Imperial College London

Health & Safety Matters

BIANNUAL NEWSLETTER OF SAFETY AND OCCUPATIONAL HEALTH

SUMMER 2021 / ISSUE 5

VIEW

PAGE 2 **The COVID ISSUE**

View our selection Health and Safety Matters in electronic format

Welcome to the summer 2020/21 edition of the health and safety newsletter

Safety Department webpages

You will find current guidance and COVID advice on the Safety department website at

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Surrinder Johal,
College Safety Director

Welcome to a special version of the Imperial College London Health and Safety newsletter. The College has changed over the past year, perhaps permanently so. The way we interact with each other and the way we work, research and study has been redefined. The way the university teaches has taken on a new definition. Things won't be the same going forward, but health and safety has been a constant throughout this period of intense change – indeed, it's taken on a heightened significance.

Across this special edition covering an unprecedented period in our history, you'll read about some of the real life experiences of frontline Imperial staff in combating the virus, and adapting our ways of working to ensure

Imperial is at the forefront of moving the Further Education community forwards. The CCT Hub has been an integral part of our response to the pandemic, and Leigh Turvey explains how it works on Page 3. Guy Fairhurst on Pages 4 and 5 talks about the issues arising as a Building Manager for some of the College managed buildings. Occupational Health updates us on their ongoing work to support those working both on-site and off-site during the past year. Finally, we say farewell to Julia Cotton in our staff spotlight. Julia has served Imperial and Further Education for nearly 40 years, and we wish her well.

Some of the articles reference the state of play at that moment in time – indeed, some of them pre-date the first COVID-19 vaccinations in the UK, which lest we forget were only a few months ago. But it just reinforces how quickly the pandemic has moved, and how quickly the situation can change in response to this. By the time the next newsletter comes out, the landscape will no doubt be very different!

Introducing the CCT Hub

The College COVID-19 Contact Tracing Hub (CCT Hub) is part of Occupational Health, and supports staff and students, complementing the NHS Test & Trace service.

"The team is co-ordinated by Leigh Turvey, with clinically trained contact tracers: Mary, Rachel, Debbie & Tracy and administrators Lucy, Jo & Agueda".

The CCT Hub is here to help you if:

- you are experiencing or displaying symptoms of COVID-19
- you've had a positive test result for COVID-19 or
- you've been in close contact with someone who has

As soon as you experience symptoms or have a positive test result, please report immediately to the CCT Hub, completing the form, at present, via the College website. From 12 April 2021, both staff & students will be able to report via MyImperial. One of the clinical contact tracers will telephone you for further details of your movements and close contacts.

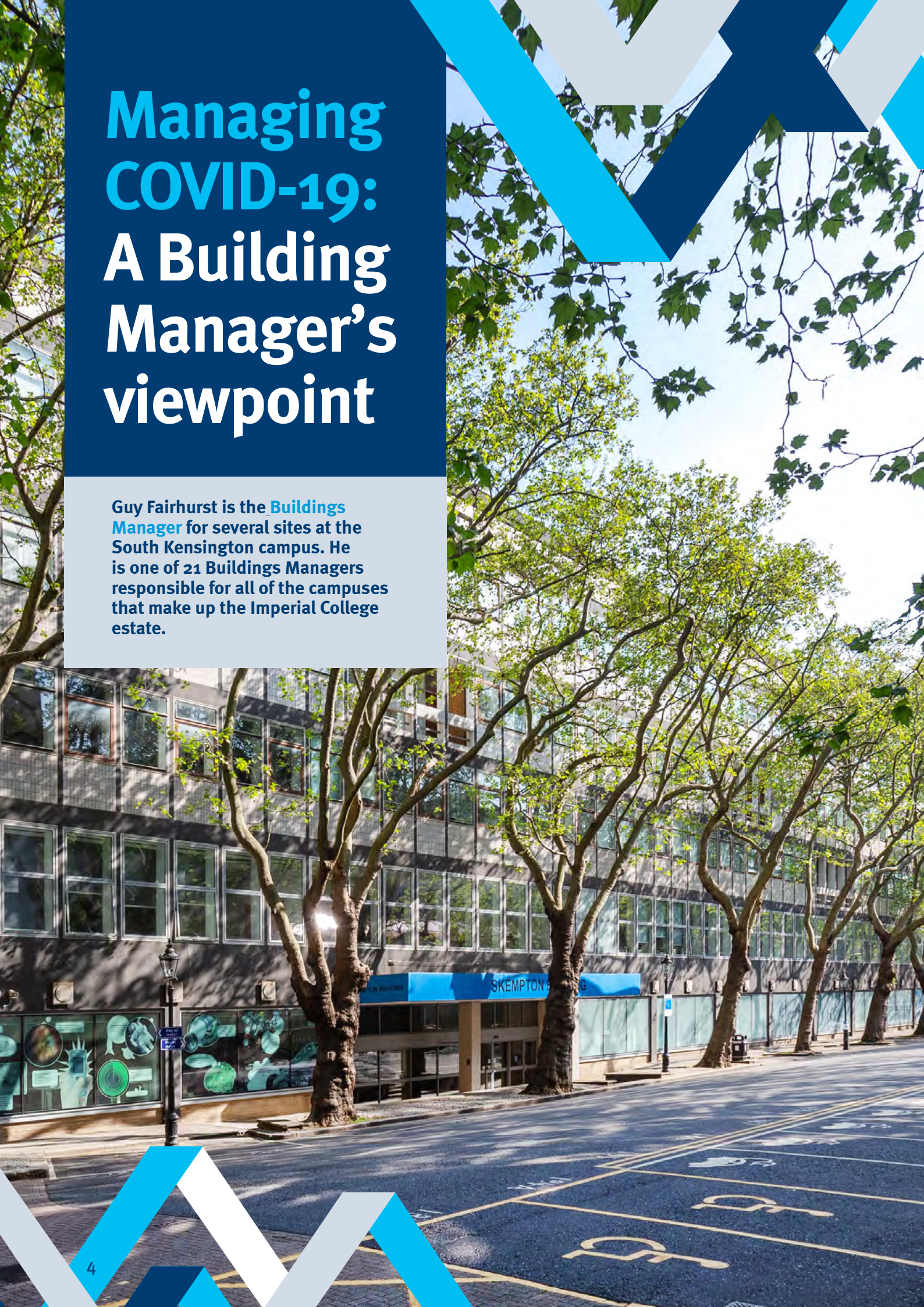
The CCT Hub will then advise on your isolation period and contact your "Imperial College close contacts" to advise them to self-isolate.

Prompt reporting to the CCT Hub helps to prevent spread of this virus, and keeps the College environment safe for all staff and students. This also enables the CCT Team to determine quickly if there are several cases occurring in parts of the College, and then with the Safety Team, look at measures to control and prevent further spread of the virus. You are still required to report symptoms and/or positive test results to the CCT Hub if you are working away or studying remotely away from the College.

Please keep the College safe - if you have symptoms/a positive test result – report promptly to the CCT Hub – thank you.

Managing COVID-19: A Building Manager's viewpoint

Guy Fairhurst is the Buildings Manager for several sites at the South Kensington campus. He is one of 21 Buildings Managers responsible for all of the campuses that make up the Imperial College estate.



It was clear a week or so beforehand that the lockdown was coming. Nevertheless, the speed of its effect surprised me. In the couple of days before its introduction most of the buildings I manage (Bessemer, Business School, CAGB RSM and Skempton) went from operating at full throttle to mainly empty. I was going to be faced with the twin challenges of working with colleagues to close down buildings and, later, reopening them. Furthermore, initially at least, I was going to be doing it from home.
At first this seemed a daunting prospect, but soon a way forward became clearer. The trick was not to over think the COVID-19 situation as a new issue, serious and unprecedented as it is, but for me to try to understand as quickly as possible its effect on my day-to-day work based on my knowledge of the buildings, the people in them, their activities, and then introduce measures to make the buildings as safe as possible. All this, of course, underpinned by College guidance.

Construction and minor works projects stopped working on site, meaning much less cleaning needed to be done. Ventilation was turned off (or down) in non-critical areas because people were not there to use it. I had information from departments about the areas of buildings still occupied, and here services were maintained. Closing down large chunks of buildings had not been too bad, but it was not long before thoughts turned to the measures needed in readiness for reopening them and, in particular, how to implement what was at the forefront of most people's minds; social distancing. At first departmental colleagues and I thought having lots of one-way systems in the communal areas of buildings would facilitate keeping people 2m apart. However, the layout of the buildings I manage meant this was feasible only for a few staircases, but hardly any corridors.

Most communal areas stayed two-way to be supported by signage encouraging and reminding people to maintain social distancing. That brings me to the challenge, I would like to call it something else, of installing suitable signage. Essential, yes, but hugely time consuming and not much fun to do. The directional signage has been supplemented by notices from various sources giving COVID-19 guidance and advice. If any more signs are needed, we first have to build some more walls.

Building Managers' jobs are not intrinsically about buildings, they are about the people in them and supporting their myriad of activities. The pandemic has highlighted this and the different challenges we face. I have mentioned some of the buildings I work in being like the Marie Celeste; on the medical campuses, for example, building management colleagues working with their NHS counterparts would report an entirely different situation.

I work more closely with in-house maintenance colleagues than any other group of people. You can't maintain a pump on a Teams meeting and, consequently, they have remained on site from day one of the first lockdown. It's not just their hard work, but their approach to it too. Good working relationships are always fundamental, but the pandemic has brought the importance of wellbeing and looking after one another into even sharper focus. The rapport and camaraderie within the maintenance team and my work with them has been a high point for me during these strange times.

Worldwide the pandemic has given rise to seemingly endless different opinions about how to manage it, and the convictions with which they are held. Of course, it has been no different at Imperial College. As a Building Manager in the thick of the day-to-day activities, either on site or on Teams, it has been fascinating working with colleagues with such wide-ranging opinions on the same pandemic related issue. COVID-19, or no COVID-19, rational and reasoned thinking usually leads us to a balanced, common sense conclusion.

COVID Safety at Halls

Clare Smith - The approach that has been taken to achieve this can be divided into three categories:

1: To ensure that the safety measures we have in place at halls are robust enough to reduce the risk of transmission

2: To devise stringent outbreak management protocols for dealing with suspected and confirmed cases.

3: To encourage people to follow the rules and challenge behaviours.

1: Reducing Risk of Transmission

Our halls are a unique challenge in being made COVID safe. Unlike workspaces, they are also student's homes and, with the high proportion of remote learning this year, any rules implemented to ensure health and safety had to be carefully balanced with the needs for comfort and enjoyment of their homes. Minimising transmission was the priority, but some of our students are arriving at University for the first time, and we had to avoid the perception that rules were too draconian or arbitrarily enforced.

Creating the foundational safety procedures that could be universally applied was the first step. This involved a lengthy process that drew upon expertise from across the College and Government.

These fundamentals included: 1) the conversion of all twin rooms to single-occupancy 2) wearing masks in all communal areas (except students' own kitchens) 3) setting maximum room capacities 4) lift restrictions 5) providing sanitising stations at entrances and cleaning supplies in common bathrooms and kitchens 6) enhanced cleaning regimes were also introduced across all halls.

The most challenging change was how to delineate households in halls of wildly varying sizes and compositions. Ultimately, it was determined that a household would be determined on the usage of a shared kitchen. Students wouldn't be able to cross between households socially – a significant change from how halls operate in 'normal times'. The size of these varied from 6-8 in Woodward and Kemp Porter, to over 30 in Wilson House, and would form the crux of our outbreak management procedures.

2: Outbreak Management

Despite these measures, it was realistic to assume that outbreaks would still happen. The challenge was ensuring that we were able to quickly locate and control it, whilst supporting the household involved. Depending on the reason for self-isolation, we established different procedures that residents are required to follow:

- Students arriving to halls from overseas, or identified as close contacts, should remain in their rooms as much as possible during their isolation period, however, they are permitted to use their kitchens and collect deliveries from reception ensuring they are adhering to the hall safety policies.
- Students with COVID-19 symptoms or positive test results should not leave their rooms for any reason, except in case of an emergency. If students are not in an en-suite room, they are moved to one within the hall to complete their isolation. At this point, their entire household 'zone' goes into isolation.
- Reporting of outbreaks is coordinated by the CCT Hub

To help support those required to self-isolate in their rooms, free food support is provided by Campus Services, including a hot evening meal on weekdays. We provide residents with freshly prepared, nutritional meals as well as catering for three different dietary preferences (meat/fish, vegetarian or vegan).

All halls have 24/7 wardening support, and the wardening teams are regularly reaching out to students self-isolating whilst the Student Support team have ensured that virtual support is available to all students who needs further guidance - including mental health services, counselling and MoveFromHome exercises.

3: Encouraging Behaviours

Engaging with students on these rules was fundamental. In order for them to succeed, they had to understand the rationale behind them and 'buy into' their role in keeping each other safe. The College's central Protect and Respect campaign was used in halls to encourage considerate behaviour, as well as regular communications from wardens and Hall teams. However, where repeated breaches of rules have occurred, stronger enforcement and disciplinary measures have been taken.

It is too early to be certain but, across the Autumn term, the incidences of COVID in halls has remained exceptionally low, especially when compared to other well-publicised occurrences at other institutions. Students have been very diligent in sticking to the rules and, supported by the network of systems we have in place, we hope that this progress is able to be maintained throughout the academic year.

Occupational Health updates

Occupational Health (OH) continue to hold on site clinical activities for staff and students during the lockdown.

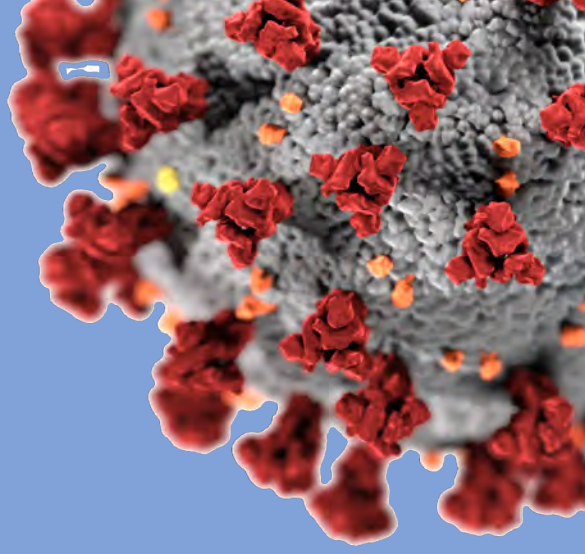
In the Autumn term, OH ran mass clinics for staff and students. The heavy footfall of staff and students meant that at times the team saw up to 100 clients a day. To ensure safety of staff and students, the department was made COVID-Secure.

All clinical staff were provided with Personal Protective Equipment (PPE) – visors/goggles, surgical masks, aprons, and gloves due to the close proximity when administering vaccines or taking blood. It was and continues to be mandatory when undertaking clinical activities.

Non-clinical staff also comply with social distancing - reception support is provided from behind Perspex screens and face coverings are worn by the whole team in line with College guidelines for shared spaces. OH service users are also required to wear a mask at all times. The OH team are also donning a new uniform.

New chairs for the clinical rooms have been purchased to ensure they can be wiped down between each client. Wipe down chairs are also placed in the reception area. All desks have alcohol gel placed on them for staff to clean their hands regularly. Gel is also available for clients to use upon entering and leaving the department.

The Occupational Health team have recruited an Advisor for 3 days a week, who started in November 2020 to assist with all clinical activities. The COVID-19 Contact Tracing Hub (see page 3) staff are also a part of the OH team, who are supporting the College in identifying staff or students who may have been exposed to coronavirus, advising accordingly and therefore minimising transmission in doing so.



Beth Wallis – being a secondee in the Safety team during COVID-19!

My secondment with the Safety Department (and COVID-19)

At the end of last summer, I completed a 6-month secondment as a Trainee Biological Safety Officer within the College's Safety Department. I applied for this role as I wanted to combine my interest in safety with my background in biology to further my knowledge of Biological Safety and to explore whether I would like to pursue a career path in this discipline.

My secondment exposed me to a wider range of higher risk laboratories than I had previously seen in my current department. With this, came the opportunity to meet some great people in departments and campuses further afield - as well as those within the same building and campus as the one I usually work in. This gave me a fantastic insight into the overall structure of the University, as well as the various Campuses, Departments/Divisions, and how they are each individually structured and specialised.

I primarily worked within the Biosafety team, which I owe a huge thank you to, for exposing me to aspects of the College which have really built my knowledge, my skills set, as well as my confidence in decision making. One of my highlights of the secondment was taking a lead role in a couple of containment level 3 (CL3) laboratories, from start to finish and following up actions from my report. Relatively soon after the completion of the annual CL3 laboratory inspections, the College (alongside the rest of the Country) went into round 1 of lockdown.This was an incredibly strange and unpredictable time for every single employee of Imperial and everyone across the world. Being part of the College's central Biosafety team during an outbreak of a Biological outbreak was equally as challenging as it was rewarding and enjoyable. Thankfully with the direct support and incredible teamwork of the Biological safety team, each individual of the wider safety department, and numerous members of the College, we all managed to get through the first few hectic months (and a mountain of Bio1 risk assessment forms). It's truly impressive the magnitude of research capabilities we have here at Imperial and if I hadn't had this opportunity I would never have had the chance to get an insight into the range of projects (as well as the fantastic facilities) we have across our sites.

Despite only being with the Safety department in person for a short time, I still felt incredibly welcomed and part of the team when we adapted to remote working. I am very grateful for the experience and to get to know each member of the team by working on various pieces of work (not just related to Biosafety). I really enjoyed the daily virtual catchups with the Biosafety team where we brought one another up to date with various projects and their progress towards approval (a particular highlight for me was Marian's daily dose of 'chicken cam' in her garden). They all taught me and showed me so much in my short time with them. Now I am back in Bioengineering, I still frequently reach out for advice from members of the team, who are always incredibly helpful.

I would really encourage anyone who is interested in either a career in Safety, or widening their knowledge of campus wide research, to do a secondment with the Safety Department – especially if it is in Biological Safety!

Provost safety awards

The 2020 Provost's Awards for Excellence in Health and Safety winners were recognised for their ongoing commitment and dedication to improving the safety of students, staff and visitors to the College.

Individual category

Eifion Nightingale
Ken Keating

Team Award category

Security:

Terry Branch
David Gordon
Necats Demir
Sonia Da Silva

Move Imperial:

Zuzana Zabielna
Christopher Adams
Mark Rawley
Nadesh Ramanathan

Highly Commended

Department of Life Sciences Technical Support team:

Alison Hunter
Lukas Bukowski
Olawale Shobowale
Javaid Iqbal
James Mansfield
Fiona May
Dina Fonseca
Alex Sierra Rodriguez
Daniel Peckman
Steven Swan

Occupational and Environmental Medicine Group:

Paul Cullinan
Johanna Feary
Anthony Newman Taylor
Jennifer Welch
Meinir Jones
Chris Allan
Mandy Thorpe

Professor Ian Walmsley, Provost of Imperial College London, said: **"I want to congratulate all of our award winners and highly commended nominees who have made outstanding contributions to health and safety within their departments."**

"Your dedication and commitment to drive change has benefited colleagues directly as well as creating wider impact on the quality of the research, education and work environment at the College and other institutions."

The Security team were jointly awarded the Team Award alongside the Move Imperial team. Nominated by Claire O'Brien, Director of Occupational Health, the Security team were singled out for their delivery of first aid support across the College:

"The Security team are unsung heroes in maintaining the safety of the College community. They support Occupational Health in providing first aid to staff and students, and we have seen the professionalism with which they communicate with and assist members of the community when they are unwell."

Terry Branch, Head of Security, said: **"It gives me immense pride to win the Provost's Award alongside my team: David Gordon, Necats Demir and Sonia Da Silva. Helping staff and students is a daily task for us, but sometimes we are faced with exceptional challenges, from staff and students who hurt themselves while on campus or who become very unwell."**

The team have won their award for working speedily to save the life of a man having a heart attack on campus. **"He was not responding and had no pulse," Terry explains. "Our first aid training kicked in and the team quickly brought out a defibrillator and began resuscitating the individual. They cleared the surrounding area by placing screens around the scene and David administered CPR which saved the man's life."**

Feedback from the London Ambulance Service confirmed that the Security team had taken the appropriate actions while giving CPR. Terry says the team have recently undertaken trauma training to continuing enhancing their skills and have continued to patrol and support those on campus during lockdown.

"I want to thank the team for the work they have been doing daily and the lives they have saved. It has been a tremendous effort."

The Department of Life Sciences' Technical Support team, led by Technical Operations Manager Allison Hunter, have won the Highly Commended Award for prioritising safety during the autoclave replacement project, which started three years ago. The project aimed to replace the autoclaves – devices that are used to sterilise glass and plastic consumables, media and waste – while still allowing research staff to continue carrying out their work in research facilities at the College during the replacement.

Ana Pedrero-Llamas nominated the team and wrote: **"The team of technicians has gone far beyond their normal roles by working longer hours to maximise the operational capacity of the autoclaves on site, so that safety and operational requirements would not be compromised."**

"Their pragmatism while implementing alternative processes to main the safety of those working within the areas they provide support to, as well as preserving the quality and integrity of the research work being conducted, is remarkable and to be commended."

Allison Hunter, who led the team, said: **"Our existing autoclaves were around 20 years old and not working as well they once did. Around 1,000 members of research staff use our service for their research work, and so our main aim was to replace the existing autoclaves but keep the research facilities open for staff to continue working."**

"It's a pleasure to be recognised for doing what we thought was our normal job roles," reflects Allison. **"We all took great care during this project, especially Fiona May and James Mansfield, and it is lovely that the team has been singled out for their stellar efforts."**

"My team have been working around the clock to log data, review our waste practices, and have also reduced the amount of water used during runs, as well as the number of new autoclaves we needed to purchase, which has saved money."

Allison also stressed the importance of research facilities upholding high safety standards: **"Good health and safety is everyone's responsibility. We benchmarked against other university facilities and were very grateful for the support from the Faculty and College's Biological Safety teams as we reviewed our practices. College and Faculty Estates and Purchasing Services staff were other key participants of this major facility refurbishment."**

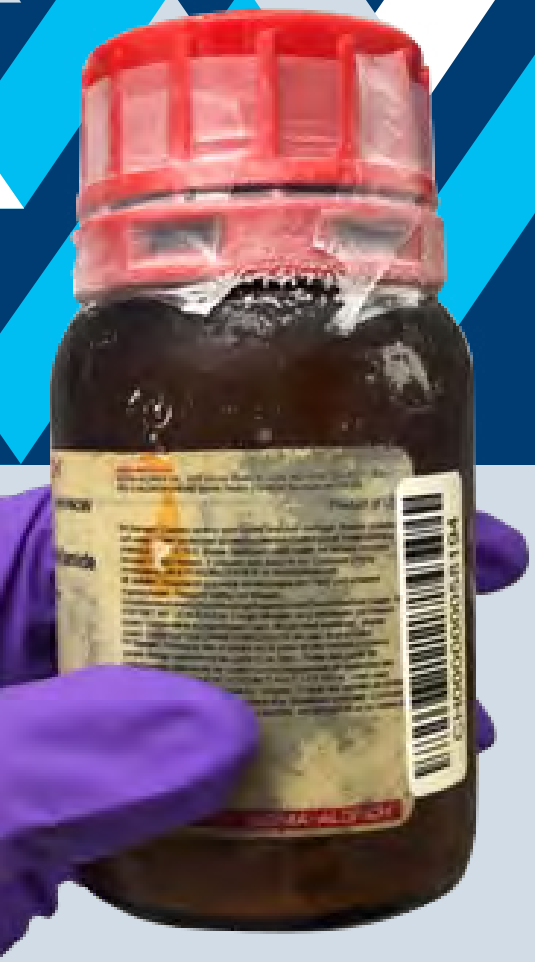
Eifion Nightingale, Hackspace Fellow - Departmental Safety Officer, won the Individual Award for taking up a voluntary role as a Safety Coordinator in the Advanced Hackspace and for being committed to monitoring, risk assessment and regular reviews of work practices.

"I have a genuine excitement for working as a Safety Coordinator at the Hackspace as it offers me a wealth of opportunities to solve problems, from the simple things like teaching people about basic workshop etiquette to the more complex problems of ensuring that cutting edge research is undertaken responsibly."

"I wouldn't be able to implement new safety measures and ideas if it wasn't a team effort, so I feel this award reflects everyone's efforts to improve our working space."

The 2021 winners will be announced shortly, and feature in the next edition of the newsletter.

The deadliest lab accident



If University laboratories were assessed by commercial safety standards the identified risk profile would be so high, it would go beyond the risk matrix scale normally used. The only reason research labs operate without constant major accidents is that their operations are made at a very small scale and hence are easier to control.[1]

There are a number of reviews available on the different types of accidents that occur in research labs,[2-4] however, the most violent, destructive and dangerous accidents are explosions. Explosions in laboratories may occur for several reasons: over-pressurised vessels, overheating, synthesis of explosive compounds, chemical changes to a compound due to incorrect storage or simply expiry (i.e. degradation), etc. Explosions always were a part of laboratory research, for example the report of an explosion at Imperial's Wilkinson lab in the 1950s[5,6] stated: 'Should we just accept this fact, or should we try to minimise the number of accidental explosions and their consequences?'.

It was in 1987 when the laboratory explosion at University of Sussex became the turning point for UK laboratory safety[7]. A PhD student had amended the procedure of dichlorohexadiyne distillation which resulted in an explosion and injured the researcher's abdomen.[8] After this incident it was decided that a supervisor should be responsible for the safety of their students and all procedures would be required to be risk assessed and documented.

Within the last ten years, 24 explosions have been reported in University research labs. One of the most recent laboratory explosions happened on 1 December 2020 at the University of Grenoble, France.[9] A researcher was rotovaping A PDRA was rotovaping a solution containing acetone and hydrogen peroxide - the mixture exploded, shattering the equipment and windows, and causing a fire. The researcher was seriously injured and had to be taken to A&E. No further details have been published yet. However, this incident reminds me of an occasion in University of Bristol where in 2017 a PhD student accidentally synthesised triacetone triperoxide (TATP) by deviating from the documented procedure.[10] The substance was quickly identified and the Police, fire brigade and bomb experts were called in, who carried out a controlled explosion of the substance.[11]
I have summarised further examples of the explosions reported for the last three years in the Summary of Accidents table on the next page

It is worth reminding researchers to review the properties of the chemicals they are using, to complete a risk assessment, and not to deviate from approved procedures unless any newly arising risks are evaluated and controlled. Just one example: H_2O_2 can detonate when concentrated to 70%! Combining acetone and H_2O_2 is also dangerous as it can produce explosive acetone peroxide.

Peroxide-forming chemicals are especially hazardous! They can be identified by the EUH019 hazard phrase: 'may form explosive peroxides' in section 16 of the Safety Data Sheet, and common examples include: dioxane, tetrahydrofuran, ether and solutions in these solvents, including pyrophorics. They should be checked regularly and disposed of as hazardous waste if peroxides have formed. When visually inspecting these chemicals immediately inform your safety contact if you see a precipitation on the outside surface of the bottles, especially around the neck (see picture above). Finding a few such bottles was the reason the bomb squad were called to Manchester University in 2015![12]
The Department of Chemistry has approved SOP 2.10 for the handling of peroxide-forming chemicals and anyone with a with a College login can see it here.

Due to the COVID19 restrictions there are less people around the lab to provide advice and help. Please plan and risk assess your experiments in advance and contact your supervisor or safety team if in doubt.

Summary of Accidents

When	Where	Incident description	Damage occurred	Reference
2020	Assam university, India	Explosion in chemistry laboratory	Four students were admitted to the hospital	13
2020	University of Grenoble, France	A researcher was rotovaping a solution containing acetone and hydrogen peroxide. The mixture exploded resulting in shards of the equipment and nearby windows and a fire.	The researcher was seriously injured and taken into A&E	9
2019	Technion – Israel Institute of Technology, Israel	Hydrogen explosion.	A professor suffered burns and died in hospital 2 weeks later.	14
2019	Sheffield University, UK	Explosion involving hazardous substances.	Unknown	15
2018	Indian Institute of Science in Bengaluru, India	Gas cylinder explosion.	A researcher died, and three others were injured.	16
2018	Beijing Jiaotong University, China	Explosion caused by stirring of magnesium powder and phosphoric acid in a mixer, the hydrogen generated was ignited by a spark caused by metal friction in the mixer. That in turn caused a further magnesium dust explosion, engulfing the rest of the magnesium powder and other combustibles nearby. The involved students had purchased and stored dangerous chemicals, and carried out risky experiments in violation of regulations.	Three students died at the scene.	17

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Getting to know you – staff spotlight

In this issue we feature Julia Cotton. Julia has sadly left the College now, but before she departed, she managed to share some of her insights!

Where were you born? Luton. It is very different now to how it was when I was a child. The airport used to be a small field with a chicken wire fence. I don't recognise it as the town in which I grew up.

Describe yourself in three words.
Loyal. Thorough. Loud.

What's your perfect day?
Any Saturday.

What are the little things in life that make your day better?
My animals – and the cup of tea my husband brings me in bed first thing.

Please describe your work in general and what you are currently working on.
Solution finding for H&S problems, sometimes uncovered during the audit process. I've taken early retirement as of December 2020, for a new career in Planning Enforcement and focusing on my own H&S consultancy.

Can you recommend any information resources that have been useful for you in your work?
The HSE web site (sad but true). Google.

If you could choose anyone, who would you pick as your mentor?
It's a bit late now . . . but a few years ago, probably Wendy Gould, who was FOO for Faculty of Medicine. She made me laugh a lot!

What would be your Desert Island Disc?
1st Movement of Elgar's Cello Concerto, performed by Jacqueline du Pre – he wrote it for the Malvern hills where he lived and walked. Or . . . My Blood by Ellie Goulding, a local Herefordshire lass.

What phone app would you recommend?
Plague Inc (thanks Steve Greenwood). But I adore Teams!

What's the most exciting or interesting thing you have ever done?
Winning a sealed auction bid for ten acres of ancient woodland. Or maybe cycling in Reading during the rush hour after a visit to the local.

When you were young, what did you want to be when you grew up?
An archaeologist; then a ballerina, and finally a marine biologist. What on earth went wrong? See the answer to the last question...

Who would you like to be for a day?
Me. Or Eve before she ate the apple. But I do like I like apples....

What are your hobbies?
Using my chainsaw - felling/planting trees in our wood. Driving our electric car, which is very fast, very quiet and runs on renewable energy. Being a servant to Cats.

What book would you recommend taking on holiday?
Challenges for Health and Safety in Higher Education and Research Organisations (Edited by Olga Kuzmina and Stefan Hoyle); many of the chapters have been authored by members of Imperial ◊

Share a fascinating fact.
Dogs can't look up.

Where do you live/who do you live with?
On the Welsh borders with my husband. We can see the Malverns and the Black Mountains from our house.

What would be your dream holiday, assuming unlimited money and a month off?
Being at home with my sheep, cats, dog, chickens – oh and husband.

What would be your superpower?
Being able to fly

What's your favourite meal?
Sangita Kerai's Paneer Korma – failing this, anything else cooked by Sangita.

Where were you born?
In bed in Dulwich.

Where did you study?
I didn't. I avoided it all costs from the age of 14 onwards.

Hazardous Laser Pointers

A set of three laser pointers was recently purchased by a College researcher via the Amazon retailer and have been found to emit hazardous levels of optical radiation. Comprehensive guidance is now available on the College's laser safety webpage.

The laser pointers, sold by the trader Tangren, were found to have power in excess of their specified rating. Marked as "<5mW" the output was measured to be close to 100 mW in one case. The radiation spectrum was also found to contain a significant infrared contribution (up to 40% in one case) which is invisible, but also optically damaging.

The labelling was also found to be incorrect, as these lasers clearly fall within the Class 3B category. This incident underlines advice to avoid cheap internet suppliers when purchasing laser devices or any equipment with safety related implications.

Personnel who need to purchase laser pointers, either as research or as presentational tools, should exercise extreme caution. Where no alternative technology exists, laser pointers should only be purchased through the College's purchasing system, and the absence, quality or clarity of safety markings should be regarded as suspicious. Further, the cheaper the product, the more likely it is to be substandard or non-compliant, so spend what is necessary to ensure your safety and the safety of those around you.

If uncertainty exists, the College Safety Department can provide advice and support including laser power measurements, where necessary.

HEALTH Snippets

Manual Handling

Please remember, with people returning to campuses over the next few months, that following the College guidance around manual handling is as important and relevant as ever. On this page you can find out what the relevant legislation is, the responsibilities for each person, the definitions that apply, and also the manual handling guidance itself. If you have any queries, please do not hesitate to email us on safetydept@imperial.ac.uk.

Using ozone? LabODS registry

Imperial College are now registered with the new UK version of the LabODS registry, for import and use of ozone depleting substances. People can now purchase ozone depleting substances for laboratory use again - please get in touch with Eddie Hartrick to discuss next steps if you wish to do this.

Electrical issues across the College

There have been an increasing number of electrical safety incidents over the last 6 months, many of which have been caused by the purchase of substandard or defective equipment, or modifications to existing lab equipment. Electrical equipment should be procured through the College's purchasing system to mitigate this. If items can only be sourced elsewhere, then please ensure they are checked by a qualified electrician prior to use. Remember that any modifications to electrical equipment need to be done by suitably qualified persons – whether this is departmental/ faculty-based electricians, or Estates Operations subcontractors.