Who am I?: Natalie Lamb

PhD student with Anglian Water and the University of Sheffield

Volunteer Ranger with Nene Park Trust

Researcher of chemical free drinking water treatment

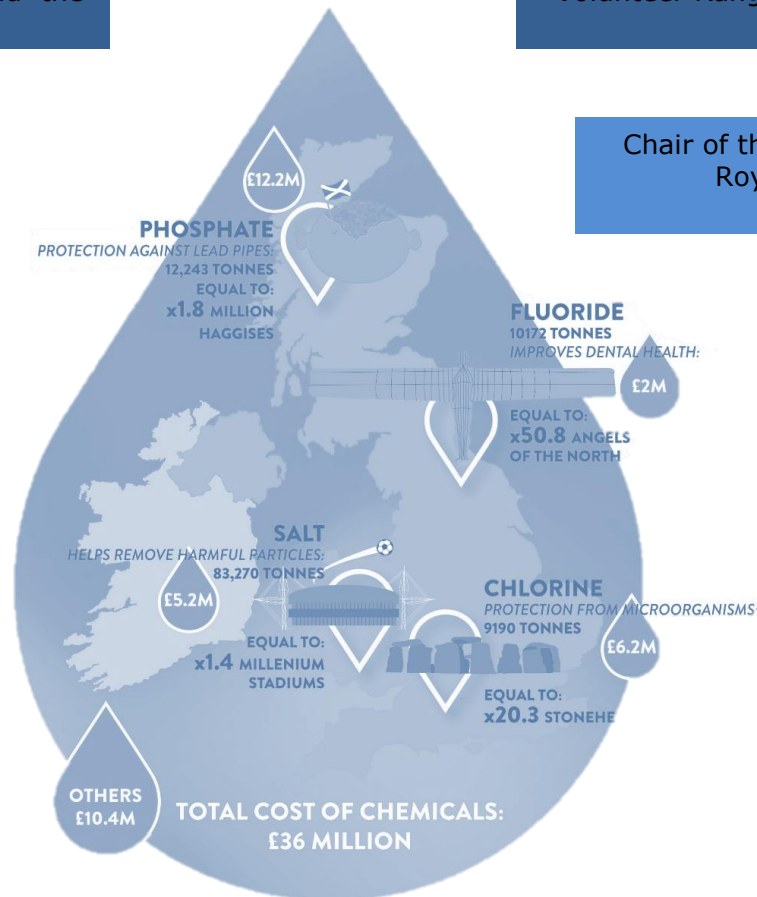Chair of the East Anglia Branch of the Royal Society of Biology

STEM Ambassador

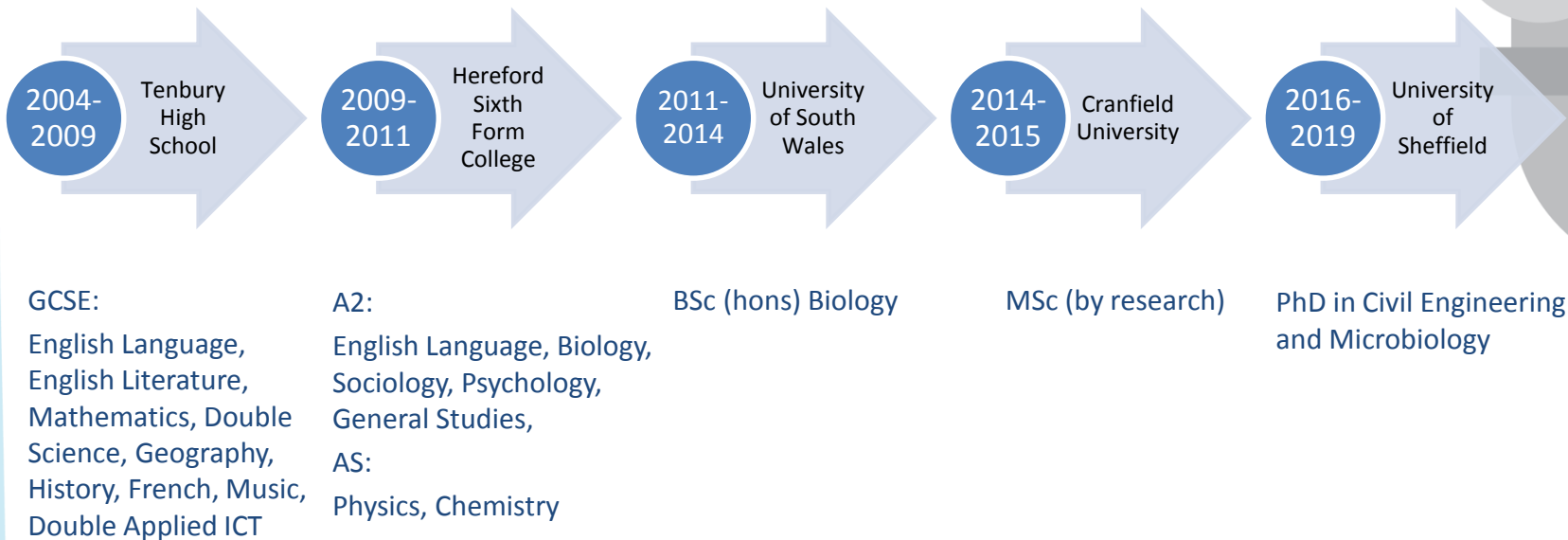PhD Mentor with The Brilliant Club

Scuba Diver

Video Gamer

Avid Reader

Netflix Binger

PHOSPHATE
PROTECTION AGAINST LEAD PIPES:
12,243 TONNES
EQUAL TO:
x1.8 MILLION HAGGISES
£12.2M

FLUORIDE
10172 TONNES
IMPROVES DENTAL HEALTH:
£2M
EQUAL TO:
x50.8 ANGELS OF THE NORTH

SALT
HELPS REMOVE HARMFUL PARTICLES:
83,270 TONNES
£5.2M
EQUAL TO:
x1.4 MILLENIUM STADIUMS

CHLORINE
PROTECTION FROM MICROORGANISMS
9190 TONNES
£6.2M
EQUAL TO:
x20.3 STONEHE

OTHERS
£10.4M

TOTAL COST OF CHEMICALS:
£36 MILLION

@Natnotgnats
StartingMySciencePhD

What have I done?

2004-2009 → Tenbury High School

2009-2011 → Hereford Sixth Form College

2011-2014 → University of South Wales

2014-2015 → Cranfield University

2016-2019 → University of Sheffield

GCSE:

English Language, English Literature, Mathematics, Double Science, Geography, History, French, Music, Double Applied ICT

A2:

English Language, Biology, Sociology, Psychology, General Studies,

AS:

Physics, Chemistry

BSc (hons) Biology

MSc (by research)

PhD in Civil Engineering and Microbiology

What does a typical day look like for me?

Office in Industry (all available days)
- 7:45-8:30am travel to the office
- 4:30-5pm travel home from the office

Work from home (once a week)
- 8am start work
- 5:30pm finish work

Office in University (once a fortnight)
- 6-9:30am travel to University of Sheffield
- 3:30-6:30pm travel home from University of Sheffield

Tasks: writing literature reviews or thesis chapters, analysing preliminary results, catching up with emails, ensure my steering group and supervisors are caught up with my progress, apply to talk at conference, organising travel/calendar

Sampling Schedule
- 8-10:30am travel to experimental site
- 10:30-12:30pm take samples, basic analysis on site
- 1-2:30pm travel to laboratory
- 2:30-5pm analyse samples in the lab
- 5-7:30pm travel home

Tasks: take samples from experimental sites, do basic site analysis (e.g. chlorine, temperature, turbidity), read meters, record data on site, check everything is running correctly/solve any problems, do complex lab-based analysis, record results

What does a typical day look like for me?

Teaching
- PhD Tutor with The Brilliant Club
- 2h slots once a fortnight (go to industry office after)

Conferences
- Discuss research with a poster or presentation
- 1 international per year, 3-4 UK per year

Training
- Usually at The University of Sheffield
- 2-3 per year

Tasks: explain my research to specialised and non-specialised audiences, network with other scientists and engineers, keep up to date with other research, improve and build on current skills
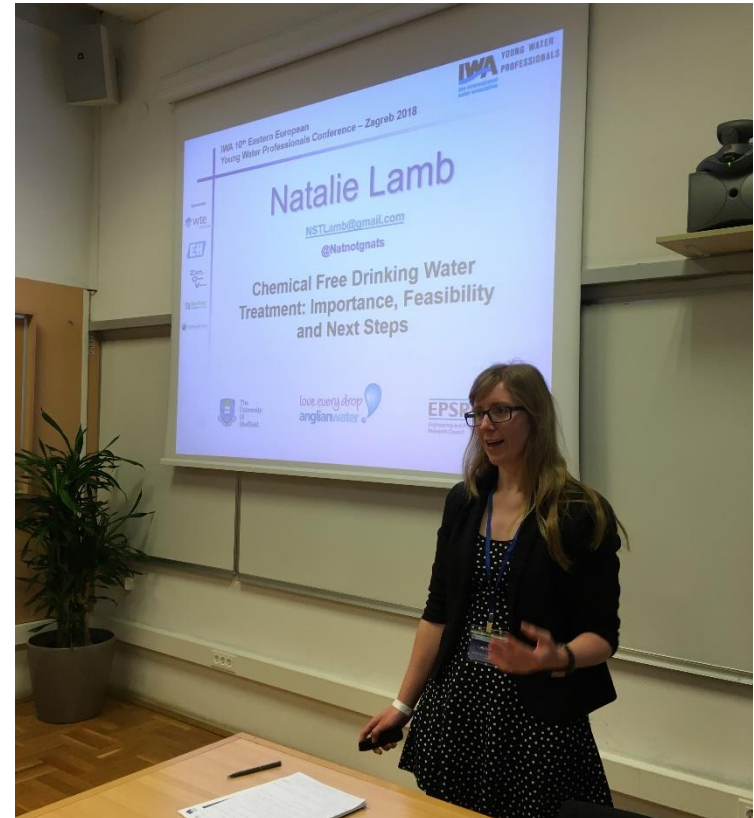
What are the best/worst bits about my PhD?

Every day is different

I receive industry funding

Travel

Freedom

I am an expert in my field

Fixed contract

What can help you do a PhD?

Have a good reason to do a PhD
- Did you love your previous research?
- Are you passionate about the topic area- what is your connection to it?
- This is not a stepping board to a job or a good CV or the title of Dr

Useful skills
- Good time management
- Ability to work independently
- Strong communication skills
- Patience
- Problem solving skills- things go wrong. A lot!
- A good support network: family, friends etc. It can be a draining process
- Motivation
- (All of this can be worked on during the PhD)

Work experience
- Do an MSc (by research) to get a taster into PhD life without the commitment
- If you want to do a lab based PhD, do some lab based work experience. You might find out lab work on a day-too-day basis is dull for you

Talk to a PhD student
- It's not easy- things go wrong. A lot!
- Get an honest opinion (and tips!) about what it was like for them
- Listen to them but ignore their recommendation to do/not do it- this is your choice

Take home messages

Anyone can do a PhD- motivation and patience are more important than intelligence and knowledge

PhDs are difficult- think carefully before doing one and make sure it's right for you

An industry PhD is a good mix of academia and industry but can be hard to find- make contacts now

Whichever path you choose, try to keep a strong support network of family and friends behind you and have hobbies outside of work

Feel free to contact me- at this event or on Twitter or on my blog

Natalie Lamb
@Natnotgnats
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