

NATIONAL REPORT OF GREAT BRITAIN

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Ordnance Survey activity

- Update to OS Net CORS coordinates - now fully aligned to EUREF IE/UK 2009 campaign
- Upgrade to transformation and geoid model in collaboration with Ireland and Northern Ireland
- Nine new EPN stations contributing hourly data
- Plan to upgrade OS Net receivers in the next year and approximately 30-40% of antennas
- Upgrade will allow for streaming and collection of Galileo and BeiDou observations in addition to GPS and GLONASS

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OS Net coordinate update

- First time whole network computed as a single figure
- Now fully aligned to EUREF IE/UK 2009 campaign results
- RMS differences from previous coordinates at the ~15mm level

	East (m)	North (m)	Up (m)	2D (m)
Min	-0.025	-0.010	-0.050	0.002
Max	0.030	0.021	0.053	0.034
RMS	0.015	0.008	0.018	0.017

Transformation update

- Impact of OS Net coordinate update on users' mapping datum coordinates minimised to RMS of < 10mm

	East (m)	North (m)
Min	-0.037	-0.015
Max	0.019	0.018
RMS	0.009	0.007

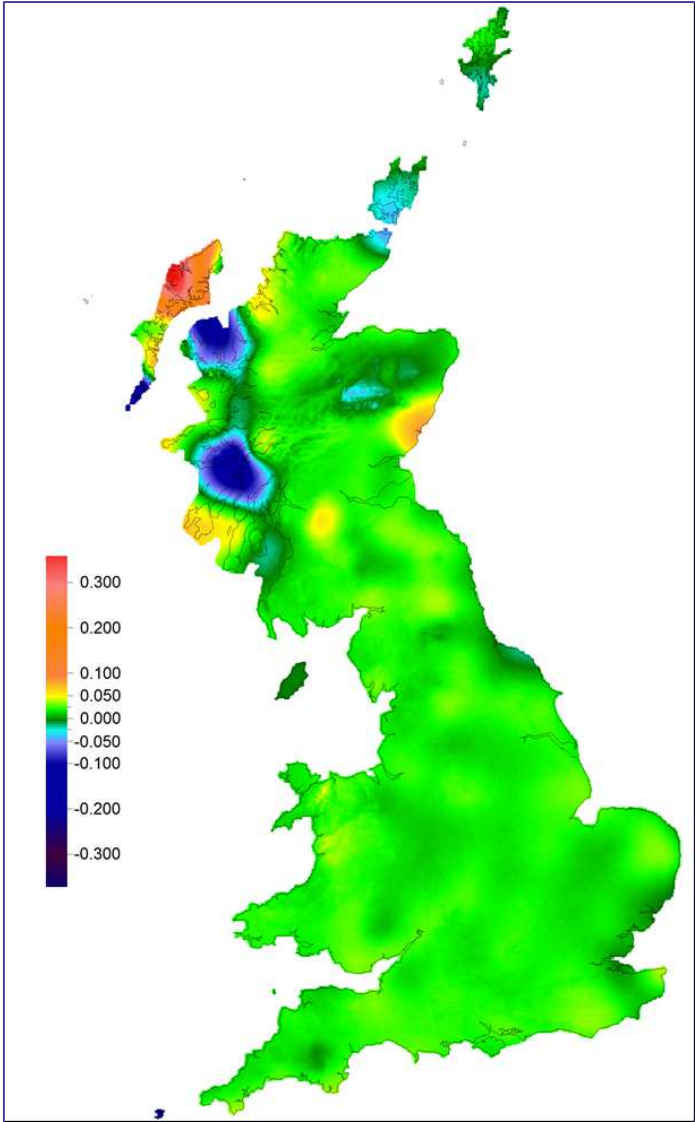
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Geoid model update

- Single gravimetric model across GB, Ireland & Northern Ireland which is fitted in “patches” to different MSL based datums using observations of N at benchmarks
- Updated to incorporate new gravity data and to improve problematic fitting in some areas
- Some areas have large RMS differences compared to old model

Datum:	Newlyn	St Marys	Douglas02	Stornoway15	Lerwick	Newlyn (Orkney)
RMS:	0.026	0.365	0.000	0.175	0.013	0.021
Accuracy:	0.008	N/A single offset	0.030	0.011	0.018	0.017

- ~25mm uplift to ODN on mainland GB is due to realignment of benchmark obs ETRS89 to EUREF IE/UK 2009



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Also in the report, activities of:

- NERC British Isles continuous GNSS Facility (BIGF)
Using archive to study long term land movements
Data contributions to EPN, IGS, TIGA and E-GVAP
Supply of GNSS data sets for a wide variety of scientific research
- Newcastle University
Combination of GNSS and SAR
Geodetic measure of tectonic strain
Geodetic deformation monitoring
Glaciological and cryospheric geodetic applications

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