



Health and Safety Interim Report

Outcome requested:	Audit and Risk Committee is asked to consider a mid-year update on Health and Safety Management.
Executive Summary:	<p>This is an update on the status of health, safety and fire management and compliance at the University for the period 1 October 2018 to 31 March 2019. It focuses on areas perceived to be of highest potential risk.</p> <p>Although there is still some way to go before all health and safety systems become fully embedded in the culture of everyday work activities, better uptake on health and safety training as well as recent audit and inspection findings show a positive direction of travel. The oversight of health and safety compliance and risks has also improved through collaborative working across the University.</p>
QMUL Strategy	This paper considers the health and safety of our people, who are at the heart of everything we do.
Internal/External regulatory/statutory reference points:	Health and Safety at Work Act 1974; Management of Health and Safety at Work Regulations 1999; and associated workplace health and safety legislation.
Strategic Risks:	This paper considers health and safety, compliance and reputation risks.
Equality Impact Assessment:	No equality issues are raised in this paper.
Subject to prior and onward consideration by:	For consideration by Audit and Risk Committee only.
Confidential paper under FOIA/DPA	No
Timing:	This is a mid-year report.
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Date:	28 May 2019
Senior Management Sponsor	Jonathan Morgan, Registrar and Secretary

Health and Safety Interim Report

Classification of health and safety risks

The Health and Safety Directorate's (HSD) knowledge-based assessment of high-hazard health and safety risks currently facing the University centres on laboratories and areas of the built environment where the probability of an incident may be low but the severity of consequence would be high. As such, health and safety management is focused on appropriate control of significant hazards in:

- Ionising and Non-ionising Radiation;
- Biohazards and Genetically Modified Organisms;
- Hazardous chemicals/solvents (including fire and explosive atmospheres);
- Compressed Gases;
- Liquid Nitrogen and other cryogenics (and asphyxiates);
- Infrastructure and safety in the built environment.

Ionising and non-ionising radiation safety management

The management of ionising radiation has been strengthened significantly during this period through the training and appointment of Radiation Protection Supervisors in all ionising radiation laboratories. In February 2019, the Environmental Agency undertook an inspection of laboratories at the Charterhouse Square and Mile End campuses and reported no issues with the management of radiation.

In relation to non-ionising radiation, a health and safety sub-group meeting was held during this period for key users of equipment generating electromagnetic fields and a draft health and safety guidance document has been issued for consultation. In 2018, the Association of University Radiation Protection Officers published guidance discouraging the use of unguarded lasers. Both the School of Physics and the School of Engineering and Materials Science are actively leading a programme of work, supported by the HSD, to implement the new guidance.

Biological (pathogen and other bio hazards) and GMO safety management

20 risk assessments for pathogen and GMO work were peer reviewed, classified and approved in the two health and safety sub-group meetings held during this period. The sub-group is also responsible for peer reviews and inspections of gene therapy clinical trials and completed three such trial projects.

The HSD has inspected the Containment Level 3 (CL3) laboratory in the Fogg Building and simulated spill drill exercises are planned in the CL3 laboratories in the Blizzard Institute. Approximately 20 CL1 and CL2 (lower risk) laboratories were also inspected in this period as part of an annual programme led by the HSD. In general, biohazard containment measures were found to be in good order. The HSD is working with the Biological Services Unit and institutes in the School of Medicine and Dentistry to improve adherence to the use of personal protective equipment around animal allergens.

Following a vaccinia virus needle stick incident in the previous reporting period, the Health and Safety Executive has acknowledged satisfactory completion of the actions and lessons learnt have been disseminated across the University.

Hazardous substance safety (chemicals, solvents, compressed gases, cryogenic liquids / solids)

Approximately 30 labs were inspected by the HSD for hazardous chemical safety in this period, the main findings being:

- the standard for laboratory storage cupboards with effective fire resistance still needs implementing in some areas;
- more integrated electronic systems are needed to control the procurement of hazardous substances;
- practical training is required for compressed gas cylinder handling;
- further investment is needed in some areas to introduce outside storage for compressed gas cylinders and piping in facilities, although flammable gas cylinders have been removed from within buildings in the School of Medicine and Dentistry;
- some laboratories do not have oxygen depletion warning alarms fitted externally.

The timeline for addressing these findings is dependent on the level of risk which has been determined via examining the process taking place in an area and the quantities and volatility of the hazardous substance being used or stored in the laboratory. Most the actions allocated on the fire risk assessment specify a time period of 3 months, with areas often completing and closing the action sooner or seeking fire safety advice

as to whether the risk can be mitigated through temporary controls whilst awaiting a permanent solution (such as a lab refurbishment).

The large-scale cryogenic storage built structures for the Blizzard Institute and Charterhouse Square campus were completed in 2018, and Codes of Practice and Standard Operating Procedures are being improved as residual snagging issues are identified. Responsibility will need to be assigned for ongoing maintenance oversight of the bulk tank facility at Charterhouse Square.

The HSD have completed specific hazardous substance information sheets for all laboratory-based buildings which Security staff can use in their emergency response and operating procedures. The processes for laboratory hazardous waste streams managed by the HSD are now well embedded across the University.

Infrastructure and safety in the built environment

The Committee received an update in November 2018 on health and safety compliance issues in relation to fire, asbestos and water systems management. Further progress has been made across all three areas.

- The University has either completed actions or is in the process of completing actions to meet the criteria specified by Arup Fire Engineers to ensure that there is no life safety risk in buildings from the presence of cladding. Notting Hill Genesis Housing Association, which manages a third-party social housing scheme above the William Harvey Research Institute, has commenced work to remove combustible insulation from areas for which it has maintenance responsibility.
- Following the discovery of asbestos containing materials in four plant areas on campus, a full, independent review has concluded that the likelihood of staff and contractors developing an asbestos-related disease through working in these areas would not have increased by any level of significance. We are in the process of working through the legal implications with contractors.
- Water samples taken at the Charterhouse Square campus showed the presence of Legionella bacteria at specific water outlets in three buildings. The conclusion is that this did not result from a systemic issue: the outlets were most likely under-used and are now being regularly flushed to take this into account. The John Vane Science Centre building continues to have water temperature distribution issues resulting from historic poor installations. Chlorine dosing to the water services is commencing in June in order to negate the risk further.

A regulatory visit from the London Fire Brigade to the John Vane Science Centre in November 2018 resulted in a Notification of Fire Deficiencies being issued in relation to the storage of flammable substances and the promptness of action on identified maintenance issues. The compliance date of 8 March 2019 was met and the London Fire Brigade has responded to confirm that it is satisfied with the progress made. A routine visit by the London Fire Brigade to student residences at Aspire Point in January 2019 resulted in no issues being raised.

A fire occurred in a laboratory in the School of Engineering and Material Sciences in March 2019 when a PhD student was neutralising battery cells inside a fume cupboard. A rapid exothermic reaction led to ignition that spread to the arms of the student's lab coat. HSD undertook a thorough investigation, which determined the root cause of the incident to be inadequate supervision. Lessons from the incident were translated into an action plan for the School and a more general briefing for all schools and institutes.

The Estates and Facilities Directorate is currently undertaking a gap analysis against statutory requirements in relation to pressure systems, lifting equipment and local exhaust ventilation, and training is being delivered to laboratory staff to ensure that they understand their statutory duties. The Directorate has also undertaken a review of contract management across HVAC systems and electrical equipment to ensure that competent staff and contractors are in place to take forward the planned preventative maintenance programme.

Audit Programme

The University's health and safety audit programme has been revised to bring it more in line with the current assessment of risks. Topic audits have been scheduled in some areas (e.g. Working at Height). Audits deemed too specialist for internal staff (e.g. Gas Cylinders) will be undertaken by contractors with relevant competence working under the direction of the HSD. Area audits undertaken in this period include Student and Academic Services and The Barts Cancer Institute. Key findings included the need for improvements to the monitoring and enforcement of control measures in laboratories and the need for

Principal Investigators in laboratories to attend health and safety training in order to understand their responsibilities.

Training Programme

In this reporting period, the HSD has delivered 28 different health and safety training courses to 1,166 delegates (see Appendix 1). The HSD is playing an active role in the tendering process for a University-wide Learning Management System with appropriate record keeping to help demonstrate compliance with training requirements.

Health and safety accidents and incidents

In the reporting period there have been 5 RIDDOR incidents reported to the Health and Safety Executive. In all cases, the HSE have been satisfied with HSD investigations, cause analysis and recommended actions and have not undertaken follow-up visits. Accident and incident data for the current reporting period is shown in Appendix 2.

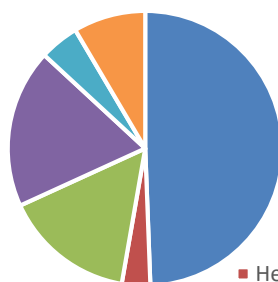
Future challenges and plans

The nature of the university environment makes it inevitable that our people's work activities will continue to present a challenge to the effective management of health and safety. For health and safety to be fully embedded, there must be visible commitment from managers, recognition of the fact everyone has a role to play, and the co-operation and engagement of staff. Recent inspections, lessons learnt and regulatory visits have highlighted cases where members of staff do not take full ownership of health and safety risk management in their areas. We have also found that staff working in laboratories have good awareness of potential hazards in their field of expertise and how to mitigate them, but have not in all cases implemented these risk control measures when undertaking the work activity. Attitudes are changing and there is new resolve to address issues, benefitting from strong leadership from the President and Principal, with an appropriate focus on staff competence. The following steps are in process to build on this.

- The HSD has introduced an internal 'Deficiency Notice' and escalation process where a clear breach is identified but appropriate action is not taken.
- Appropriate communication and training for staff and students at all levels within schools and institutes will continue to be prioritised as a way to embed a more compliant culture. The HSD is investing in improvements to its training provision in order to support this.
- We will continue to explore ways of using systems to facilitate record keeping and compliance monitoring by managers.

Rebecca Jones
Interim Head of Health and Safety

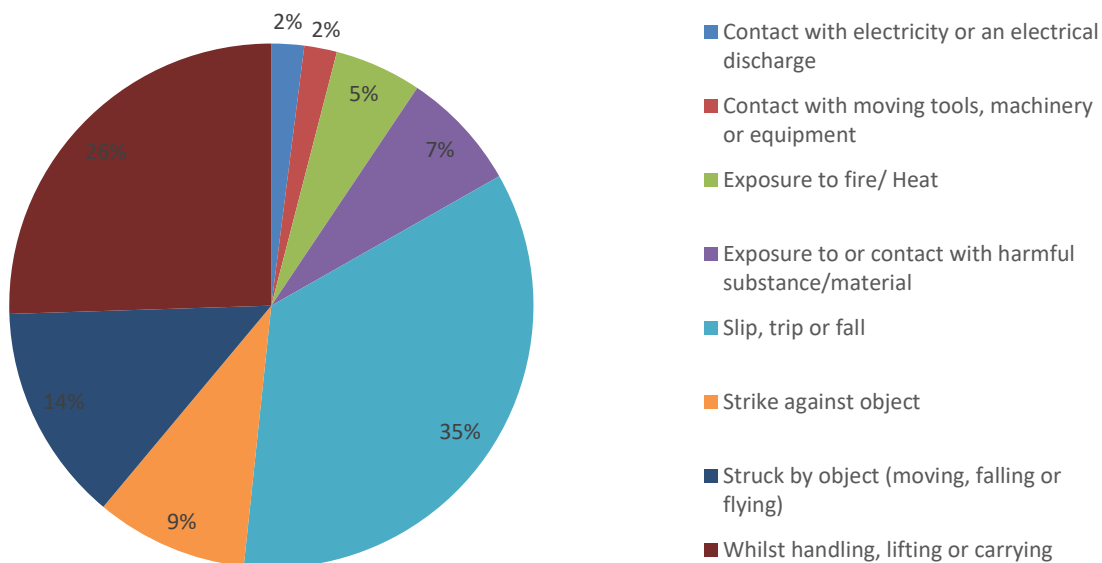
Appendix 1
Health and Safety Training Data
October 2018 - March 2019



- Laboratory Hazards
- Health and Safety Risk Assessment and Management
- Physical and Infrastructure Related Hazards
- First Aid
- Wellbeing and Mental Health
- Fire Safety Training

Topic Category of Training	H&S Training Course	Total Attendance
Laboratory Hazards	Decontamination and Sterilisation of Labs	21
	Bio Safety For Msc Clinical Microbiology	26
	Containment Level 3 Principles And Practices	18
	Hazardous Substance Risk Assessment (COSHH)	210
	GM and Bio Safety for Clinical Trials Staff	7
	GM Risk Assessment and Notification	97
	Bio Hazards and GM Agents Refresher	22
	Safe Management of Lab Hazardous Waste	32
	Selection of Lab PPE	4
	Working Safely With Biological Hazards	116
	Working Safely With Ionising Radiation	6
	Radiation Protection Supervisor	17
Health and Safety Risk Assessment and Management	IOSH Managing Safely	24
	IOSH Working Safely	11
	Risk Assessment	4
Physical and Infrastructure Related Hazards	Introduction to Health and Safety	16
	Manual Handling	86
	Lab Safety for Non Research Staff	69
	Working at Heights	9
First Aid	Basic Life Support	27
	Emergency First Aid at Work	57
	First Aid at Work	24
	First Aid at Work Requalification	7
	First Aid for Lab Workers	48
	First Aid Skills Update	55
Wellbeing / Mental Health	Mental Health First Aid	54
Fire Safety Training	Fire Marshal	99
Total		1166

Appendix 2
Accident and Incident Data
October 2018 - March 2019



Accident type	Number of accidents
Slip, trip or fall	52
Whilst handling, lifting or carrying	38
Struck by object (moving, falling or flying)	20
Strike against object	14
Exposure to or contact with harmful substance/material	11
Exposure to fire/ Heat	8
Contact with electricity or an electrical discharge	3
Contact with moving tools, machinery or equipment	3

Accidents reported to the HSE – RIDDOR	
Accident Type	Number of incidents
Slip, Trip, Fall	4
Exposure to Fire	1

There were 48 near misses in the reporting period.