Using GDAL for Helicopter Safety

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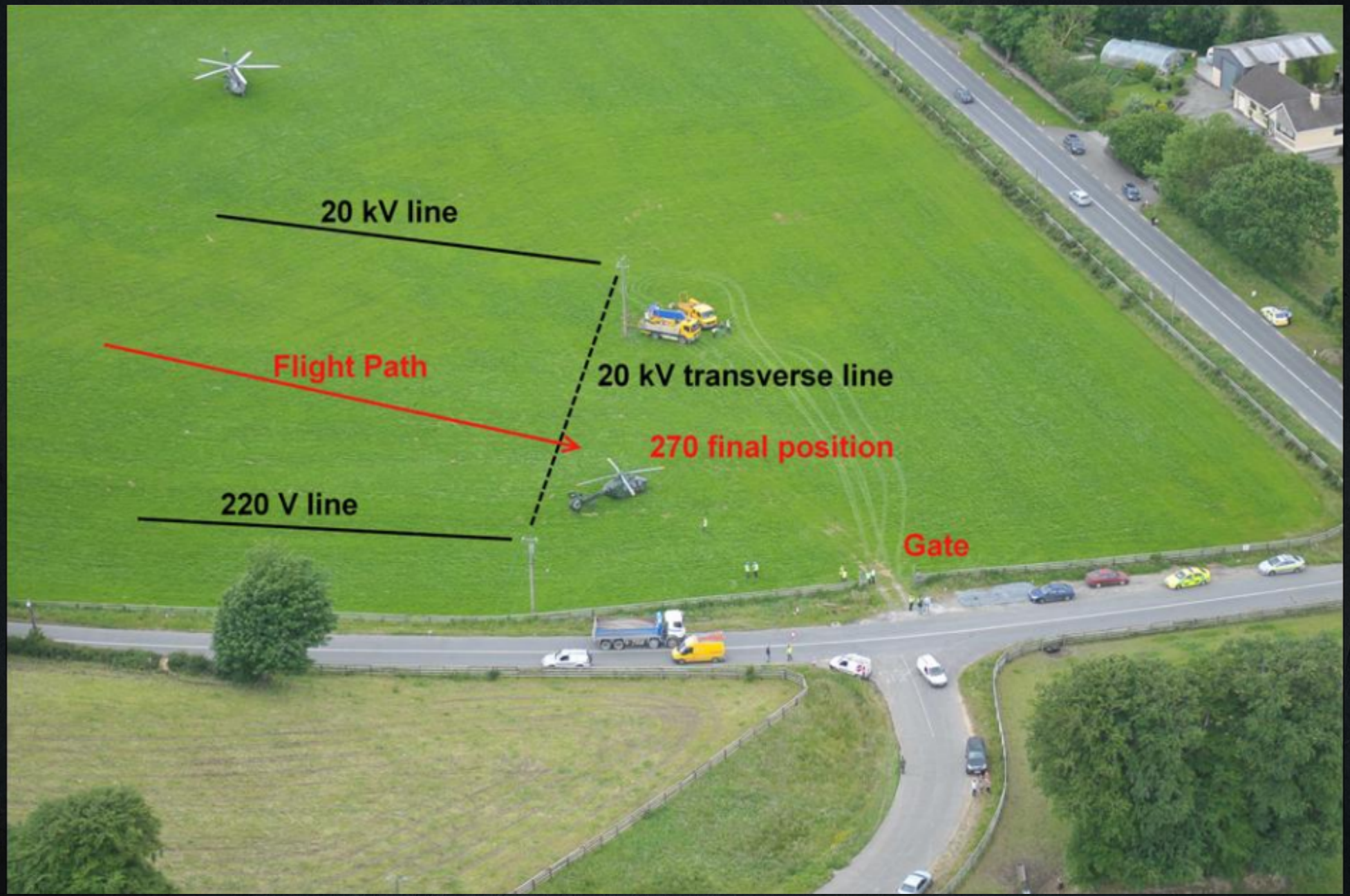
Health Atlas Ireland AeroMedical

- In 2012, we launched a new Web based GIS for use by the National Ambulance Service.
- The software helps to direct and manage AeroMedical missions.
- System was developed with the help of multiple agencies and has won numerous awards to date.
- It combines various Open Source tools and libraries such as OpenLayers, PostgreSQL, PostGIS, Proj4, Node.js and GDAL to help emergency services 24/7.

21st June 2012



ESB Networks

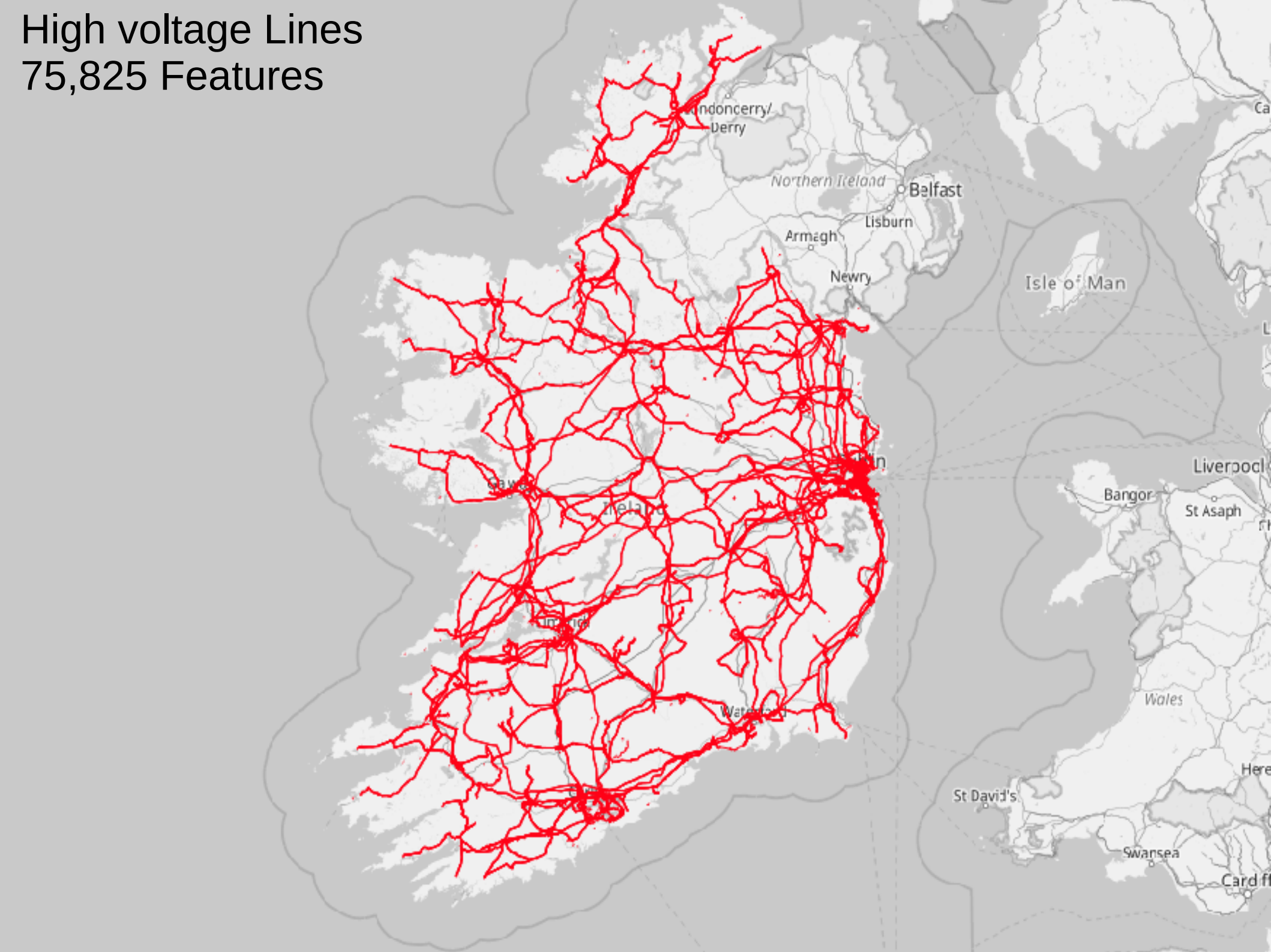
- To prevent similar accidents in future, we requested data for the Irish Electrical Grid.
- Took 6 months of negotiation, but eventually delivered via DVD.
- Data was given in a CAD format (Bentley Microstation).
- Over 1.5GB of Information.
- Needed some method of converting to a more suitable GIS format.

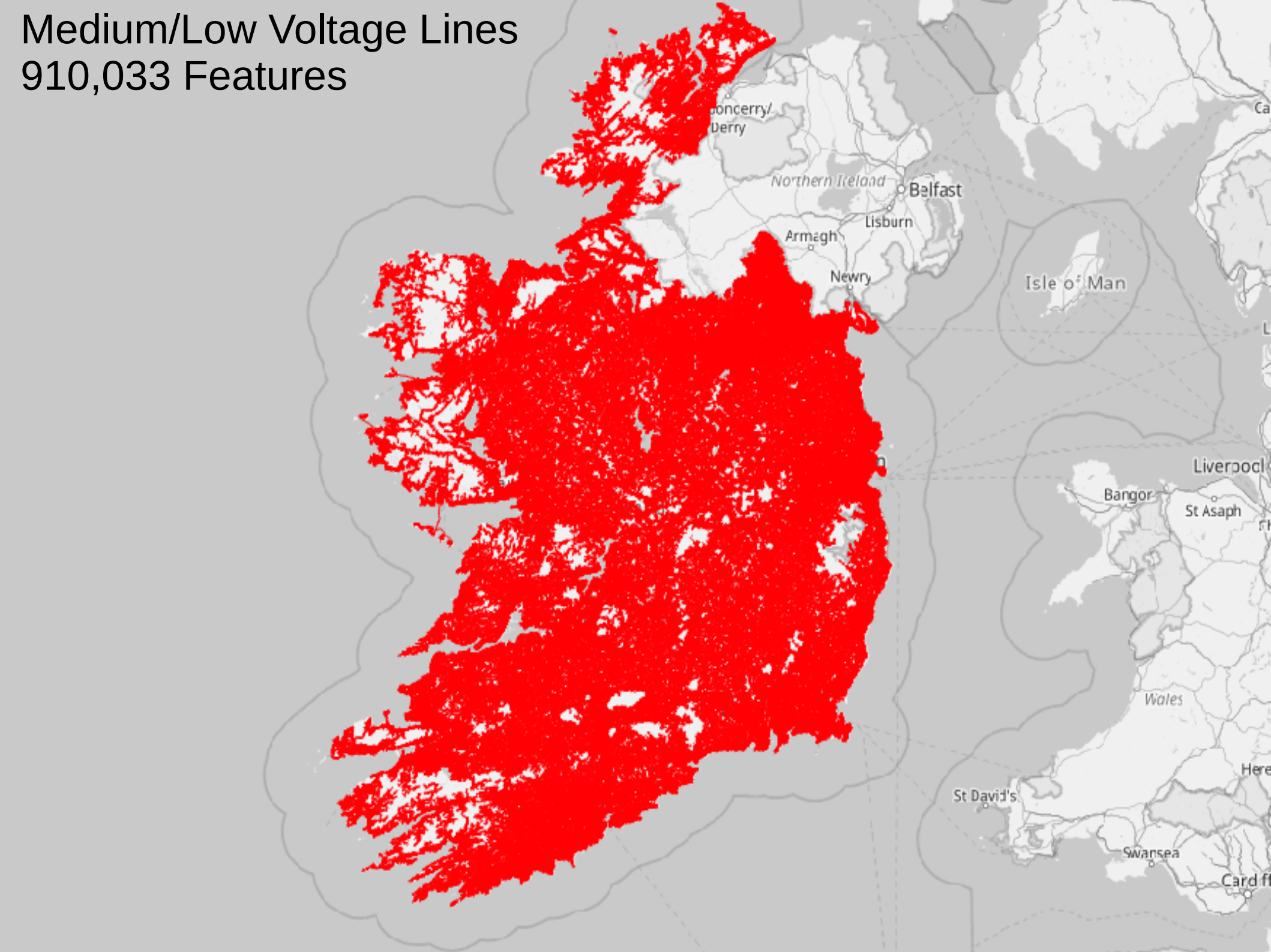
GDAL to the Rescue

- Trial versions of the software would not allow export to SHP.
- Tried GDAL and ogr2ogr.
- After some work, the DGN v8 driver was able to make sense of the data.
- Managed to import everything into PostgreSQL.

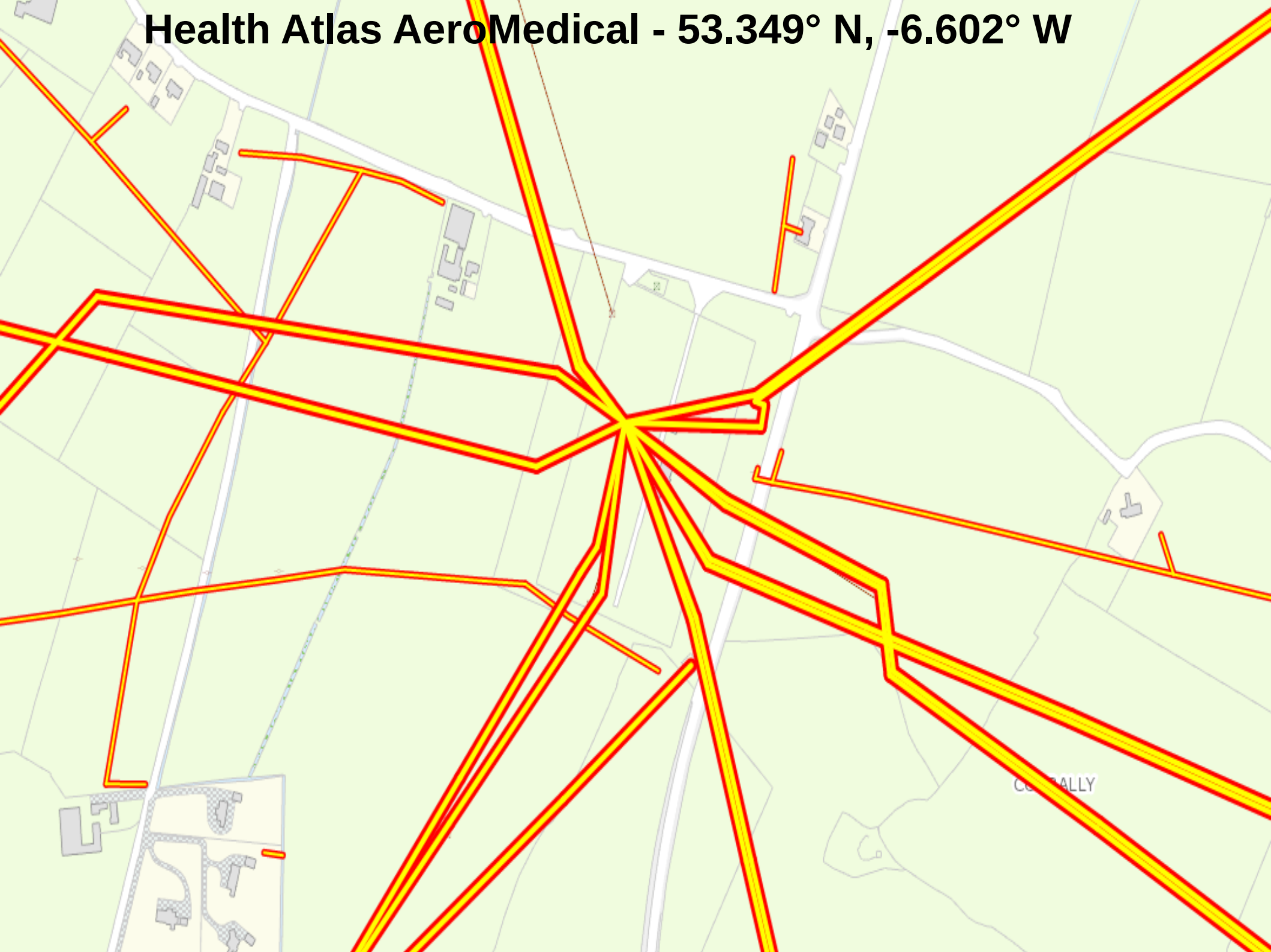
Above and Below

- The CAD data contained both above and underground cables, ducts, poles and labels.
- The DGN format uses a series if levels and colours to denote different features.
- Using QGIS and printed maps from ESB Networks, we identified each feature in turn.
- Using SQL, we dropped all underground wires.
- This left us with linestrings for each cable.


High voltage Lines
75,825 Features
Northern Ireland
Belfast
Lisburn
Armagh
Newry
Isle of Man
Liverpool
Bangor
St Asaph
Wales
St David's
Swansea


Medium/Low Voltage Lines
910,033 Features
Derry
Northern Ireland
Belfast
Lisburn
Armagh
Newry
Isle of Man
Liverpool
Bangor
St Asaph
Wales
St David's
Swansea

Health Atlas AeroMedical - 53.349° N, -6.602° W



More Information

- See our website www.openapp.ie and check out our Work.
- View my previous talk on the Air Ambulance Service here: https://youtu.be/eserHSlz0EA
- Contact us: info@openapp.ie or nigel@openapp.ie