WELCOME!

WELCOME TO THE SPRING 2016 EDITION OF OUR NEWSLETTER FOR GEOGRAPHY, ENVIRONMENT AND AGRICULTURE AT THE UNIVERSITY OF HERTFORDSHIRE

ith the first semester of the academic year behind us, this Spring edition of our newsletter has lots of our activities to report on within the Geography, Environment and Agriculture subject group. Our highlight for the semester was our postgraduate awards ceremony where our MSc Environmental Management and MSc Sustainable Planning classes of 2015 graduated in the Weston Auditorium of de Havilland campus. We wish them all the very best with their future careers and studies.

VANISHING GLACIERS AT THE GALLERIA

In February Dr Phil Porter and Dr Martin Smart took part in the University’s first research showcase that was held at the Galleria shopping centre in Hatfield. The event was held over two days to show members of the public some of the research that goes on at the university. As well as displaying a mini melting ‘glacier’, they had a range of 3D imagery of the Everest region to show some of the glaciological research that is being undertaken to understand how these systems are responding to a changing climate. Phil and Martin were joined by their colleague Dr Ann Rowan from Sheffield University who leads the team investigating the state and fate of glaciers in the Himalaya. The team also includes postgraduates and academic staff from Aberystwyth University, the University of Leeds, and Northumbria University.

CAREERS AND PLACEMENTS SYMPOSIUM

In March the School of Life and Medical Sciences hosted the annual Careers and Placements Symposium where students who are currently undertaking a placement year return to present posters about their placements. This was a great opportunity for current students to find out more about the placements being undertaken. Placement students were also joined by their line managers who were able to talk to final year students about the range of careers in their respective industries. The award for the best placement poster went to Sophie Iddeson (right) who is undertaking a placement in the Transport, Access and Safety Unit at Hertfordshire County Council. The award for the best placement went to Joe Mortlock who spent a year working for environmental consultancy RSK Group.

LIFE AND MEDICAL SCIENCES RESEARCH CONFERENCE

Many GEA staff and students attended the annual Life and Medical Sciences Research Conference that took place in April. There was an exciting programme of talks and presentations from external speakers, academics and research students. The Vice-Chancellor, Professor Quintin McKellar, opened the conference, and Professor Achim Dobermann, Director & Chief Executive of Rothamsted Research, gave the first plenary lecture on the future directions of Rothamsted Research. Over lunch there was an opportunity for doctoral college students to present posters on their research and this was followed by an afternoon of interesting presentations and discussions in a number of themed sessions related to agriculture, food, and geographical and environmental sciences.
Ashley Lydiate, a BSc (Hons) Environmental Management graduate, decided to take an entrepreneurial approach to his graduate career. Upon completing his studies Ashley founded the Blue-Sky Greenhouse, which provides fun and interactive learning experiences for community groups and schools to educate and inspire them about some of the new and innovative soilless agriculture systems (also known as hydroponics) for growing food in cities. These methods are becoming recognised as a potentially sustainable way of growing food.

The Blue-Sky Greenhouse also aims to empower communities to start cultivating their own food by providing cost-effective infrastructure.

“Growing food is fun, rewarding and mentally stimulating. There is strong evidence to suggest that children who engage in even basic gardening and horticultural activities show improved cognitive and affective skills. It can also help those with behavioural issues and improve interpersonal and social skills. Research has shown that teaching children and young people how to grow food can also lead to an increase in fruit and vegetable consumption,” explained Ashley.

Through the University of Hertfordshire’s Enterprise Fund, Ashley received a £2,000 grant that helped him with the start-up costs of the business. Current students and those who have graduated within three years can apply to the Enterprise Fund for support.

The grant enabled Ashley to design his logo and produce marketing material, including a professional website and high quality brochures. The funding also helped with other important set-up costs, such as insurance and office address registration.

Ashley also took advantage of a practical three-day event, the Enterprise Launch Pad, which was hosted by the University. “I highly recommend this event to other students who are thinking of starting their own businesses - even if they haven’t got a solid plan.”

His company has recently applied for funding to enable them to purchase additional tools and materials to provide more in-depth, hands-on workshops.

“We have a six week workshop structure planned that we hope to roll out by the next academic year. Initially, we will be targeting secondary schools, and we are also working with other community groups to provide our current workshop programs.”

For more information on the Blue-Sky Greenhouse visit blue-skygreenhouse.co.uk
MOBILE-TICKETING IN THE SPOTLIGHT
NEW COLLABORATIVE PROJECT TO ENHANCE PUBLIC TRANSPORT ACCESSIBILITY

The University of Hertfordshire, in partnership with two UK Local Authorities (Hertfordshire and Northamptonshire), the University of Northampton and public transport providers are currently demonstrating how to develop a smart scan-on mobile ticketing (‘m-ticketing’) solution. A similar system has been developed for users of the Uno bus network in Hertfordshire. Staff, students and visitors of the University of Hertfordshire, as well as members of the public, can currently download a smartphone app (‘Intalink M-Tickets’) to purchase discounted bus tickets on a number of local routes. The phone is then used to display and scan the user’s ticket to speed up boarding times (aiming to enhance timekeeping) whilst also removing the potential barriers of needing to have cash to hand. So far the project has been a big success, with some routes seeing upwards of 20% conversion from paper-based tickets to m-tickets. This unique project was the first scan-on bus mobile ticket product used in the UK outside of London.

Based on the initial success of this Hertfordshire pilot, work is being conducted in Northamptonshire to establish similar smart integrated multi-operator solutions with the aim of enhancing the accessibility and reliability of public transport provision in the county. Funding from the UK Department for Transport ‘Network Northamptonshire Total Transport’ fund is being directed to improving the connectivity, integration and accessibility of rural transport networks, whilst forming part of a wider so-called ‘smart city’ solution that works towards delivering a broad range of desirable outcomes, such as those related to social mobility and inclusion. This means that m-ticketing will be expanded upon further in order to integrate other smart solutions and technologies that encourage more people to use sustainable modes of transport, as well as to improve the customer experience for existing users. The work has also demonstrated how partnership approaches in the provision and management of sustainable public transport solutions are critical to improving connectivity and accessibility.

One of the key challenges to address is related to the provision of public transport services in rural areas. In England these services are deregulated and have a lack of effective statutory backing and ring-fenced funding. Consequently, with reductions in funding to local authorities, funding for non-commercial bus services is being sharply reduced and many authorities are proposing to cease all funding for local bus services (Campaign for Better Transport, 2016). Projects such as this one may offer alternative cost-effective ways of providing local transport services in non-metropolitan areas, and thus provide the potential for unique future research opportunities.

Staff from the university, along with colleagues in the partner organisations, will be presenting the findings-to-date at the 44th European Transport Conference in October 2016.

PLACE MAKING CONFERENCE
ROYAL TOWN PLANNING INSTITUTE CONFERENCE EXPLORES INGREDIENTS OF SUSTAINABLE COMMUNITIES

In April the University of Hertfordshire hosted a Royal Town Planning Institute (RTPI) conference on Place making: Delivering Successful Places – From Concept to Reality. The conference looked at the key ingredients of successful place making and heard from a range of case studies to explore contemporary planning challenges and solutions for delivering strong sustainable communities. Key themes included the value of community engagement, the role of sustainability, and funding and delivery mechanisms. The event included a keynote presentation by the RTPI President, Phil Williams, on the role of planners in place making. The programme also included contributions from a range of highly respected practicing experts and researchers, including examples of place making from Grenoble by Dr Stéphane Sadoux (left), Director of the Centre for Research in Building Cultures at Grenoble University.

After the conference the University of Hertfordshire hosted an evening reception at the De Havilland Campus for RTPI members and Young Planners in the region to network with one another and meet the president of the RTPI.

Dr Alina Congreve, Principal Lecturer in Sustainable Planning, commented: “We were fortunate to hear a range of interesting presentations by some excellent speakers. I was particularly pleased to see the event so well attended by students and young planners in the early stages of their careers in Town Planning.”
In March 2016, the University of Hertfordshire’s MSc Sustainable Planning students took part in an international study visit to France and Germany to look at European approaches to planning, urbanism, transport and environmental management. The 6 day visit combined discussions, presentations and a study journal with city-trips, international case studies and walking tours. Here, one of the participating students shares their fieldtrip diary:

**Day 1: Thursday 17th March:** We travelled by Eurostar and stopped off in Paris for a few hours for lunch. We arrived in Strasbourg in the evening, dropped off our bags and ventured into the city centre to grab dinner. After taking in the beautiful architecture we stumbled upon an artisan brasserie (Brasserie de La Lanterne) which sold amazing home-brewed beer and traditional Tarte flambée, an Alsatian delicacy!

**Day 2: Friday 18th March:** On our first full field day we visited the Musee Historique de la Ville de Strasbourg in the city’s old slaughterhouse which included a replica 1:300 model of the entire city centre from 1715. Following this we were treated to an architectural tour of Strasbourg with Anker, a resident and Professor of Architecture who showed us the city’s distinct quartiers ranging from the Roman road system to recent French and German planning styles. In the afternoon the group visited a new mixed-use waterfront development that now houses the biggest library in Eastern France in a former dockyard industrial warehouse. Last on our itinerary was a trip to the Eco-logis development in Neudorf. We spoke to one of the residents of this self-built commune about how this model could be introduced in the UK and what it was like to live in such a building…it was also a great opportunity for a group photo!

**Day 3: Saturday 19th March:** After another evening exploring the city centre of Strasbourg we took a tram to the European quarter to undertake an Urban Design assessment of the area. Using field notes, sketches, photos and conversations with developers, we measured key Urban Design features such as walkability, scale and wayfinding tools. In our groups we presented a proposal of how the area could be improved to our fellow students and the staff. It was a lot of fun putting our newly acquired skills to practice and seeing what the other groups came up with. In the afternoon we had a chance to explore the city and we decided to go inside the famous Notre-Dame de Strasbourg Cathedral (world’s tallest building from 1647-1874) and then walk along the River Ile to the beautiful Petite-France quarter. Some of the student’s went to a local football match in the evening seeing RC Strasbourg Alsace beat Chambly 1-0!
Day 5: Monday 21st March: The highlight of the trip was Monday's visit to Freiburg in Germany where we spent a full day with Stefan seeing the city centre, new districts and trying our first bratwurst of the trip! After a few minutes walking around we quickly understood why the city is held up across the world as an international example of urban sustainability: never had we seen so many bikes, and some stops had trams arriving every minute! After touring the bustling city centre, we then visited two new districts in the Freiburg suburbs. Rieselfeld was first, with its dedicated tramway line, low-energy community construction housing, SUDs, allotments and ecumenical church this district was a great case study for a new sustainable community. We then moved onto Vauban, a former military barracks and now converted into an internationally celebrated example of a sustainable residential development. Green corridors, passive housing, child-friendly streets, they even had communal chickens! We were all inspired by what we saw in Freiburg and it was a struggle to list all the examples of best practice in our daily journal, without doubling our word limits!

Day 6: Tuesday 22nd March: On our last full day we visited Stuttgart, home to the controversial Stuttgart 21 development project around the city’s main train station where huge swathes of the city centre are planned to be developed and the current station terminus to be replaced with a high speed line connecting Paris to Bratislava. Following this we visited the new Stuttgart Bibliothek, a huge library with an inner chamber, tech and Virtual reality booths and a panoramic café and terrace on the top floor. We then jumped on the Stuttgart Metro system to visit the famous Weissenhofmuseum which was a series of bespoke designed homes by Le Corbusier, one of the 20th Centuries most influential architects. Although the homes were radical in their time, his idea of multi-functional places in rooms that capitalise both light and space still exist in architecture today. We then had a few hours to walk around the city, buy some German food and drink and souvenirs before heading back to Strasbourg for our group’s last meal: flambés and French beer all round!

Day 7: Wednesday 23rd March: With our daily journal completed and our suitcases full of continental snacks and souvenirs we ventured back home to St Pancras, returning with a fantastic set of case studies and ideas to help make planning, urban design and environmental management in the UK even better!
What is your current role?
I work in Network Rail’s Track Geometry Department

What does your role involve?
Track geometry examination is an essential and vital role in railway safety, as it ensures track design and its components meet strict standards to provide a safe and smooth quality ride. The geometry team within Network Rail is divided into three groups of those who collect track data on monitoring trains; those who examine the data to identify faults, calculate track longevity and communicate with engineers; and the engineers who fix the track. I belong to the middle group, so I’m responsible for identifying any actual or spurious faults with the track with regards to current standards, after which I produce a fault report to create an action plan to rectify any faults. This fault report is then distributed to the local Maintenance Delivery Units along the line for them to visually inspect the track to see whether it needs fixing. I also work with project managers in providing historical information on track quality to calculate the rate of deterioration. This can help decide the frequency needed for annual inspections or whether existing track equipment is suitable. Occasionally I also get the chance to travel on Network Rail’s monitoring trains or visit maintenance units, so I experience all aspects of the supply chain.

How did your degree help you to get the job and what have you done since graduating?
Although my job is engineering-based, studying environmental management has directly and indirectly helped me with my job. For instance, environmental knowledge has helped me with explaining and predicting the rate of track quality deterioration as numerous external environmental factors in the weather influence track quality and the stability of the track bed. Network Rail also has a very good environmental policy, and I’ve been able to see how Network Rail is actively involved in managing vegetation along its track bed to provide suitable corridors between protected habitats. However, I’ve found the transferable skills that I’ve developed throughout my degree have really helped me to perform my job to a high standard as my role involves a lot of precision and analytical thinking. My ability to communicate is also essential for justifying the need to fix faults and provide workable recommendations for inspection.

Did the work placement within the degree benefit you?
Yes, it did. During my placement I was a research assistant at the Northwest Agricultural and Forestry University in Shaanxi Province, China, where I mostly spent my time examining soil and water pollution, so I had to follow strict laboratory procedure to see whether samples were within government standards. Some of this research also helped with my dissertation as I was allowed to collect samples along the Wei He river to examine whether recent government programmes have helped to improve river water quality. My placement also taught me the importance of being dedicated to my work, as others relied heavily on the information I had to provide. But I would say the most important thing I learnt was being able to build a good relationship with my work colleagues so I could breakdown any communication or cultural barriers, enabling me to learn new skills and knowledge. By doing this, I was able to enjoy my placement.

How would you summarise your University experience?
An amazing experience which has allowed me to develop my academic skills and understanding of environmental science due to the support I’ve received from the department, whilst broaden my cultural understanding of the UK and the world due to the friends I’ve made. Overall, I have thoroughly enjoyed my four years as a student at the university.

What advice would you give to new students starting on the programme you completed?
Be ambitious with what you want to learn from your degree, and don’t be afraid to stand out or do something different if it is something that interests you, as the department will always be willing to help guide enthusiastic students. Also take any opportunity to broaden your skills and knowledge, because it will help you decide or provide more opportunities when looking for a career path. But overall, make sure to enjoy yourself as university is a fantastic opportunity to improve your social and cultural awareness of both the UK and the world.

What level of degree did you achieve?
BSc (Hons) Environmental Management (First class)
The calm before the storm at Protektorbreen

“Gosh aren’t you lucky to go to such a beautiful place!” “Wow you have an amazing job!” “It must be wonderful seeing all those polar bears!”

These are the sorts of comments that I regularly receive when I give talks and lectures about my research investigating shrinking Arctic glaciers. Despite never having seen a polar bear during a twenty-two year Arctic research career, being a Physical Geographer and a Glaciologist is indeed a great job and working in some of the last true wilderness areas on Earth is of course a huge privilege, but there is a ‘but’! Much like the material we post on social media, we tend only to ever talk about the high points, we tend only to show pictures taken when the weather is fine and everybody is happy and we tend only to focus on the positive findings of our research, not what went wrong! This sunny portrayal of life masks the truth of being a field scientist and the somewhat sobering reality that we regularly have to face when things don’t quite go according to plan!

Rewind to August 2015 for example, and it was with much excitement and anticipation that I board a small rigid inflatable boat to head off for a two-week field camp to study the hydrology of Protektorbreen, a small Arctic glacier in Spitsbergen. We pull up on the beach in fine sunny weather, drag the boat up the beach and securely anchor it to the shore and it’s not long before we have all tents erected, a cup of tea on the go and a hearty meal bubbling away on the stove. Inevitably however, someone has to be first to christen the toilet tent and that someone was me! Now let me explain a few functional issues with Arctic toiletry; because we are in the pristine Arctic wilderness we can’t leave anything behind, so when it comes to the toilet, everything (and I do mean everything!) has to be collected and bagged and taken out by boat. We are issued with rolls of biodegradable bags that are single use; ten bags per roll and you simply stretch one over a plastic seat, answer the call of nature, remove the bag, tie it up and place it in a bombproof, super heavy duty,
impossible to leak from' large bin bag, which is then gingerly removed at the end of the camp and taken back to base. I did wonder why there was only one roll of bags in the toilet tent on my inaugural visit and so upon return to the mess tent, asked where the others were? The horrific realisation soon dawned that the English to Norwegian translation that should have resulted in ten rolls, comprising ten bags each being supplied, had been mis-interpreted as one roll of ten bags! However, ‘adapt and overcome’ is the name of the game, so we have no option but to engage in some rather clever (but not especially pleasant!), reusing and recycling; Environmental Management in action!

So having been fed, watered and visited the bathroom, it’s time for bed. There’s nothing quite like a night under canvas in the great outdoors. Zip up the sleeping bag, open a good book, have a relaxing read and then switch off the light ready for a night of restful sleep. OK, slight problem, we are at 78 degrees north and so even at midnight, it is broad daylight and bright sunshine illuminates the bright orange tent and even with eyes shut its like someone is shining a torch directly in my face! Cue much messing around with various socks trying to fashion a makeshift eye shade to block out the light. Inevitably it only partially works, so let’s adapt and overcome again and pretend that we are on a beach in the tropics enjoying the warm glow from the sun and forget that I’m lying in a tent with a couple of walking socks wrapped round my head; sorted, so now it’s back to trying to get that relaxing sleep. Now, if you have ever visited a campsite you will know that tents offer zero sound insulation; inevitably someone nearby will snore like a southbound freight train and this camp was no exception. No problem, pop some earplugs in and all is fine…until you realise that you really don’t want to have your hearing cut off when asleep, as this is polar bear country! And suddenly you feel rather vulnerable. The net result of this realisation is sitting belt upright in sleeping bag, sock removed from head, earplugs out, one leg out of sleeping bag ready for rapid exit and now I am wide awake, sun streaming into the tent, the heavy goods train from Newcastle to London constantly rumbling by in the tent next door and every other slight noise immediately sounds like a hungry bear snuffling around outside! Anyway, it’s all in the name of science, so after a night of no sleep at all and a bleary-eyed breakfast it’s up onto the glacier to install instruments; “This is more like it! Science in the wilderness and look at those amazing views! But hang on a minute, those clouds in the distance don’t look too friendly and now that the sun has gone in it’s rather chilly and the wind is picking up…..” So it’s back down to camp before the gathering storm hits, but not to worry, this is Spitsbergen and its summer, how bad can it really be? Probably just the usual light Arctic summer shower…..

Two hours later all hell has broken loose! The wind blowing off the glacier is ferocious and is bending the poles of the tent to such an extent that even lying down I’m getting regularly slapped in the face as the gusts flatten the tent! At least it’s not ripping the guy lines out or breaking the tent poles; at least not yet! Peaking my head outside into the maelstrom, next door things look much worse, as loose guy lines are flailing about, tent poles can be heard snapping and tent pegs are being ripped out, but there are no signs of life from inside the tent so I decide I had better try and wake the occupants and help baton down the hatches! Well would you believe it, but despite the deafening roar of the wind and the sounds of tents collapsing and scientific and camping equipment flying around, from within the rapidly collapsing tent I can hear that the southbound freight train is still making steady progress towards London….! I see that our glacier weather station is leaning at a worrying angle…and is that anemometer really recording 95mph? Well it was before the winds get too strong and the whole thing collapses! More worrying however, is the precarious state of the tent, or more significantly, the imminent demise of the toilet tent and the ghastly prospect of the ‘bag of bagged bags’ housed therein making a bid for freedom! Sprinting flat out gets me there just as lift off is about to take place, saving our pristine Arctic wilderness from some deeply unpleasant pollution issues! A few rocks piled on the remains of the tent keeps everything in place, but while gathering rocks I happen to glance out into the fjord and see a small boat bobbing about. “Who on earth would go for a boat ride in weather like this? At least our boat is safely anchored high up on the beach out of harms way…..”. I’m sure you can work out the sorry end to this particular story! Yes, the winds were powerful enough to rip the metal chain and anchor from their deeply embedded position in the shingle on the beach and blow the boat, together with extremely heavy (and very expensive!) outboard motor way out into the seething, boiling mass of storm-lashed fjord waters. How on earth do we explain this to the people we hired it from and how on earth do we get it back?! Thankfully there is a happy end to this story; the storm eventually passed 24 hours later, the boat was towed back to shore by a passing tourist vessel and the science was completed. We even had an emergency delivery of extra toilet bags to make everyone extra happy! ‘Geography gives you options’ states a Geographical Association advertisement; I couldn’t agree more, but when chaos surrounds you in the middle of nowhere and it’s all going wrong in the pouring rain, I sometimes wonder why I opted to become a field-based Geographer who studies slowly moving blocks of ice in cold places? Desk-based research would certainly be a lot less stressful, but definitely a lot less exciting!