

# Response from the Royal Geographical Society (with IBG)

Royal  
Geographical  
Society

with IBG

Advancing geography  
and geographical learning

## ● Review of post-16 qualifications at level 3 in England

### 8. Should the Institute create additional T Levels for pathways or occupations featured on the occupational maps? If so, please indicate the pathway(s)/occupation(s) and explain why.

An occupational cluster/pathway is needed to support sectors and industries in working with geospatial and location data. Geospatial data is information about where people and objects are in relation to a particular geographic location at multiple scales (local to global). This includes features on or near the Earth (gathered via direct observation and remote sensing) or in space (through satellites), or through crowd-source, administrative data and myriad of other kinds of data now created. The terms 'located' or 'location' data, 'spatial' data, and 'geographical information' are used throughout our response to refer to geospatial data. Geography – and its spatial lens – has its greatest role to play in unlocking the value of located data, especially in linking, and drawing relationships and insight from, a range of disparate datasets that have been 'meshed' across different scales and contexts.

The Society highlights the comments of Lord True CBE in the welcome to the Government's National Geospatial Strategy <https://www.gov.uk/government/publications/unlocking-the-power-of-locationthe-uks-geospatial-strategy> which identifies **the important contribution of location data to our national life and prosperity**: "As well as making everyday lives easier, location data and the innovations that spring from it have even greater potential to unite and level up the country – by connecting people, organisations and services. Location data can help us respond to the great challenges of the future such as climate change, as well as tackle the immediate threats we face today."

The Geospatial Commission has identified that the better use of geospatial (location-based data) could contribute £12bn gains for the UK economy. **The importance of skills is centrally identified within the [National Geospatial Strategy](#), "unlocking the value of location data requires people with the right skills"**.

However, the skills required for this fast-growing and essential field, which cross-cuts a very broad range of sectors and industries, are either siloed into specific and narrow occupational pathways (e.g. occupational training for surveying and geomatics do not necessarily address increasing demand for visualisation and analytics of surveyed data), or not sufficiently specific in terms of developing the specialist knowledge and skills required to unlock the value from location data (e.g. a lack of focus on location data within broader training for data analysis/science).

Geospatial and location data skills need to be developed not only for the creation, curation and assurance of geographic information, but also critically with the contextualisation, analysis, interpretation and use. This is where the technical skills and methods of geography - and its spatial lens - has a particular role to play in unlocking the value of located data, especially in relation to other datasets, and where additional technical qualifications could play a significant role.

Foundational skills and awareness of the value of data and geospatial insights must start in the earliest stages of education in schools. Currently, geography is the only academic (statutory in school) subject in which geospatial skills are embedded and which also delivers extensive data/quantitative skills too. The absence of technical qualifications in this valuable field prevents young people with an interest and aptitude for working with location data from progressing, including through apprenticeships.



Attention and focus is needed at multiple levels, from schools through to creating opportunities for advanced training. Investment is needed both in 'core' areas (such as geography/GIS, geomatics, surveying etc), but also new and emerging areas (especially data science and AI) and with different user communities (e.g. disaster response and risk management, finance etc). Skills need to be developed not only for the creation, curation and assurance of geographic information, but also critically with the contextualisation, analysis, interpretation and use of this information.

Skills shortages for the geospatial sector have related to the lack of digital/data skills generally, in combination with a lack of knowledge of key geospatial concepts (which has implications for accuracy and interpretation when using location data). Occupational and technical training routes for data-focused occupations such as computer science, software development and data analysis rarely teach core concepts of spatial thinking needed to competently use location data in solving problems, while there is a lack of data analysis and data science skills among those trained through 'traditional' geospatial routes such as geodesy and surveying, cartography, GISc etc.

The Society has been involved in an employer-led Trailblazer Group, which is proposing an apprenticeship at Level 7 Spatial Data Specialist (where there is currently the most demand from employers, in terms of the specialist skills needed for advanced location data analytics and visualisation, and their application to business problems). The group is also considering the wider progression pathway, which can currently only be focused on academic qualifications in geography and cognate subjects.

**11. Do you agree with our proposal that core maths should continue to be funded?**

Yes.

We strongly support the continued funding of Core maths qualifications, as they serve an important role in supporting students at Key Stage 5 (given the range of demands placed on A Level geography students to collect, analyse, review and critically assess data from different primary and secondary sources) and in preparing students for higher education study in geography, which has a significant mathematical and statistical component.

Over 2020 and 2021 the Royal Geographical Society has developed the Geography and Core Maths programme, in partnership with the Advance Maths Support Programme/Mathematics in Education and Industry. The Geography and Core Maths programme: builds supports for the approximately 80% of young geographers who do not study maths beyond the age of 16; raises awareness of how Core Maths can support geography students during their A Levels and transition to undergraduate studies; and provides CPD online resources and other support for geography teachers [[www.rgs.org/geomaths](http://www.rgs.org/geomaths)].

**20. Do you agree with our proposal to fund the Access to HE Diploma for adults (as well as for 16 to 19 year olds in exceptional circumstances)?**

Yes.

The consultation recognises the important role that Access to HE diplomas play in supporting individuals who do not have traditional qualifications to enter higher education. They are key to widening participation initiatives for many institutions, ensuring that underrepresented groups may reskill and progress their careers, while also supporting responsiveness to local labour market skill needs. Support should be given to adults in appropriate circumstances, as well as 16-19 year olds.

**25. What occupations fall outside the scope of the occupational maps but are in demand by employers (as described in paragraph 116)? Please explain your answer.**

We refer to our earlier comments about the need for qualifications to develop and recognise geospatial skills that cut across sectors and occupations. We refer to the evidence base of the Geospatial Commission.