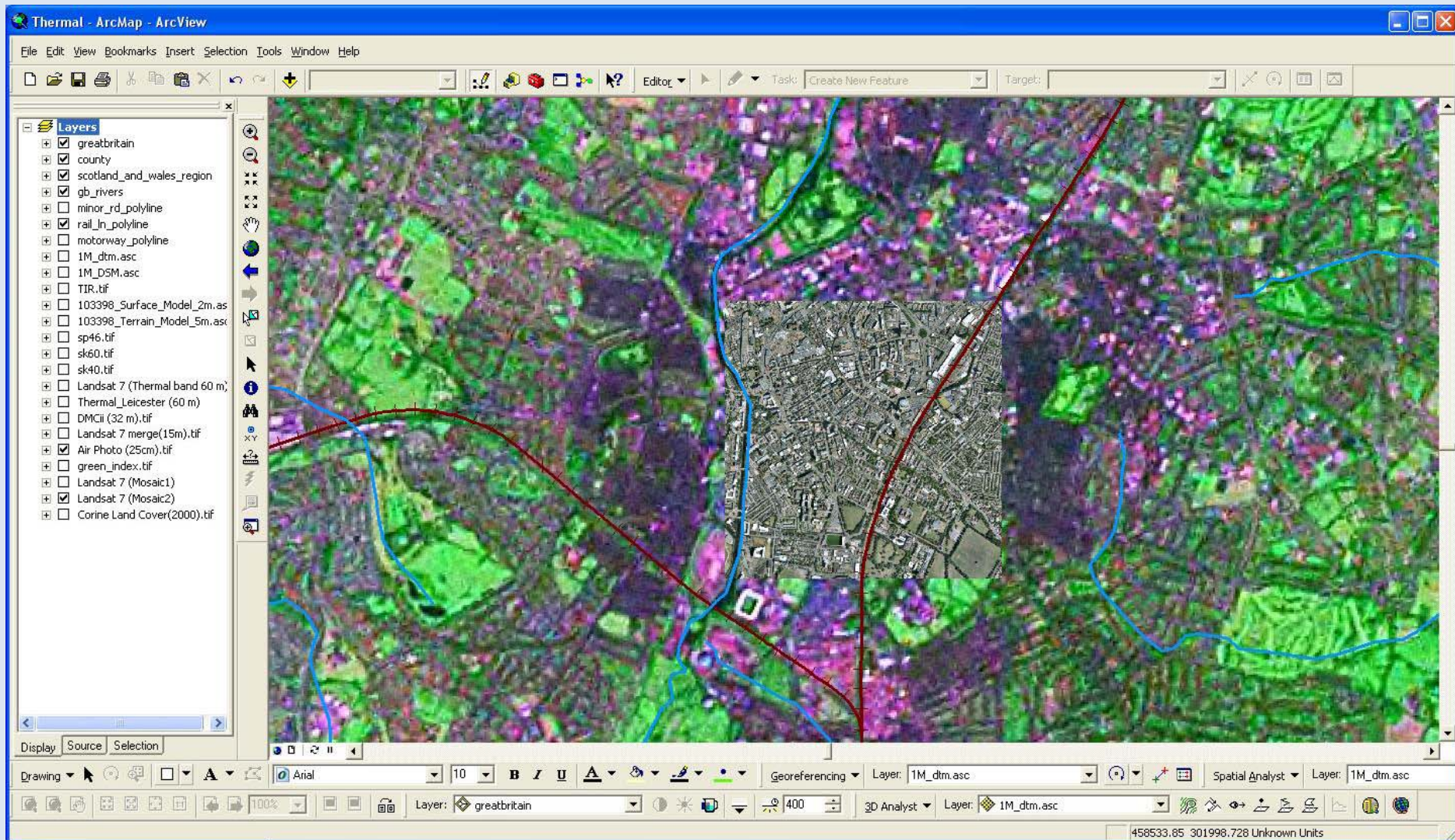
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# GIS Applications



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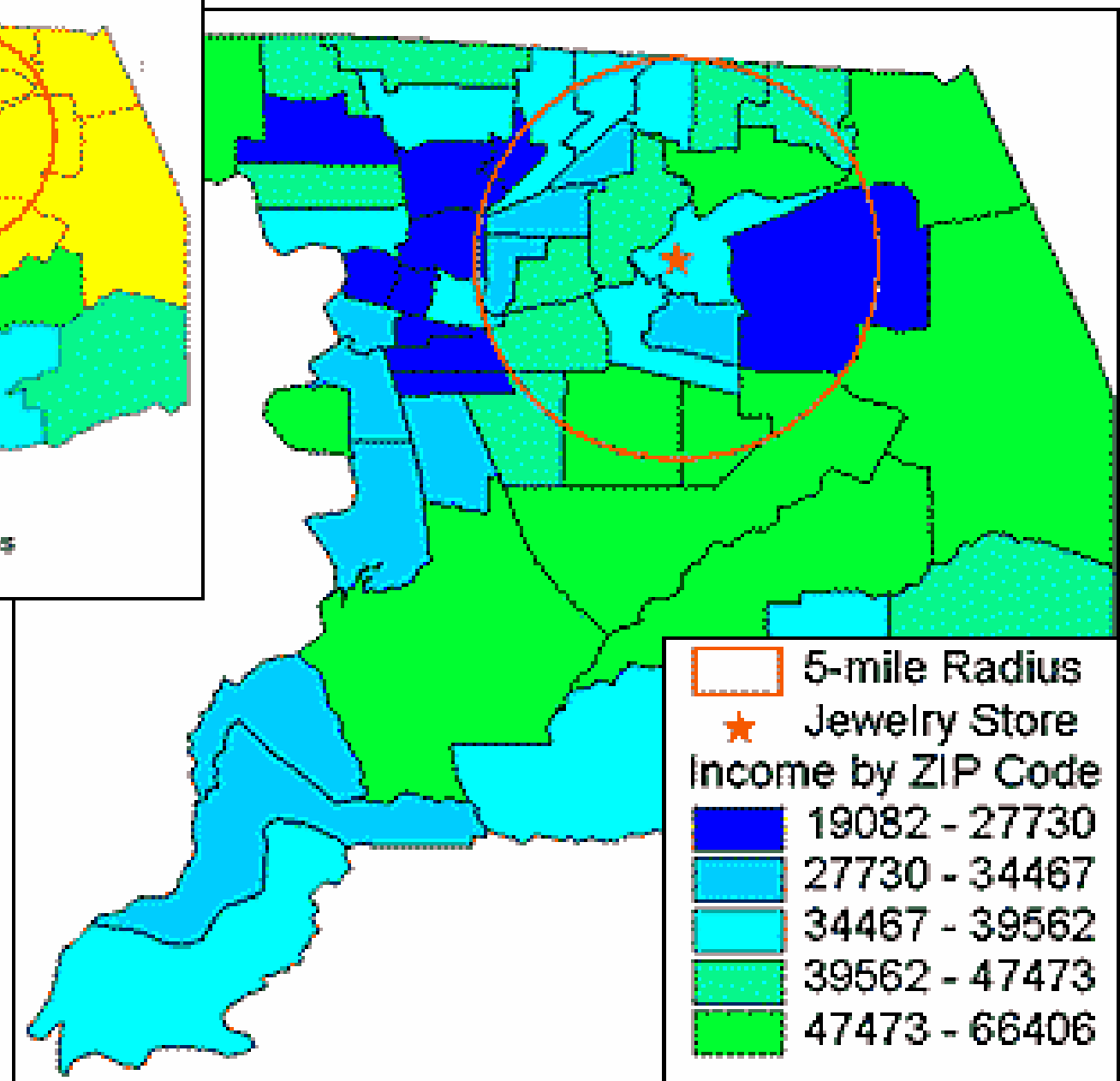
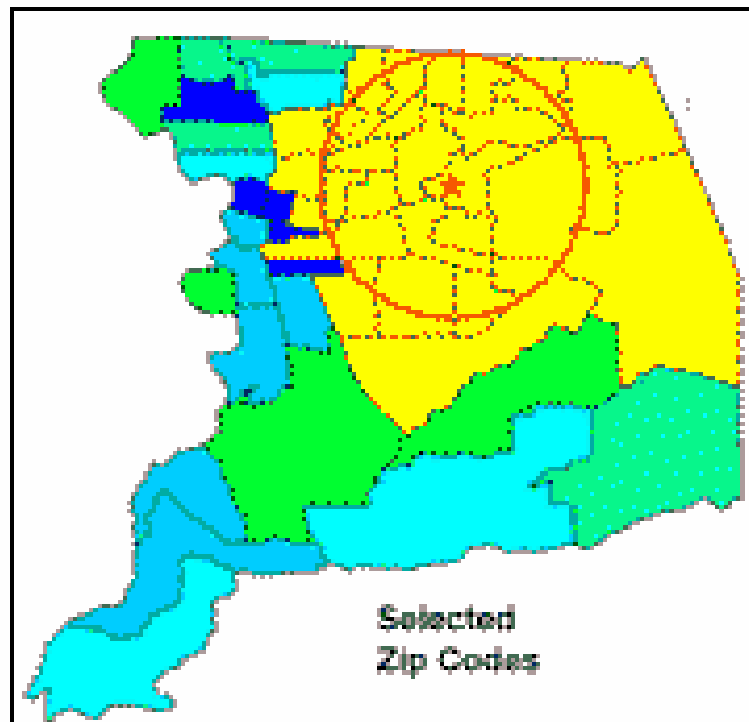


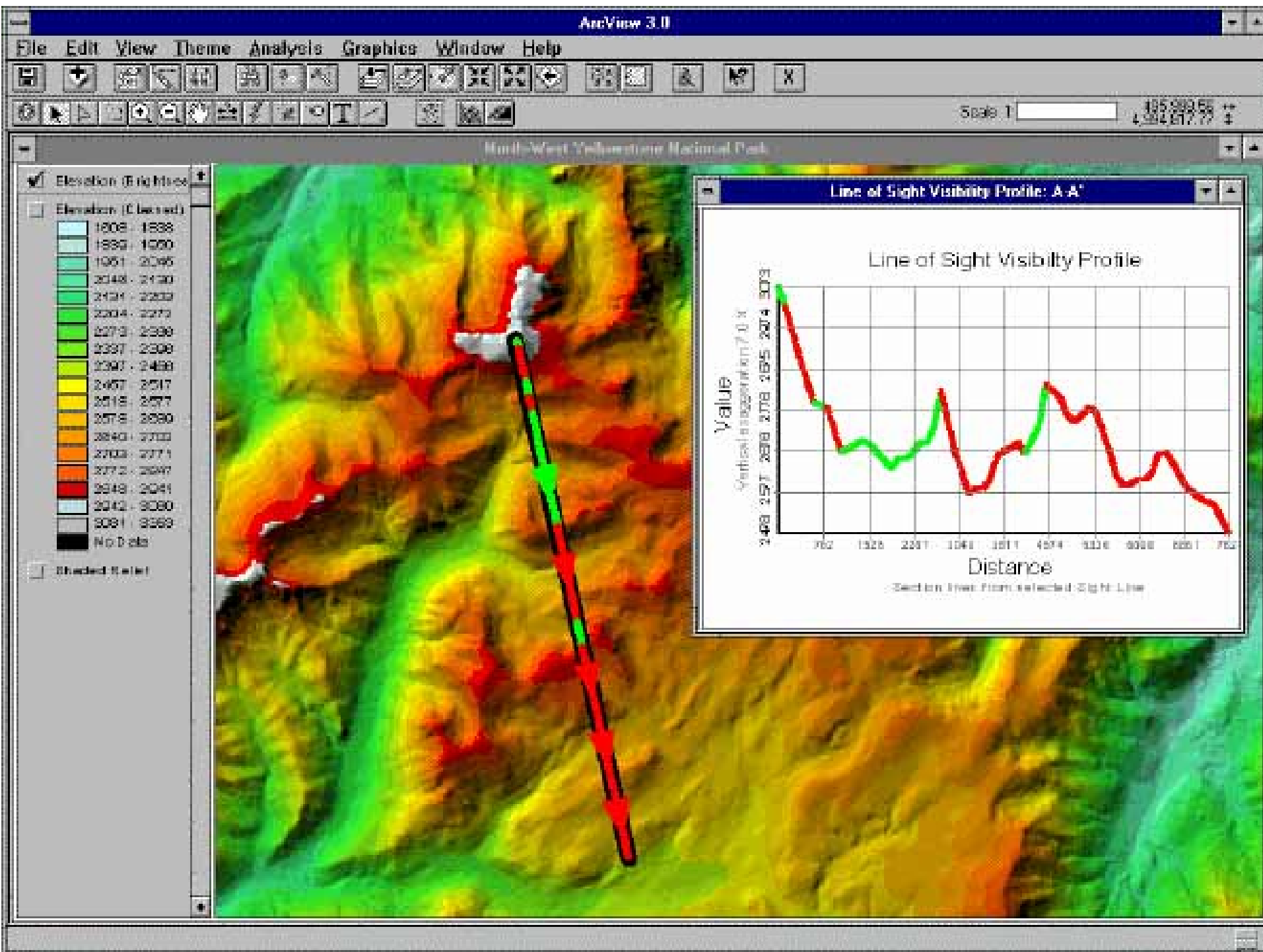
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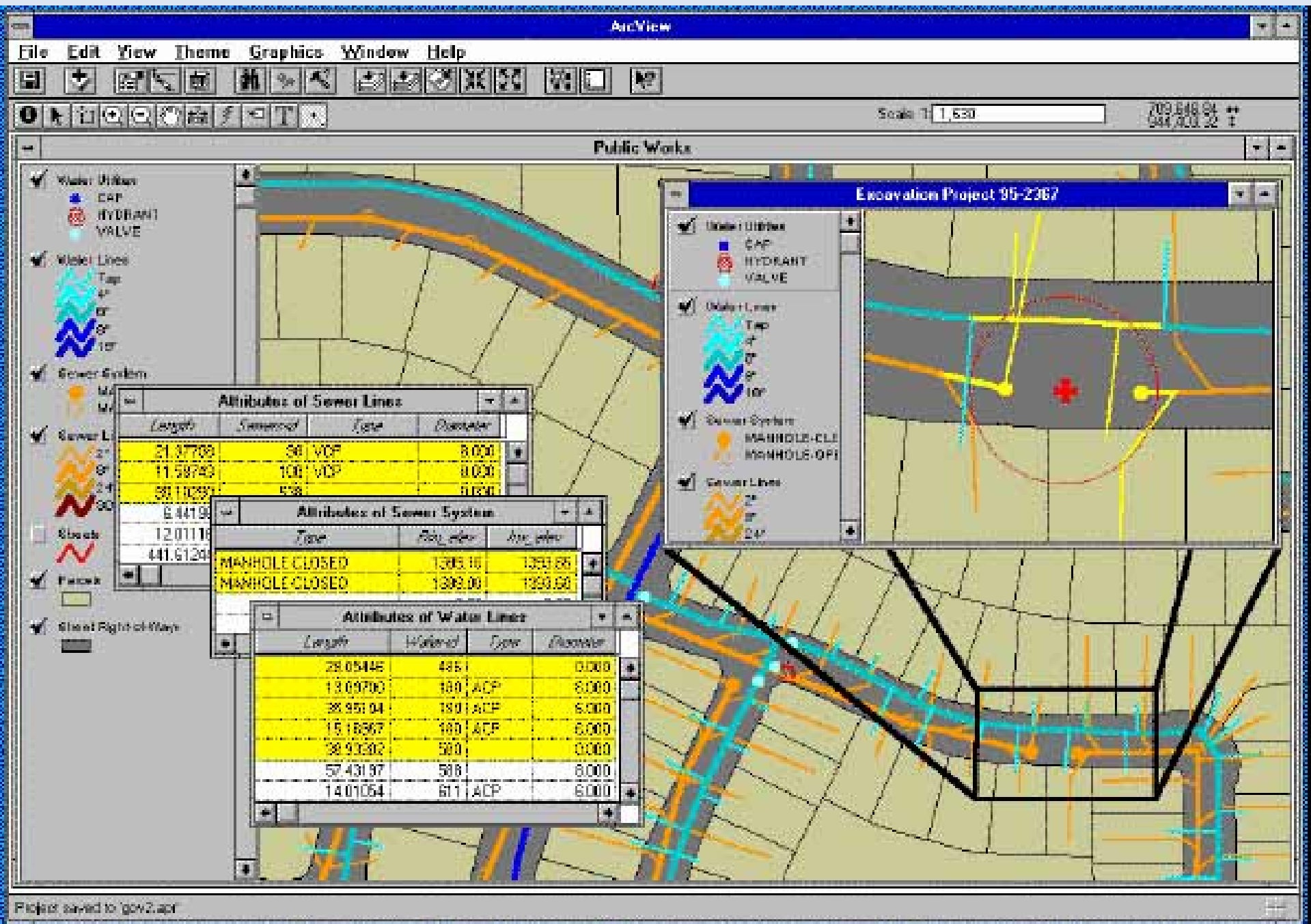


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# ArcView GIS Version 3.0a

File Edit View Theme Graphics Window Help



Scale 1:  480,766.17  
4,761,474.61

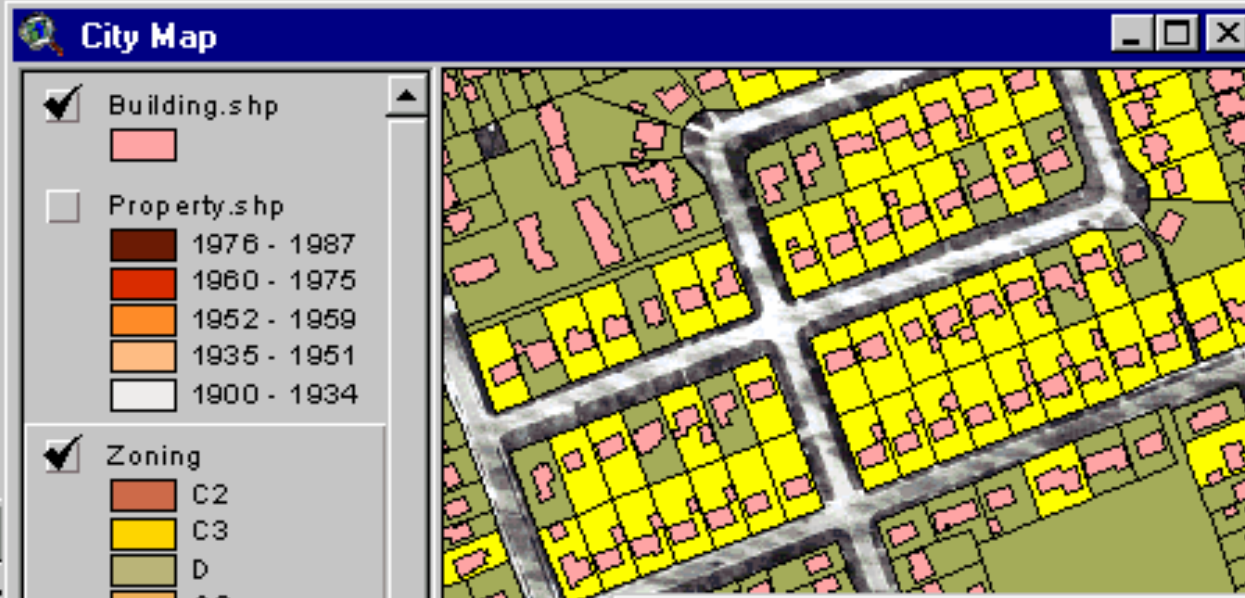
**Comparable**

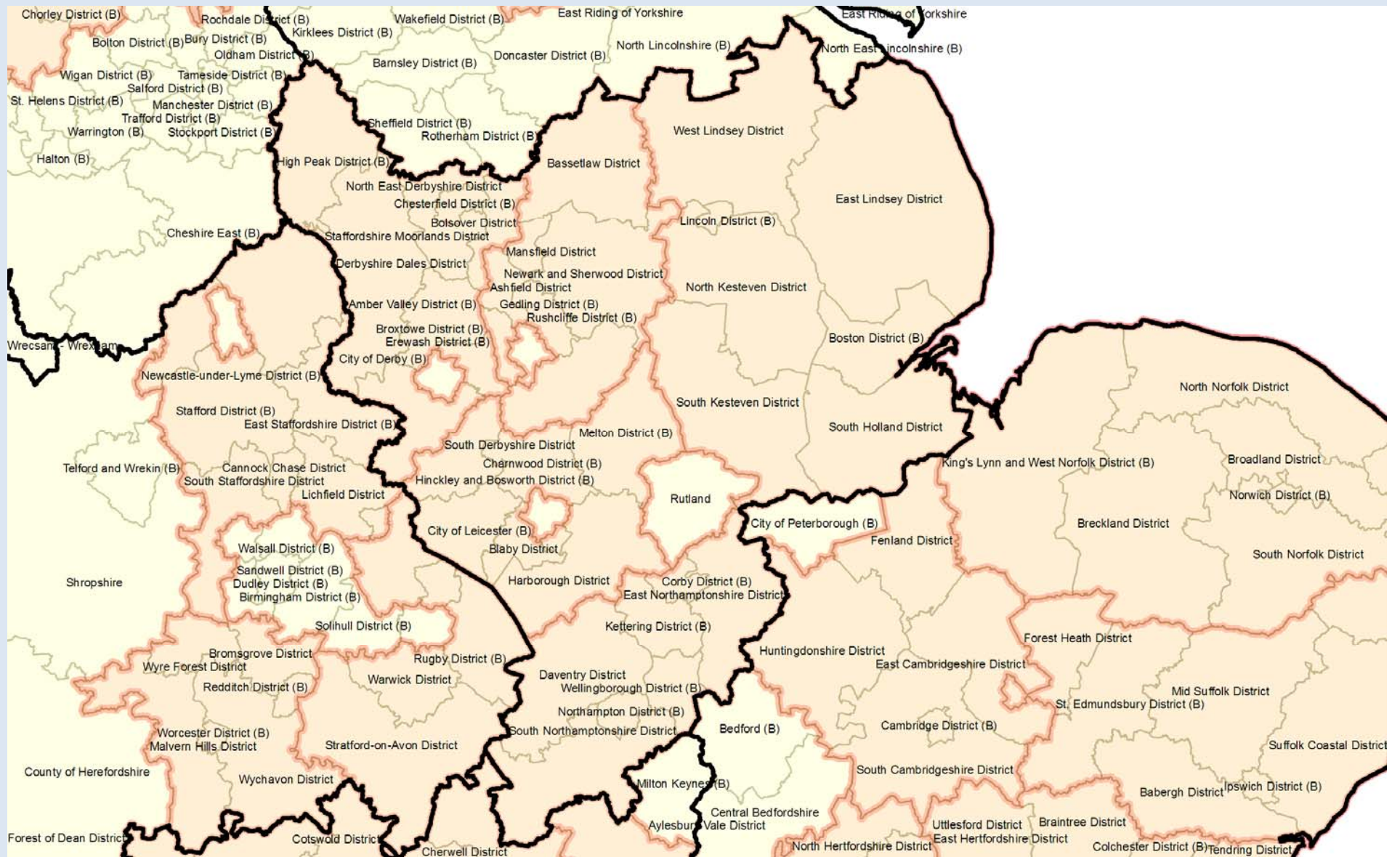
Field	Value
Prop_cod	301
Stuct_code	301
Yr_built	1953
Full_stories	1
Gross_area	984
Area	726

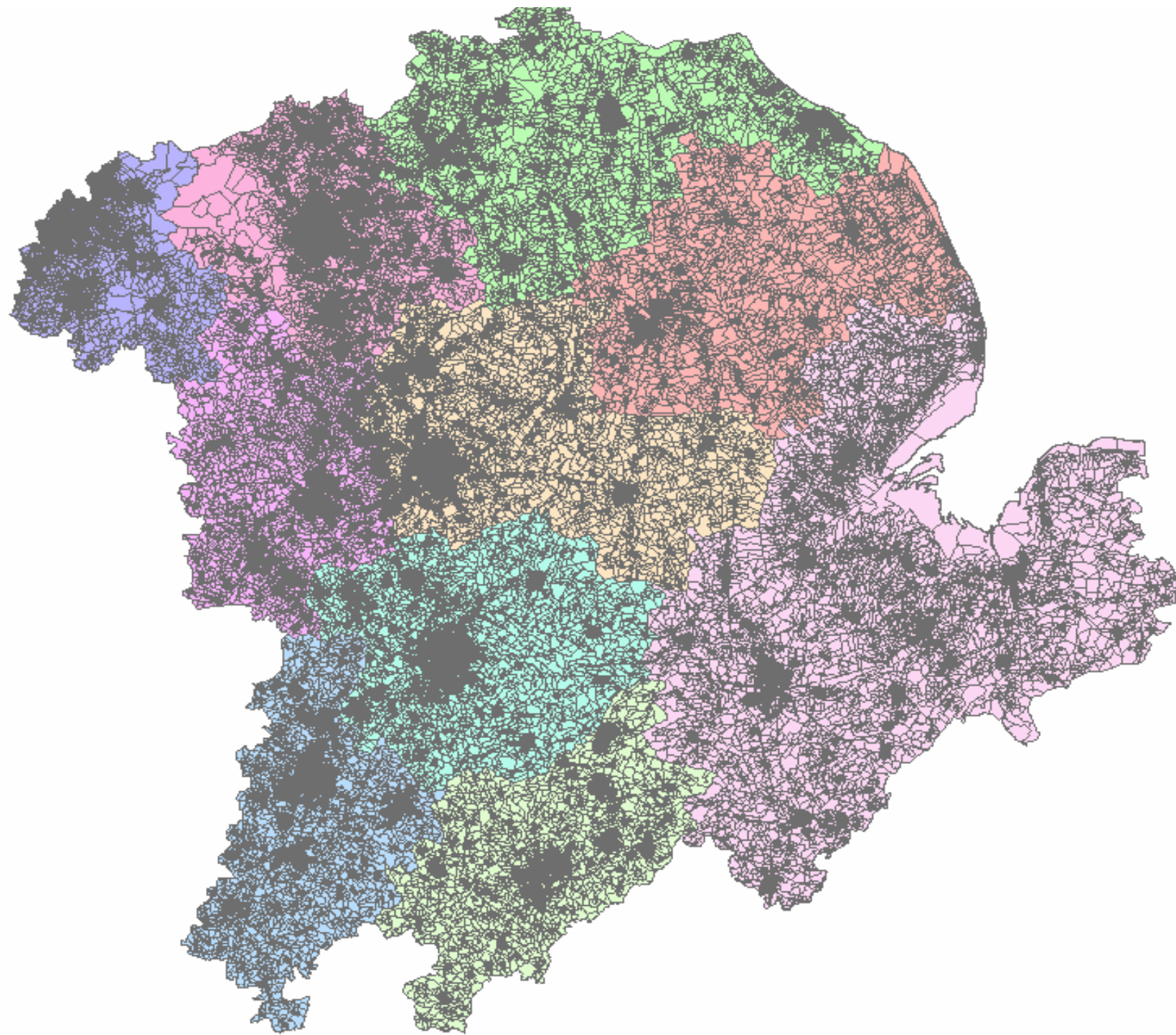
**Attributes of Zoning**

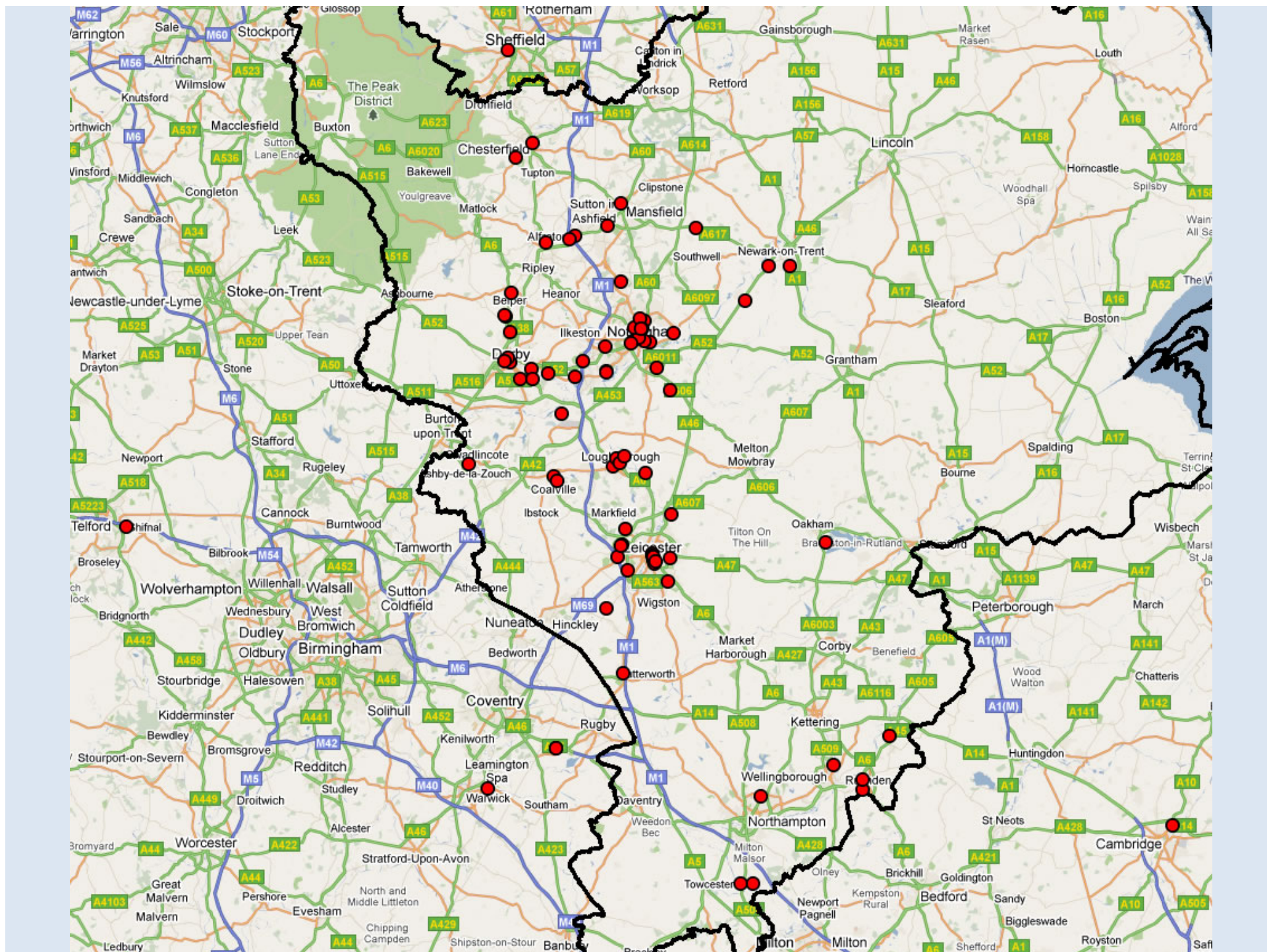
Prop_cod	Zoning	Zcode	Service
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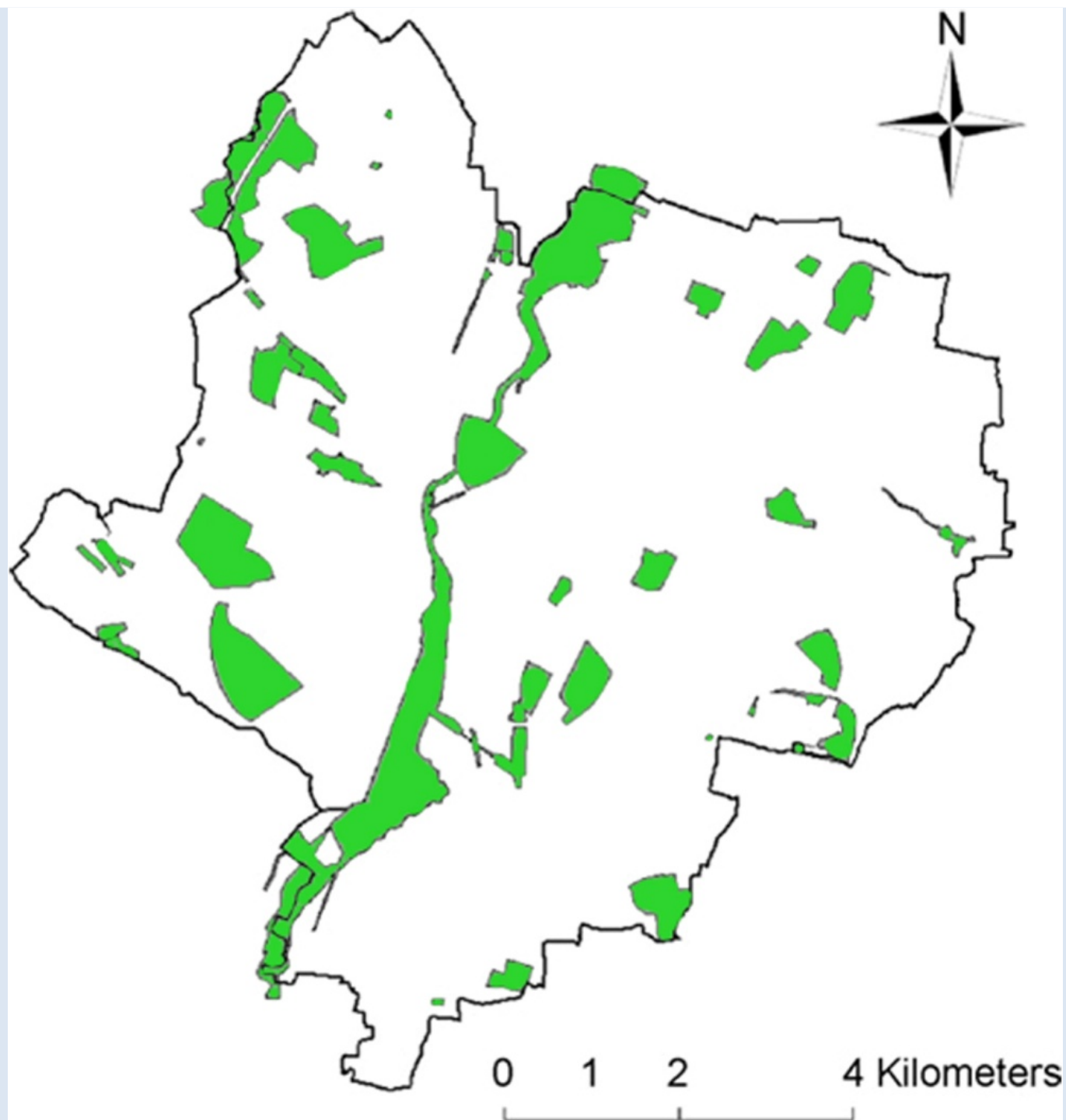
301	SR-3	SR-	A
311	SR-25	SR-	A
100	SR-342	SR-	A
301	SR-3	SR-	A
301	SR-3	SR-	A
311	SR-25	SR-	A
301	SR3	SR3	A
311	SR-25	SR-	A
301	SR-3	SR-	A
311	SR-25	SR-	A

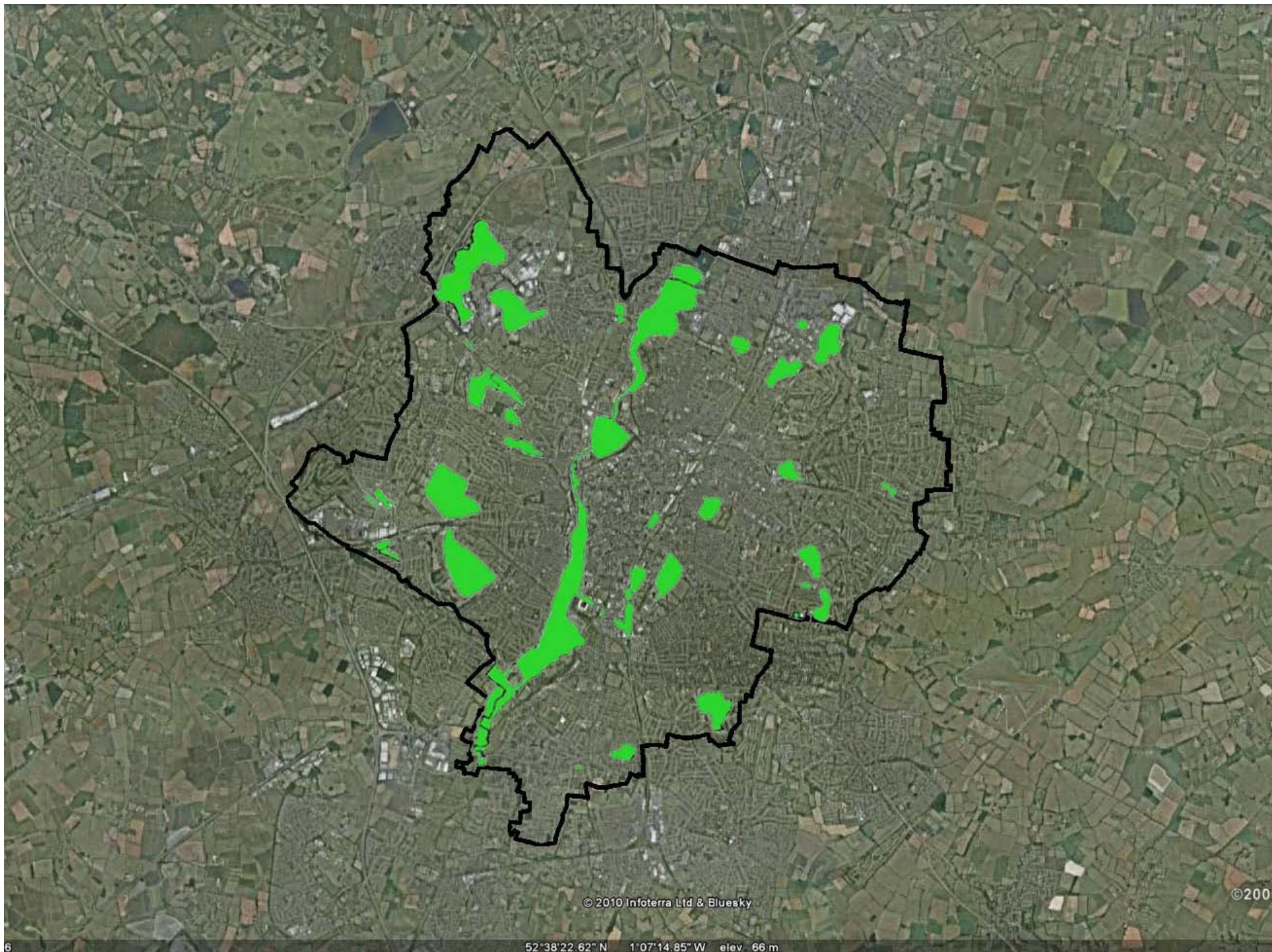


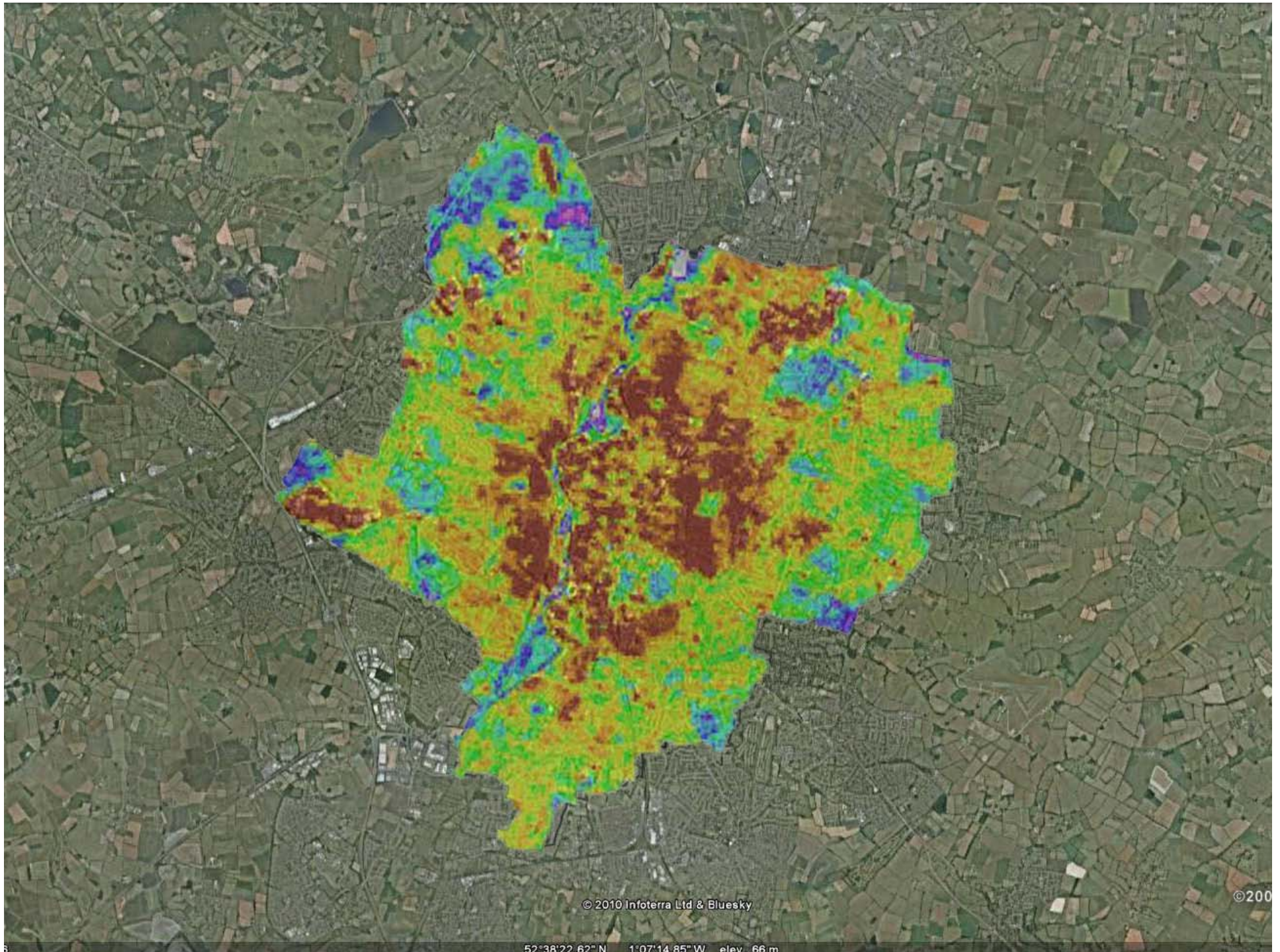












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52°38'22.62"N 1°07'14.85"W elev. 66m

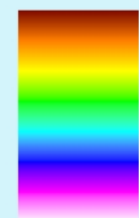
Leicestershire County

## Legend



### Thermal\_Leicester

Value

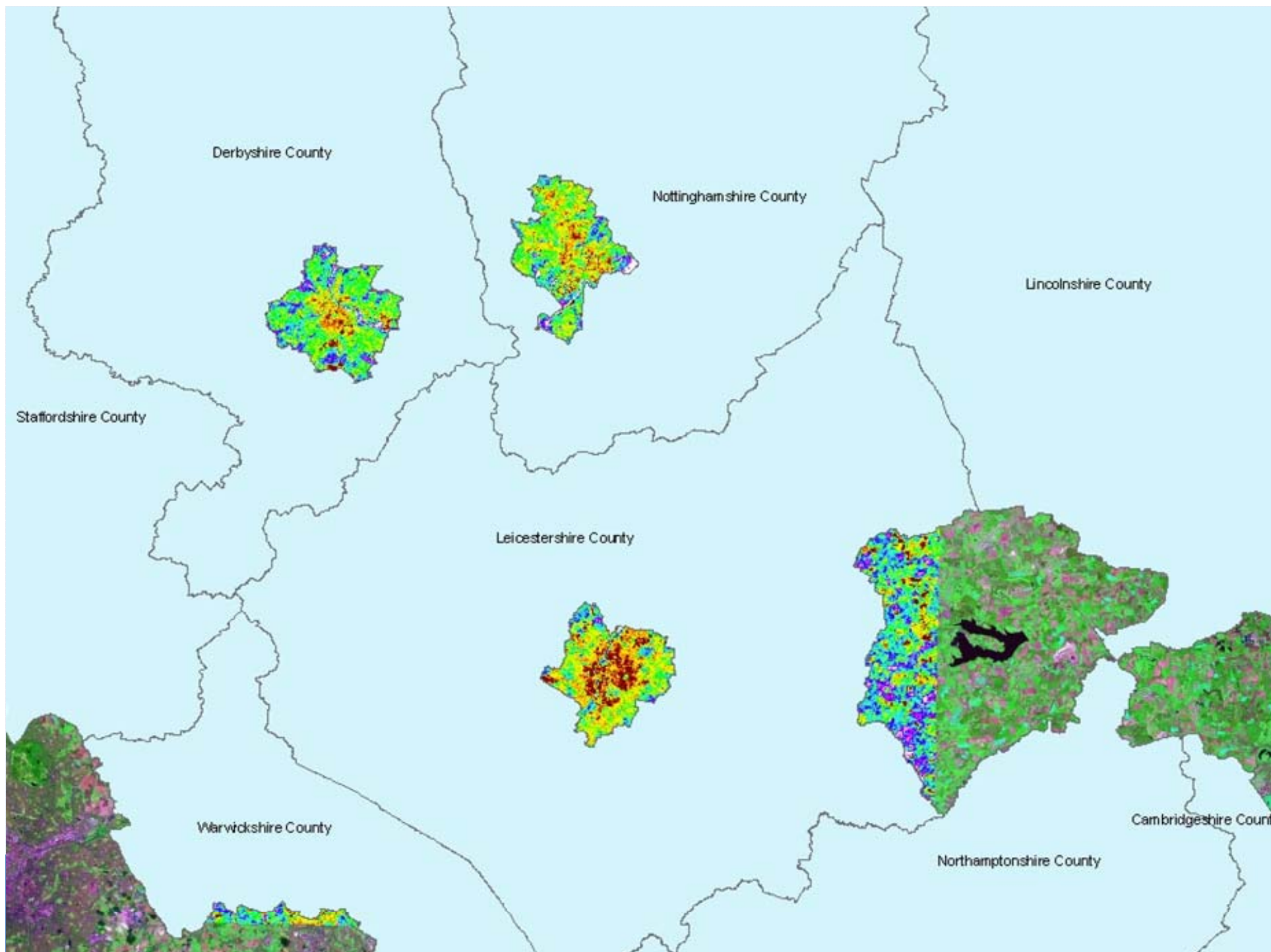


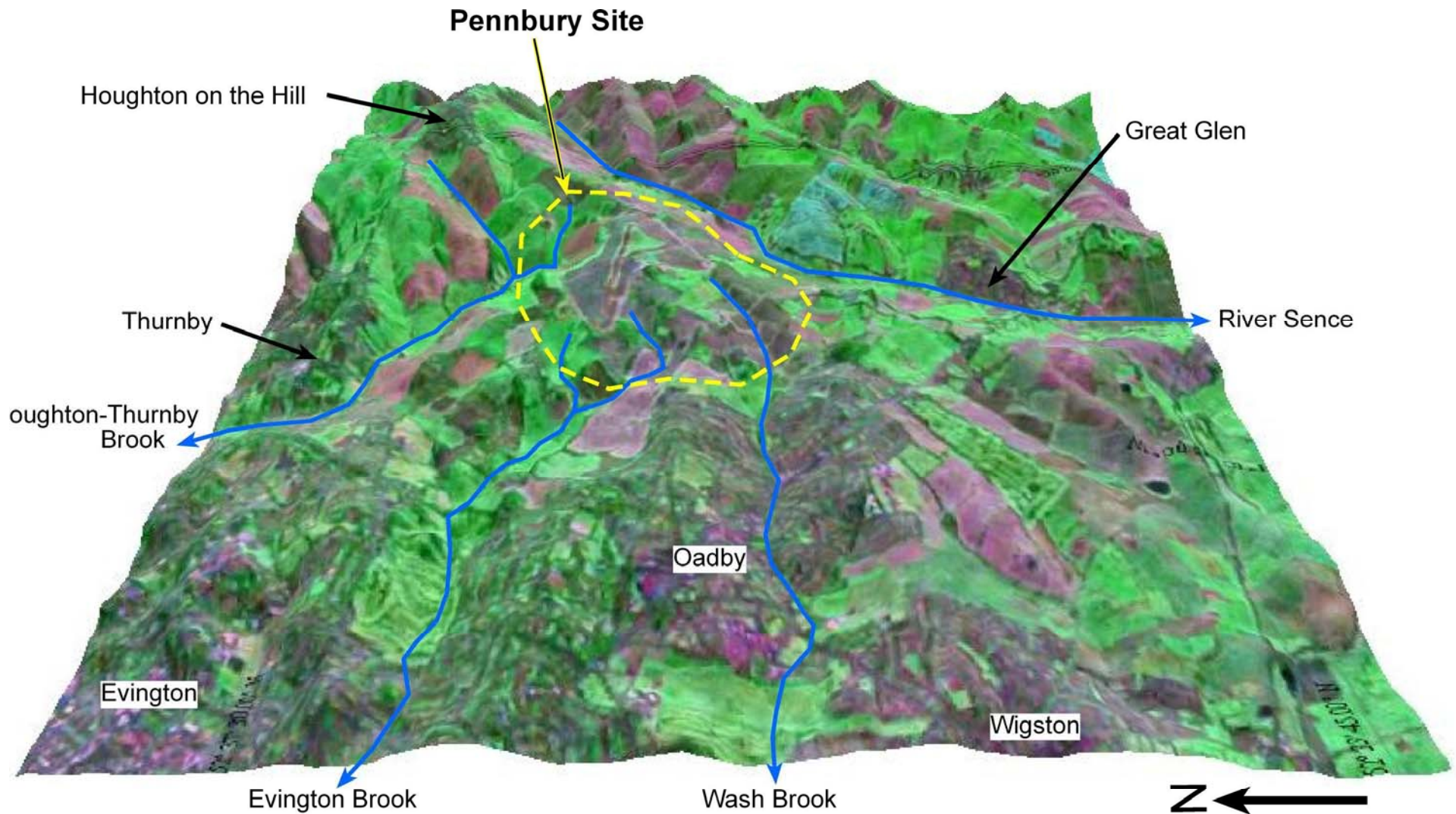
High : 299.198

Low : 285.03

0 400 800 1,600 2,400 3,200  
Unknown Units







## Oblique Perspective View Looking East Showing Proposed Pennbury Eco-Town and Surface Drainages

Image shows Landsat TM satellite photo draped over SRTM-90 digital topographic data.  
Image is vertically exaggerated to accentuate topographic relief.  
(courtesy of Dickson Cunningham, Department of Geology, University of Leicester)





<http://www.g-step.co.uk>



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