

# Where do Geomatics Graduates Find Employment



Tom Bramald and Karen Allenby explore where Newcastle University's geomatics graduates are finding employment and discuss what makes them employable.

Although attracting school leavers to study geomatics at Newcastle University remains a challenge, recent years have seen the opposite problem at the graduate end of the degree cycle – quite simply, we haven't been able to turn out enough graduates for employers. The overall picture has been very buoyant, although there are signs that the geomatics employment prospects for graduates are changing. Furthermore, for those that don't pursue a career in our sector, there is also plenty of reason to be optimistic.

## Geomatics Graduate Job Prospects

Each year, six months after graduation, graduates are asked to report their employment status as part of the Destinations of Leavers from Higher Education (DLHE) survey.

The offshore sector remains the biggest employer of graduates from the BSc Surveying and Mapping Science and BSc Geographic Information Science degrees, attracting approximately half of the graduates of recent years. For some time, the main employers have been in the offshore construction sector although in the last three years, we have seen sustained interest from companies working in dimensional control work on offshore installations. This year, offshore seismic employers have returned to the graduate recruitment market. What impact the recent fall in oil prices will have on graduate prospects in the offshore sector remains to be seen. Salary, often low – to mid £30k's, combined with lifestyle, travel and the intrigue of offshore work are the main attractions. There is though, some competition arriving in the form of good salary packages but an onshore lifestyle.

About four years ago, two major civil engineering contractors started to hire both placement students and graduates from our courses. With salaries in the mid/upper-mid £20k's, coupled with high profile projects such as Crossrail, a civil engineering surveying role has become an attractive prospect to our students. Roles for geomatics graduates in the civil engineering consultancy sector seem to be relatively few compared to contracting and offshore, although it is far from true to say that they aren't there; both survey and GIS roles are available. At the moment our worry is that where we don't have a good personal link in to an organisation, geomatics roles are lost in large HR machines that are trying to recruit several hundred engineering graduates a year. When the geomatics graduates don't appear, consultancies may start to look to civil engineering and geography degrees as a source of geomatics skills.

## Must it Really be a Masters?

GIS, a sector one might think is booming for graduate jobs, isn't. However, one area that is looking promising is that of civil engineering consultancy, specifically around transport engineering and management. In coming months, we will be working to try to build bridges in to GIS-using organisations and raising the profile of what a GIS graduate can offer an employer. But it's often a difficult starting position with employers seeming to be locked in to a culture of "needing" a Masters level of GIS education. Is this because a Masters level is required? Or the relatively greater availability of Masters GIS graduates? Or because experiments with non-geomatics graduates in GIS roles have failed and so the solution seems to be to go for Masters level?

The BIM revolution hasn't manifested itself at the graduate level yet. We hope it will. . . but will it? Or will employers fixate on computing science graduates for the data management and systems side of things, and commission other professions to lead the collection and coordination of data? A role, surely, suited to geomatics professionals.

## Land Loses Out

What of the land sector? Anecdotally, it's what many would like to do. Unfortunately, the salaries offered by most in the sector are not attractive. When compared with the salaries of offshore work, or the experience of civil engineering contracting where one can be "on the tools" and with a typical graduate-level salary, the land sector often struggles to retain the interest of graduating students.

It is also worth noting the equipment manufacturers and hire companies. At GEO Business last year, of the 26 alumni who updated their details with us, 11 were working in sales, technical support and hire with Leica Geosystems, Korec, Trimble, Topcon or SCCS.

## More to it than Coordinate-geometry

It would be churlish to suggest that geomatics graduates have enjoyed such good prospects in recent years owing to their number being

so few. Whilst conceding that this helps, unsurprisingly we would also argue that the skills and knowledge students develop during their degree make them attractive employees. What are those skills, knowledge and experiences that graduates may typically have?

The professional accreditation of both the RICS and CICES ensures a broad range of skills and knowledge, both professional and technical, are included in the curriculum. In addition, the degrees are set against the University's Graduate Skills Framework (GSF) that aims to ensure that graduates can independently self-manage, proactively interact and ethically apply their knowledge and skills in a global context. A more succinct interpretation is that accreditation and the GSF ensure that graduates have completed a genuinely "higher" education.

A great example of students developing and using their broad skills base is the recent British Virgin Islands expedition (see [http://youtu.be/v8jlg\\_eqjE](http://youtu.be/v8jlg_eqjE)) organised and undertaken by second-year students in summer 2013. Yes, it was a geomatics-based project, but the softer skills required around planning, organising, negotiating, and accountability were probably the more valuable experiences.

In addition to specialist, subject-specific study modules, other events and activities during courses allow students to develop a broad range of skills, knowledge and experience. For example, the annual Life During and Beyond Geomatics event brings students, professional bodies, employers, and other geomatics-related organisations together at the start of each year in a trade show-like setting. So far in 2014/15, the academic curriculum has been complemented by guest lectures from Atkins, Skanska, Shell, Murphy Surveys and the RICS, with visits to the Land Registry and civil engineering plant manufacturer Komatsu to look at GNSS machine control. The first and third-year field courses are also occasionally visited by equipment manufacturers to see and work with our students in the field.

## Not Locked In

Very few of the geomatics graduates for whom we have records, seek employment outside of the geomatics industry.

The RICS's James Kavanagh this year shared his belief with our students that the property business is changing towards being a data-driven industry. If this is the case, and as the BIM era evolves, geomatics graduates' spatial-literacy should ensure they are well placed to take on key roles. . . if employers know where to look for them.

Other professions can benefit from the professional, analytical, technical and spatial literacy skills geomatics graduates possess. In recent years, graduates not going into geomatics have joined the Army, the civil service and MoD, teaching, and migrated across to other disciplines such as rural practice, or project management.

There are also a few alumni now running their own survey practices. A recent alumnus already had his own geomatics company and completed his degree so as to progress further towards his own chartership and two alumni we met at GEO Business were now running their own practices.

Overall, the employment situation for geomatics graduates is positive but no party; the employers, the students, or the universities should not rest on our laurels. We will be exhibiting at GEO Business again this year. Do please come and share your thoughts and experiences with us – we'd love to talk and work with you.

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<https://www.gim-international.com/content/article/where-do-geomatics-graduates-find-employment>

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