Geography Policy Gridlink

Contents

Background

In the past, competition between different organisations led to duplication of effort on postcode products.

In 1999 the Gridlink consortium was formed and comprises
- Office for National Statistics (ONS),
- Ordnance Survey (OS),
- Royal Mail Group plc,
- National Records of Scotland (NRS),
- Northern Ireland Land and Property Services (LPS), and
- GeoPlace.

Gridlink ensures a standard and consistent approach to postcode referencing products in the UK.

It is an important example of modernising government and implementing 'joined-up geography'. Each of the Gridlink consortium members produces their postcode products based upon Gridlink core data.

What is Gridlink?

Maintained by Ordnance Survey, Gridlink® is a database system designed to store and supply consistent high quality location data. It includes National Grid co-ordinates for each unit postcode in the UK as well as administrative area code information.

Its data sources are
- Ordnance Survey (OS) Boundary-Line^{TM},
- Royal Mail (RM) Postcode Address File,
- Office for National Statistics (ONS) National Health Service and administrative area codes,
- GeoPlace Postal Address Location Feed, and
- postcode data from National Records of Scotland (NRS), and Northern Ireland Land and Property Services (LPS).

How do OS allocate Gridlink grid references

Ordnance Survey take the mean position of high quality address points (APs) for each postcode and then determine which AP is nearest to the mean position. The location of this AP becomes the Gridlink grid reference.

Positional Quality
The positional quality is a flag to indicate the positional accuracy of the Gridlink coordinates allocated to each postcode record.

All postcodes are to one metre resolution, but Gridlink will seek to provide the most accurate coordinates according to the hierarchy detailed in the following table.

Status value	Description of status values
1	Automatically calculated to be within the building of the matched address closest to the postcode mean (see illustration below).
2	As for status value 1, except by visual inspection of OS MasterMap® Topography Layer maps.
3	Approximate to within 50 m of true position.
4	Postcode unit mean – (mean of matched addresses with the same postcode, but not snapped to a building).
5	Postcode imputed by ONS by reference to surrounding known postcodes.
6	Postcode sector mean – mainly PO boxes.
8	Postcode terminated. No postcodes of this type will be provided by Gridlink, or to Gridlink. Consortium members may wish to hold this information for historical purposes. The accuracy of the data is as indicated by its status value immediately prior to its termination.
9	No coordinates available.

Status value 1 and 2 derivation

The postcode mean, point **M**, is snapped to the nearest postcode seed point, building **B**.
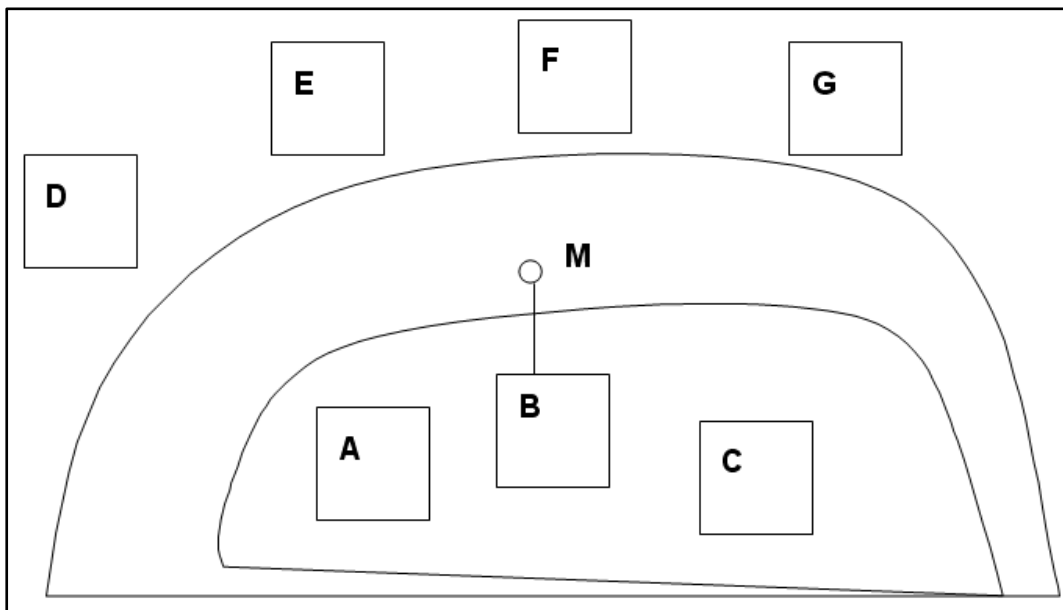
In the above example, the average eastings and northings for the seven buildings are calculated. This is point **M**. This is then snapped to the nearest building **B**.

How NRS Geography applies Gridlink

NRS extract the Gridlink grid reference for higher area assignment providing the Gridlink grid reference is within the NRS postcode boundary.

Gridlink grid references falling out-with the postcode boundary are replaced with a NRS grid reference that lies within the postcode boundary.

Research has shown that the situation where Gridlink grid references are outside the postcode boundary is most likely to occur because of digitising conventions that we use. For example, there are a few occasions where we will not use the Gridlink grid reference:
- NRS split postcodes
  - a postcode straddles two or more council area boundaries,
  - a postcode straddles the Scottish/English border,
  - an island and the mainland share a postcode,
  - or a postcode contains property on more than one island,
- Multi storey buildings
- Multi-postcoded buildings

NRS Grid References

The address judged to be nearest to the centre of the populated part of the postcode is used as the position for the NRS grid reference.

Problems with Gridlink grid references

As GridLink grid references are calculated based on the position of high quality address points it does mean that issues can occur in the real world.

Mapping technology, like TomTom, use the postcode grid reference to guide people to an area, in some cases (usually rural areas), this can have a negative effect to the public in the area, for example:

- deliveries going up private roads and using driveways as a turning circle.

- caravan owners going up narrow tracks thinking they have found the site only for it to be a residential area.

- residents in areas like this have complained about damage to property, feeling unsafe due to the amount of strangers appearing at all hours, and having to deal with people who are infuriated that they aren't at the location they thought they were at.

Where a customer contacts NRS Geography, we will move the grid reference to a more appropriate property within the postcode boundary and advise Ordnance Survey of the change and the reasons why it has occurred.

NRS Geography also update a listing to ensure that the postcode in question will not take the GridLink grid reference in future updates.

Gridlink and NRS postcode data

Gridlink® grid references were used for the first time in data 2003/2 and over 96 per cent of NRS live small user postcodes now have a Gridlink® coordinate as the grid reference.