Health Safety & Wellbeing Annual Report
1st January to 31st December 2022.

Contents

1. Executive summary

Covid-19 continued to have a significant impact on our activities at the start of 2022, with a return to full teaching capacity requiring considerable attention from ourselves and other Estates colleagues to ventilation effectiveness across the campuses. As work from home dictates were relaxed and administrative activities returned to campus, enquiries, concerns and anxieties about returning to the workplace required a lot of sensitive and attentive interactions to reassure colleagues. In practical terms, there was also still a need to keep a lot of active documentation up to date and to review and update the return to campus video one more time. The removal of remaining restrictions and requirements enabled cessation of most of our remaining Covid-specific processes, including the Covid report form, by the end of May. A short-life Covid Resilience Group operated until the Autumn, when it was subsumed into the Health Safety & Wellbeing Committee.

The restrictions over the previous 2 years had some impact on experience, with increased laboratory incidents as a result of 2nd/3rdyear students having less experience than would be normal for their level of progression. This had been anticipated and additional refresher training in labs advised for students.

With residual Covid-19 restrictions still in place for the first part of the year and the return to normal activities accelerating through the year, the resultant work demands were exceptionally challenging at times for the HSW teams.

One of the priority areas of focus was biological safety. HSE now classifies UofG as one of the higher risk facilities in the country, due to the types of organisms our researchers work with. As a result, HSE are adopting a new model of inspection, with multiple visits planned to review different aspects they consider key to good biosafety management. The Biological Safety Adviser (BSA) was exceptionally busy, firstly supporting the successful Specified Animal Pathogens Order (SAPO) licence (SAPO) renewal in January. The BSA then had to submit a profile of all our higher risk activities to HSE to inform their trial of the new model of inspection. These include our work with GM organisms and the BSA dedicated considerable time to supporting the GM committees to review their remit and identify ways to improve their coordination and effectiveness. Once HSE had reviewed the submitted profile material, they then shared their plans for subsequent visits, starting with a review of CL3 facilities and their management in December. Once again, a huge amount of work coordinating specific submissions to inform this visit was required from the BSA. The 2-day visit was busy and

complex and before the year ended plans for the next visit in March 2023 were announced by HSE.

The Chemical Safety Adviser (CSA) also had a remarkably busy year. He was heavily involved in advising and supporting the handover and subsequent safe occupation of the new ARC building, helping resolve several issues involved in equipment transfers/ installation and establishing safe systems of work. He also responded to incidents requiring specialist investigation and/or support to resolve, some of a chemical nature but many more general incidents bringing his tally of investigations to 96 for the year.

The Safety and Environmental Adviser had a diverse year working across a range of environmental and safety issues. He provided specialist advice on a variety of hazardous substances, supported and contributed to several statutory licence applications and ensured continuity of specialist waste contracts as well as delivering general safety advice on subjects including Display Screen Equipment training course content, water ingress to an office building and noise arising from dental equipment.

The Fire Safety Advisers had a busy year, with a small number of fires to investigate and establish lessons learned and comprehensive reviews of both our arrangements for Personal Evacuation Escape Plans (PEEPS) and the fire safety policy and arrangements to reflect changes necessary due to the impact of hybrid working on availability of employees to perform statutory roles concerning alarm testing, drills and emergency evacuations.

Other general safety developments included review and redrafting of the lone working procedures, with supporting generic assessment templates and review and update of travel risk assessment documentation to support the new TRICAP travel portal launched early in the year.

Business Continuity was boosted by the arrival of newly appointed Stella Matimba, BC Adviser, in May. As well as taking over the response to the internal audit of the previous year Stella also took a lead role in the University's review of its resilience to threats to power supplies and disruption to clinical waste uplift provision.

The Radiation Protection Safety team has also seen increasing levels of demand for advice as activities employing radioisotopes, lasers and other radiation sources increase once more on campus. This has been accompanied by increased training activity, largely through the online courses developed during the pandemic, which have proved popular, particularly for those schools taking on more than one intake of students a year.

Total number of employees completing safety-related training in 2022 was 8,839. This compares with 10,546 during 2021 but that figure included 1910 completing the Return to Campus induction. Without that additional training the 2021 figure would have been 8,636 so the 2022 figure reflects a real increase in numbers trained of 203.

Demand for training continues to be high and the teams have worked hard to accommodate in-person training, as well as developing and collaborating to improve the online training offering, including the newly developed in-house course for Display Screen Equipment –our thanks go to Neeraj Bhardwaj in Digital Learning for all his support in its development. The move to hybrid working and changes in fire management arrangement have increased the demand for certain courses, such as Fire Warden and Fire Safety Coordinator (previously Area Fire Officer) due to reduced staff presence on campus.

Once again, my thanks go to all the members of the Health, Safety and Wellbeing service, our colleagues in Occupational Health and Estates, as well as those in other specialist areas such

as Digital Learning, Learning Materials Development and IT for all their hard work and support in assisting the University back to safe normal operations.

2. Key developments and activities

Administrative changes

Despite the limitations of Covid-19 the majority of the SEPS team have continued with full time on site working, sometime combined with limited homeworking working for most of 2022. Whilst homeworking is effective for administrative tasks, our role in inspection and investigatory work can only be conducted effectively on site.

Stella Matimba joined the HSW team as Business Continuity Adviser and successfully completed her probationary period. Our (general) Safety and Environmental Adviser successfully completed his probationary period, becoming a permanent member of the SEPS team. As well as these additions, HSW also note the retiral, in August 2022, of Aileen Stewart, an ex-colleague who led the Occupational Health team, now within P&OD but previously part of the HSW department. The Head of SEPS assisted the Estates Compliance Team with interviews for recruitment to their team.

There were a few minor changes involving IT and data management during the year. These included the majority of the SEPS team moving from use of desktop PC to laptops allowing more effective agile working and update of the SEPS record retention schedule in line with GDPR requirements.

SEPS contributed to a series of Estates-led workshops working towards development of a SharePoint records system for the Estates function. This appears to be an ambitious project and, on our part, included data mapping of the extensive records held by SEPS and RPS.

As the year progressed the HSW team were pleased to see a return to team face-to-face meetings. These included a team Strategy and Planning meeting involving the full HSW team.

Three senior members of the HSW team participated in a mentoring scheme established by P&OD and aimed at providing support to staff within the Facilities Services team who may be new to the University or have changed jobs as part of the zonal modal restructure.

Occupational Health saw a lot of change, with the departure of Aileen Stewart, OH Manager, and Val Wright, OH Adviser. Hazel Bookham was appointed to a new role as Head of Occupational Health and Wellbeing in September. Margaret Thomson joined the team in another new (part-time) role as Health and Wellbeing (employees) Advisor in November. Other appointees included Charlotte Convery as OH Specialist Advisor and Nicola Stewart as OH Screening Nurse for posts commencing in 2023.

General safety

Covid activities

Yet again, the early part of the year was affected by Covid restrictions imposed in December in response to a peak of infections in the early winter period. This occurred just as the University was transitioning in the second semester from the 1m distanced teaching delivered in late 2021 to a return to full capacity. To address this HSW and SEPS were involved in updating risk assessments covering general Covid risk and more specific assessments covering teaching activity and practical work. Great attention was needed to ventilation levels

in teaching spaces, including regular measurement of CO_2 levels by Estates to ensure ventilation systems were functioning correctly.

National 'work from home' guidance was relaxed from 31st January 2022 prompting a return to campus of those involved in administrative work and an accompanying spate of requests for advice and guidance. One new area of guidance needed was around campus social events which had largely ceased until this point. Travel also began to increase, accompanied by requests for guidance on that too. This included advice regarding a tour by the Chapel Choir, an indication of the diversity of work that the safety team encounters.

The legal requirement to wear face coverings ceased from the 18th of April, becoming guidance instead. Government provision of LFD kits and recommendations to test also ended on this date. The University responded to this by ceasing recording and analysis of weekly Covid data from 31st May 2022. University Covid Planning group meetings continued through to March 2022 with Scottish Government Covid Leads meetings continuing until July.

The full return to campus seen at the beginning of the semester was most welcome but did come with an associated increase in accidents and incidents. It is noted that some of these involved student lab work in practical subjects and showed a lack of lab experience due to the Covid-driven restriction of activities in the previous 2 years.

Other general safety work

The CSA undertook an exercise to update our list of current safety contacts. Suitable contacts were identified in each School and a new contacts list produced. Members of the SEPS team attended safety committees and groups across the University both as members, and by invitation typically to provide specialist safety advice or information. These included the HSWC and various School safety committees.

SEPS contributed to completion of various applications, questionnaires and surveys associated with bids for research funding and duty of care activities on the part of funding providers. These included contribution to the JOSCAR submission, to facilitate access by the University to research contracts within the aerospace, security and defence sectors.

Collaboration with other Scottish Universities included work with the University of St. Andrews on our respective safety management systems and training processes. This involved the Director of HSW and Head of SEPS and included a short presentation and Q&A session with the St Andrews senior safety group and members of their senior management team and reciprocal visits between the two institutions to meet team members and discuss our respective approaches.

Migration of the University incident reporting system to the Ivanti platform was completed and the system became live on the main Helpdesk from mid-June 2022. Report submission and data extraction both appear to be functioning satisfactorily with various data dashboards available to provide better visual representation of incident patterns. SEPS continue to provide monthly incident data to Estates and periodic summary data to other Colleges and units. Options to make the data directly available to Schools and Services are being explored but opening the database or making reports visible is severely constrained by GDPR requirements and the fact that incident reports contain personal and sometimes medical data about individuals.

All of the SEPS team continued to investigate incidents as they were reported, offering advice or preparing more substantial reports and requirements in proportion to both the nature of the incident and any perceived managerial improvements needed.

SEPS responded to a number of Subject Access Requests and FOI requests during the year. Although numbers remain low, these are increasingly being used by claimants and their legal representatives to obtain information as part of the civil claims process following accidents. FOI requests have also been received seeking more general information on accident and incident rates and numbers.

SEPS assisted Estates with retendering of the statutory examination contract in late 2021 and during 2022 our Safety and Environmental Adviser has monitored reports issued by the contractor, following up with Schools and Services where necessary to ensure that appropriate action is taken, especially on any more serious defects that may be identified.

As new buildings near completion on the Western campus redevelopment, SEPS staff have been involved in a series of operational readiness meetings in preparation for handover of buildings and infrastructure to the University. This has particularly involved the fire team and Head of SEPS and has involved planning for the handover of the ARC, Infrastructure works and, currently, the Clarice Pears Building. This process is separate from specialist advice and support provided during the design and construction phases which typically involves the wider SEPS team and may include review of design material held within the Multiplex Zutec data system. Post-handover we have supported the local management teams with guidance on lab moves, initial set up and with the development of new safety systems and arrangements.

The SEPS team have worked with Security and the UofG Life app team to devise a way to present emergency information gathered through our hazardous areas survey in a form that would be accessible to Security in an emergency. SEPS acknowledge the work of our Security colleague, Archie Macgilvary, in initiating this project and supporting the Security element. Discussions identified the benefit of including defibrillator locations within the 'Near Me' menu within the app and a list of locations was provided to allow the app team to include this.

In conjunction with Estates, SEPS reviewed options for improvement of original fire and security separating doors fitted within the Hunterian Museum. These are extremely heavy metal doors and are inherently difficult to open and close. This has resulted in periodic injuries. Options for modification were explored and considered in consultation with a Glasgow City Council planning officer. However, no practical change appears technically or aesthetically possible given the historic and listed status of the doors and building. The only viable alternative is therefore suitable working systems and operator training. Safety improvements in two other heritage locations were also consulted on with GCC.

Work on development and maintenance of safety policy, arrangements and guidance is a constant task for the team. During 2022 key work in this area included a revision of lone working risk assessment and update of the University guidance on assisted evacuation for disabled campus users, the latter being conducted in consultation with the Disability Service. In relation to asbestos, it was agreed that the Estates compliance team who have an asbestos specialist within their staff, would take the lead role in preparing and hosting University policies and information on this topic, consulting with HSW and SEPS on any matters affecting the wider University.

Practical support was provided to resolve an invoicing issue with threatened elements of the contract for supply of specialist lab gases.

SEPS general safety advisory role is wide-ranging and extended to the typical myriad of issues including portable and fixed electrical testing, glove resistance with relation to chemical handling, breast feeding during University field trip, noise arising from dental equipment, use of gym equipment and many more.

Travel procedures

The University travel portal remained in operation in 2022 with travel increasing to more normal pre-Covid levels. In the latter part of the year HSW began a review of commercial travel risk assessment systems with a view to replacing the current form-based system with an online system if a suitable system can be found to do this. The advantage of an electronic system may be that assessment components can be tailored to the individual trip based on the questions answered, allowing simple low risk travel to be assessed with a relatively small question set, but more complex travel being subject to a more extensive and rigorous set of questions. Investigation of the available options is at an early stage and will continue in 2023.

Biological safety

The BSA provided professional biological safety advice across the Colleges, Schools and Services as work progressed or was planned. The Colleges of Medical Veterinary and Life Science (CMVLS) & Science and Engineering (CSE) are a major focus for the BSA, however biological related activities extend across the University as a whole. General safety and specialist support was given to management units involved in teaching, research and support activities throughout the year.

Existing work with pathogens and animal models across the organisation continued to grow. Input to the considerations and permissions for new proposed work was required in addition to providing consultation and competent advice for laboratory refurbishments and new builds, as the University expands. The increasing biological risk profile (both safety and security) of the University has required the BSA to support front-line academics and area managers as higher risk work increased.

Renewal of the University Specified Animal Pathogens Order (SAPO) licence was successful at the start of the year for SAPO 3 agent work following the 4-day HSE inspection at the end of the previous year at Garscube Campus. The University response was facilitated by the BSA prior to the issue of the licence by HSE. A meeting of the CL3/SAPO agents' group (comprised of key personnel at Gilmorehill and Garscube) was held by the BSA to discuss previous and future HSE inspections, ongoing work and risk assessment processes. The BSA continued to update the University Pathogens and Toxins register as new pathogen work commenced**.**

HSE instructed the BSA to provide a 'portfolio of higher risk activities' across the University to be submitted at the start of the year, including associated requested paperwork. The University was allocated a dedicated HSE inspector from the Microbiology and Biotechnology Unit and the inspector informed the BSA there will be a new trial approach to CL3 inspection here at UofG, proportionate to the higher biological risk profile. HSE indicated this will involve more frequent targeted inspections than previously.

The BSA continued to visit and support the Glasgow Lighthouse COVID-19 Testing Laboratories at QEUH. They have gradually but substantially reduced their testing capacity over the year with a reduction in personnel.

The BSA also attended and gave input to the School of Infection and Immunity's Health and Safety Committee meetings throughout the year. This is the largest School in CMVLS, where a substantial amount of higher risk biological work is undertaken.

Many units required support on the importation processes and documentation for receiving pathogens and specimens into the UK from EU and non-EU countries.

The BSA gave input and competent advice throughout the year to the four CMVLS Genetic Modification Safety Committees (GMSCs) to ensure appropriate approvals, or consent, were in place for the diverse range of work with genetically modified organisms, animals and plants. The BSA met with the GMBSOs to discuss business continuity of the GMSCs as some of the GMBSOs wish to step down from their positions because of other commitments. New GMBSOs require to be identified by CMVLS to fill these academic roles and ensure continuity of appropriate GM permission processes. Throughout the year the BSA has also stressed again to CMVLS that administrative support is required for the GM committees to function effectively and improve consolidation and appropriate regular review of all existing approved GM risk assessments.

As a co-opted member of the NHS Greater Glasgow & Clyde GMSC the BSA also continued to contribute to the review of GM risk assessments for work in NHS clinical trials.

General safety duties included general accident investigations and statutory reporting to the enforcing authorities where appropriate. The BSA followed up appropriately on many accidents across the organisation. Whilst most those dealt with by the BSA were biologically-related (including spills and sharps injuries), the BSA also conducted various general incident investigations.

The SEPS Team met regularly with our colleagues in the Occupational Health Service (OHS) and the BSA liaised with them on specific health-related matters/investigations arising from within Units across the University. Some cases required more substantial input and liaison with OHS personnel, line management and relevant staff where appropriate.

Chemical safety

2022 represented something of a return to normality and with most of our colleagues in researching, teaching and support services returning to campus (at least on a part-time basis) the CSA was called upon to provide advice and support on a range of topics to colleagues across the organisation as well as responding to *ad hoc* requests for assistance. The following are some examples of significant projects with which the CSA has been involved.

The CSA was heavily involved in the planning and delivery of the transfer of research groups and their equipment, chemical stocks and other resources from various disciplines into the newly completed ARC building. This involved working with internal stakeholders and external companies undertaking the work to ensure that the process was completed safely and efficiently. Ongoing support and advice were provided to the ARC technical team and management, research groups and spin-out companies throughout the process to help ensure minimal disruption to their activities and that their new workspaces were safe to use. Throughout 2022 the CSA continued to support the staff and students working in the ARC, as issues were identified.

Working with the Estates team and colleagues in the ARC, the CSA developed a robust risk assessment and safe system of work to allow safe access to the ARC roof for staff involved in ongoing maintenance of equipment and services. The procedure was focused on the temporary suspension of high-risk laboratory activities which could cause harmful vapours to be discharged at roof level for the duration of works and agreeing that proposed maintenance activities should be notified to building users in advance to allow researchers to plan effectively.

Towards the end of 2022, the CSA was asked to assist the Estates Project Team in ensuring that the recently vacated research laboratories in the Anderson College Building were clean and safe to hand over to Kaplan international College for use as teaching space. Some residual hazards were identified during this process and advice given on how to make the areas safe for repurposing.

The CSA continued to attend the School of Chemistry Safety Committee in an advisory capacity providing guidance and support to the head of School, Safety Coordinator, and other committee members. The committee discusses accidents, training requirements and other matters of safety relevant to the School and is a useful, constructive forum for improving health and safety.

The annual survey required under the International Chemical Weapons Convention was successfully completed and submitted to BEIS to ensure that the University remained compliant with its legal responsibilities.

The ongoing annual programme of formaldehyde vapour- monitoring in the anatomy teaching facility was undertaken to ensure that staff and students were not exposed to hazardous levels of this toxic substance. With formaldehyde having been reclassified as a presumed human carcinogen and a forthcoming reduction in the occupational exposure limit it was reassuring to note that the current level of exposure was well within the reduced exposure limit.

Following an incident where a research laboratory was flooded due to the actions of a contractor the CSA participated in a working group intended to facilitate the safe recovery of laboratory materials to minimise disruption and return the laboratory to service. This project was successfully completed, and the laboratory is now operating normally.

During 2022 the CSA was responsible for investigating 96 incidents, accidents and dangerous occurrences involving staff, students and visitors to the University, representing a significant increase on previous years. These included many general safety incidents as well as those involving chemicals.

Following the return to campus of most staff and students to campus after the disruption of the previous two years, there was a notable increase in the number of (mostly minor) accidents. This was a predicted outcome given the limited practical experience able to be gained by students during the Covid-19 pandemic and it was evident early in the academic session that students were less familiar than usual with the laboratory environment and the practical techniques required. This was discussed with the academic and technical staff in charge of the laboratories who agreed to make some improvements in the safety information made available to students.

Some of the more notable incidents included:

- A release of the hazardous inhalation anaesthetic isoflurane within a Biological Services unit.
- Injury to a disabled student when her wheelchair tipped over on a loading ramp at the tower entrance to the Gilbert Scott Building.
- A compressed gas cylinder trolley failed during use when one of the wheels detached, almost causing the trolley to overturn. Whilst investigating, the CSA identified a design flaw in the trolley supplied by BOC and, following discussion, the manufacturer agreed to make a change to the trolley design to eliminate the risk of similar failures occurring in the future.
- A potentially serious incident occurred when a large quantity of obsolete chemicals was inappropriately transferred from the Bower Building to the Sir James Black Building. The potential for a serious incident in this case was high due to the transportation of incompatible materials in plastic bags and the substances were made safe by the CSA and those involved reminded of the correct procedures to be followed for transportation and disposal of hazardous chemicals.
- Two incidents occurred where inappropriate materials were accidentally included in material destined for autoclaving. In one case a small flammable gas cannister was found in a bag of waste and in the other hazardous chemicals were discovered. Both incidents resulted from poor practice and a safety alert was issued to all autoclave users.

Environmental issues

Liaison with SEPA forms a key aspect of SEPS environmental role and, this year, involved a significant body of work related to a new discharge consent for the Scottish Centre for Ecology and the Natural Environment. This consent was successfully approved in November.

Other enforcing authority related activities included composting licensing and initial liaison regarding planned cleaning of the mill pond at Cochno Farm and disposal of the extracted silt.

The advisory aspect of the Environmental Adviser role provides an opportunity to visit various Schools and Units to observe their processes and provide specialist advice on both environmental matters and associated safety matters. Examples of specialist advice given include:

- Advice on disposal considerations for a multitude of hazardous materials, ranging from common materials such as lab chemicals, drug contaminated animal bedding and mixed biological/chemical wastes, to more unusual materials such as nitrate film negatives, an XRF system, a scintillation crystal and various unidentifiable waste chemicals.
- Advice on processing lab plastics enabling the materials to be diverted from landfill.
- Communication of procedures and best practices with stakeholders outwith the University including the Beatson and Chemistry
- A review of relevant legislation related to environmental matters.

The past year brought an increased collaboration with colleagues in Estates, including the provision of hazardous waste data for submissions required by various bodies, provision of samples of non-hazardous wastes for the waste contractors and the planning and coordination for future recycling of polystyrene.

The Safety and Environmental Adviser's experience as a Dangerous Goods Safety Adviser has been relevant with advice on packing and documentation requested from the School of Chemistry, the School of Infection and Immunity and the James Watt Nanofabrication Centre. The University's Transport Security Plan was also redrafted with the BSA in preparation for a visit from the Department for Transport, though this visit was postponed.

As part of the sustainability aims of the University, heated air extraction by fume cupboards running when not required or at higher extraction rates was identified as a potential area for improvement by Estates. Discussions took place between SEPS and the sustainability team to highlight the importance of local exhaust ventilation (LEV) as a safety control measure and to make it clear that safety cannot be compromised by reducing the availability, or effectiveness, of LEV systems.

Invoicing issues occurred in October in relation to the biological waste contract due to annual purchase orders not being correctly renewed/updated by Schools. This led to a significant number of unpaid invoices and a possibility of service suspension. Liaison with Stericycle and a quick response in identifying the units with issues and encouraging prompt payment averted this. Issues also arose in relation to access to the waste stores at the School of Chemistry due to building works in the Joseph Black Building. Substantial coordination between the chemical waste contractor and the works contractor was required to arrange waste pickups. Across the campus, coordination between service users and the waste contractors remains a constant task in relation to both invoicing and uplift planning.

Fire Safety

There was a significant increase in demand for face-to-face training, in particular the Fire Warden course. We suspect that this is due to increased hybrid working and the appointment

of additional staff by Schools and Services to cover the working week. We have also seen increased demand for our more specialist fire safety courses aimed at those with specific fire safety roles such as Fire Safety Coordinator. Overall, 46 face-to-face courses were delivered to meet this demand.

Following internal changes within the Estates Department and their commitment to take on the regular weekly testing of the fire alarm systems, it was necessary to undertake a review of our fire safety arrangements and policy. This was updated to clarify the new roles and to introduce the change of name from Area Fire Officer to Fire Safety Coordinator.

A review of assisted evacuation and Personnel Evacuation Escape Plan (PEEP) policy and procedures was carried out in conjunction with Disability Services. This included preparation of guidance to students and staff and changes to the standard form.

The fire safety team continued to provide support to all building users regardless of location including visits to our sites at Cochno Farm and Dumfries.

Fire incidents

One serious fire occurred involving the electrical supply within a teaching laboratory washroom in the Joseph Black Building. Fortunately, this did not result in significant damage beyond the room of origin and was detected early via the automatic smoke detection system. This incident occurred early in the morning with no one present in the area. The severity of this fire was minimalised through prompt action by Security who investigated and correctly assessed the situation, called the Scottish Fire and Rescue Service (SFRS) and quickly directed them to the location. A subsequent insurance-led forensic investigation attributed the cause to a possible electrical fault within a steam generator, although this was not conclusive. All relevant electric checks had been correctly carried out by the equipment owners.

Two smaller fire incidents occurred within the lift room of the James Watt South Building caused by an electrical short within the lift machinery apparatus, and within the Sir James Black Building caused by contractors working on a skylight. Both incidents were confined to the area of origin although smoke did permeate through other parts of the building, but with no permanent damage. Both buildings were successfully evacuated and the incidents dealt with by the SFRS. In the case of the Sir James Black Building, prompt action was taken by our facilities staff to tackle the fire and prevent further spread.

One further significant fire occurred at Garscube involving an external Scottish Power owned 11kV electrical transformer which caught fire and set alight an adjoining gas main. The scale of the fire was such that the incident became a national news item. Although external, the incident caused the evacuation of two campus buildings and disruption to the power and gas supply for around a week until repairs were carried out by the utility companies.

All other fire incidents were minor and were dealt with promptly by staff on site. These incidents included lab experiments with flammable materials and (mostly unavoidable) overheating of electrical equipment. Other incidents involved cooking and these are clearly avoidable by improved operator attention. SFRS carried out post fire audits in relation to three of these incidents, but in all cases offered advice only.

We received three regulatory inspections in relation to student accommodation (HMO) licences, but these also resulted in advice only. The fire safety team supported various SFRS familiarisation visits to our existing buildings and to new buildings as they were added to the University estate.

Fire alarm activations

The Fire Safety Advisers continue to put considerable effort into monitoring unwanted fire alarm activations. The internal response process includes support by Security to assist building occupiers and local Fire Safety Coordinators to identify, address and mitigate impacts of all unwanted fire alarm signals timeously to reduce unnecessary SFRS call-outs.
The total number of alarm activations increased considerably from last year, up from 237 (2021) to 311, 289 of these being unwanted alarms. (See Table 4 for a breakdown of causes) The first half of the year with reduced student attendance) recorded a third of the overall incidents with the second half of the year (full student return) responsible for two thirds of the totals. Incidents in student accommodation account for 28% of the overall totals. We have further identified several non-residential buildings with repeat activations and want to act on these to reduce the number of unwanted fire alarms. Other areas which are highlighted for further investigation and action are the number of alarm faults, contractor activity, cooking and 'occupier activity' events. The high number of activations where Security or occupiers have been unable to determine an obvious cause is also of a target area.

Although the number of unwanted alarm activations has increased, attendance by the Scottish Fire and Rescue Service (SFRS) has reduced from 2021. This is a result of changes in call out practice over the past few years, driven largely by SFRS and aimed at reducing both the cost and safety risk from unnecessary attendance at emergency speeds. As a result of these policy changes, we no longer receive an automatic attendance to every alarm activation but are expected to confirm a fire, or significant likelihood of a fire before calling SFRS. This does not apply in residential accommodation where automatic attendance is still the norm in most cases. As a result, 85% of our SFRS attendances were to residences and only 15% to our non-residential buildings.

Campus development

The extensive campus development programme continues to require significant input from the Fire Safety Advisers, along with input by other specialist advisers, at the design stage to minimise the need for potentially costly and time-consuming alterations once the buildings are commissioned. This is particularly so where designs include fire-engineered solutions, and the fire team has been involved in a significant number of "soft-landings" meetings to support and agree the designs developed for new buildings on the existing campus and on the Western Infirmary site. This professional input is crucially important to ensure that these designs are suitable and that any change, or the conduct of building operations, does not compromise fire safety. Following this process, the Mazumdar Shaw Advanced Research Centre was handed over in 2022 with the Fire Risk Assessment in an advanced stage of completion. The Clarice Pears Building (School of Health & Wellbeing) will be delivered in early 2023 with significant work and effort put in during 2022 to allow for this. Looking ahead, the next building to be delivered will be the Adam Smith Business School in the late summer, early autumn of 2023.

Major refurbishment activity elsewhere in the estate demands similar levels of advice and support. Work within existing occupied buildings continues, including significant fire improvements within the Boyd Orr Building Continuing) and the internal completion of a major project for the School of Engineering within the James Watt North Building. On such refurbishment projects within existing and operational buildings ensuring that work does not compromise escape routes or create risk to the occupants is always a primary objective of the fire safety team and is one of our safety-critical tasks.

Fire risk assessment

Some additional contracted support with fire risk assessment reviews was required by SEPS in 2022, and our thanks goes to Murray Consulting for assisting us at short notice in this.

Sustaining this rate of assessment review is challenging alongside the demands of reactive work associated with new build and refurbishment activity. However, the fire safety team seek to maintain the target pace of assessment, whilst prioritising our sleeping House of Multiple Occupancy (HMO) risks. It is expected that at least two, possibly three depending on progress, significant new properties will be added to the building list during 2023, which will include the Mazumdar Shaw Research Centre and the Clarice Pears Building (School of Health and Wellbeing). All of this will or has already involved significant input from the fire safety team.

A breakdown of the fire risk assessments carried out in 2022 is shown below. These include 104 scheduled assessment reviews, and three new building assessments, including the Kelvin Hall, which we occupy in partnership with Glasgow City Council. The overall number of assessments this year includes a larger than expected number of category 3 & 4 buildings due to the inclusion of Cochno farm. As the buildings vary in size and to try to reflect the scale of work involved the square meterage of the buildings has also been included. The range of buildings included varies from Victorian terrace to 1960's large teaching/research buildings including the new Mazumdar Shaw Building which although not included in this year's work totals has absorbed many hours in its development before opening and in the preparation of staff occupancy and fire risk assessment process.

Premise Type	**Number**
Cat 1 - High Risk	12 (17212.15m²)
Cat 2 - Med Risk	52 (46569.77m²)
Cat 3 - Low Risk	22 (5723.12m²)
Cat 4 – Very low risk	21 (3899.99m²)
Total assessments	**107(73405.03m²)**

Inspection and Audit

Internal auditing

The University health and safety auditing system was reviewed compared with the ISO45001 safety management standard. While there were some differences between the two systems due to the way in which we audit individual management units rather than the University as a whole, the standards used were found to be broadly similar in most important respects. The extent to which individual units meet these does vary between units, in part due to size, scale and complexity.

SEPS Audit programme was back in full operation throughout 2022 and commenced with some increased encouragement and support to those units who had been audited immediately prior to Covid lockdown in March 2020 and had some actions outstanding from that period. Understandably, their priorities and on-site activities had changed for a time but as work returned to normal the audit actions once again became relevant. The units involved recognised this and were quickly able to address their remaining actions.

A total of 5 units were audited in the January to June period, 3 of these occurring between 31st January and 15th February resulting in a very heavy workload in that short period. This occurred as a result of deferment one audit coinciding with an additional and unplanned audit of another unit that was expected to receive an enforcing authority visit. A further 4 audits were completed in the July to December period. SEPS aim to make the audit process a positive and constructive support and training exercise for the units involved and our feeling is that audit visits are surprisingly well received by Schools and Services who recognise that it is part of a process of incremental improvement rather than simply a fault-finding exercise.

Alex Shearer participated in audits in late 2021 and early 2022 as Support Auditor and, after this training period, undertook the Lead Auditor role for an audit of the Hunterian Museum. With this experience Alex is now able to participate fully in the audit process with the SEPS team. Other members of the SEPS safety team all undertake Lead and Support Auditor roles on a programmed basis.

Reports on audit activities and on completion of actions continue to be supplied to the quarterly meetings of HSWC. This management oversight provides a useful motivator which SEPS actively use to encourage continual progress and completion of actions by Schools and Services.

Units audited during 2022 were: Physics, Biological Services, Nanotechnology, Infection and Immunity, Chemistry, Psychology and Neuroscience, Hunterian Museum, Education and Social and Political Sciences. Each audit visit typically takes at least one week of Lead Auditor time between preparation, auditing sampling visits and report preparation and so is a significant workload. The Support Auditor may spend about half of that time on each audit.

External audits

There were no external safety-related audits conducted during 2022 although we did receive enforcing authority inspection visits from HSE's biological safety group and post fire audit visits from the Scottish Fire and Rescue Service. Details of the latter are provided within Section 7. Our liability insurers visited the Weipers Equine Unit and Small Animal Clinic as part of their risk profiling of the University and SEPS participated in this visit.

Inspections

With the return to campus having been essentially completed following the relaxation of Covid-19 restrictions and a largely normal service resumed in terms of research and teaching, the CSA undertook a full programme of health and safety inspections across the organisation focusing on laboratories, storage facilities and other technical facilities, working with local Safety Coordinators and laboratory users to examine health and safety practices in the areas visited and discuss both good practice and areas for improvement with those with health and safety responsibilities for the area in question. The areas inspected in 2022 included:

- Bower Building research laboratories x 4
- Joseph Black Building Research laboratories x 15
- Centre for Virus Research (all laboratory and support areas)
- Wolfson Wohl Cancer Research centre (all laboratory and support areas)
- Mazumdar Shaw Advanced Research Centre (all laboratory areas)

The BSA accompanied the CSA on several inspections in the School of Molecular Biosciences CL2 areas.

In addition to the more traditional laboratory inspections, the CSA also carried out two further series of targeted inspections. The first covered the health and safety signage installed in the ARC to ensure that it accurately reflected the hazards and PPE (Personal Protective Equipment) requirements for each laboratory area in the building, comparing the installed signage with the original specification. The inspection identified several areas where signage needed to be improved either due to inaccurate installation or, in some cases, change of the expected use of the space. Secondly, after a spate of needlestick injuries in the School of Chemistry, the CSA and local Safety Coordinator visited all the wet chemistry laboratories where needles were in regular use to inspection handling and disposal practices.

The biological Containment Level 3 (CL3) lab inspection programme continued across relevant laboratories at Gilmorehill and Garscube campuses with 5 inspections undertaken by the BSA during the year and two scheduled early next year. The pre-COVID formalised tracking system of Actions raised and verifications with management requires to be fully re-instated and it was agreed that future Actions raised at CL3 will be highlighted to CMVLS to allow oversight at a higher management level as well as locally and at the relevant School level.

Radiation Protection Safety

The RPS team continued to operate throughout the pandemic, although at a reduced level of activity compared to normal. 2022 saw a return to a more normal and varied level activity. We were delighted to be able to replace some of the now very dated equipment to better support the team's surveillance activities, including a replacement scintillation counter and wipe test counter and new equipment to measure electromagnetic fields. This leaves us in a better position to deliver the quality of service commensurate with the research and teaching profile of the institution.

Contamination Surveys

19 Radiation labs contamination surveys were conducted during 2022, This was up from 13 surveys during 2021 but still short of our normal 30+ per year. Contamination surveys are part of our licence conditions.

Source Audits

There were 31 source audits conducted during 2022, up from 18 the previous year. Source audits are part of our licence conditions.

Decommissioning

One laboratory was decommissioned during 2022, Jarrett 327d, Garscube Estate.
The necessary paperwork was submitted to SEPA as part of our licence conditions.

Incidents

There were 4 incidents that required investigation during 2022.

- Garscube campus, Nov 2021, small fire during a diagnostic procedure utilising a laser system.
- Gilmorehill campus April 2022, UV overexposure.
- East Kilbride, June 2022, radiation shield missing from equipment.
- Garscube, June 2022, overexposure of dosimeter.

Training Courses

See table in Section 4 for details.

Registered Radiation Workers

There were 69 new registrations in 2022 for 512 currently registered radiation workers.

Dosimeters

512 whole body dosimeters are issued bi-monthly.

44 eye dosimeters are issued bi-monthly.
78 extremity dosimeters are issued bi-monthly.

Sealed Sources

Most of the sealed sources are held in the Kelvin Building. As part of our licence conditions these must be swab tested annually for leakage.
176 sealed sources were swab tested in 2022, none failed.

Contamination Monitor Testing

The University has around 300 contamination monitors available for staff, these must be tested annually for compliance with Ionising Radiations Regulations 2017. Of these 187 were tested (up from 150 in 2021), 4 monitors needed repaired (4 in 2021) and 110 needed replacement batteries.

Isotope Deliveries

There were 90 radioactive packages monitored, logged and delivered to users during 2022, down from 130 in 2021. This breaks down to:
Gilmorehill Campus - 1986 MBq down from 3453 MBq in 2021.
Garscube Campus - 59,229.5 MBq down from 131,376 MBq in 2021.
Reduction in Garscube Campus mainly due to global shortage of Tc^{99m} during 2022.

Radioactive Waste Disposal

There was 1 solid waste disposal to contractor (Grundon) during 2022, consisting of 1 m^3 of contaminated laboratory waste with a total activity of 70.5 MBq.
There were no sealed source disposals during 2021
'Dustbin' solid waste disposals are no longer undertaken at Gilmorehill Campus, these continue at the Garscube Campus for radioactive cat litter and horse bedding, and these records are kept on-site, and can are available on request.

Liquid radioactive disposals for Gilmorehill during 2022 were 1945.25 MBq.
Liquid radioactive disposals for Garscube during 2022 were 145.3 MBq.

Occupational Health and Wellbeing

2022 Saw considerable change within Occupational Health, with 2 clinicians and the OH manager all retiring within a short span of time. Unfortunately, the recruitment market for specialists OH advisors remained challenging.

Despite this we have been successful, and Hazel Bookham commenced in September 2022 in a new broader role as the new Head of OH & Wellbeing. Margaret Thomson started in another new (part-time) role of Health and Wellbeing Advisor (employees) in November 2022 and OH Specialist Advisor (Charlotte Convery) and OH Screening Nurse (Nicola Stewart) will come into post in early 2023.

Safe Effective Quality Occupational Health Services (SEQOHS)

SEQOHS accreditation was successfully obtained for a fourth year, with positive feedback received from the auditors.

Health Surveillance

Health surveillance continued to be conducted in line with the Control of Substances Hazardous to Health Regulations and HSE guidance. The respiratory surveillance programme did not include spirometry assessments this year, reflecting precautionary measures adopted during the COVID pandemic, and was instead questionnaire-based with peak flow reviews as applicable. It is anticipated that in-person spirometry assessments will resume in 2023. Skin surveillance and hearing conservation resumed in person during 2022.

Student Electives

Occupational health support for student electives, which were suspended during the pandemic, is due to resume in 2023.

Student Health

Student health screening continued to be supported and remained a pivotal area to which OH provided support and expertise. Student screening clinics returned to campus, with mass clinics being scheduled within the OH department, Dental School and Wolfson Medical Building.

There was a noted increase in the number of student referrals to OH.

Business Continuity

Business Continuity Adviser

Since the departure of the previous Business Continuity Officer (BCO), a new Business Continuity Adviser (BCA) is now in place to review, update and improve the existing Business Continuity Management System (BCMS).

Key Achievements

In the last half of 2022, the BCA has:

- Written and published a Business Continuity Management (BCM) Strategy and Resilience Framework
- Written and published a new BCM Policy
- Enhanced governance of BCM across the University by:
    - Establishing a BCM Forum and
    - Short-Life Working Group
    - Expanding the remit of the current business continuity (BC) board to cover essential areas

Exercising

Clinical waste exercise -

A clinical waste exercise, involving the Safety and Environmental Protection Services (SEPS) team and individuals from various departments which handle clinical waste across the University estate, was carried out in December 2022. The aim of the exercise was to test and validate the effectiveness of Contractor arrangements for clinical waste disposal in the University.

A report detailing findings from the exercise was produced and shared with SEPS. Actions in the report will be tracked and progressed.

Power outage exercise –

The BCA facilitated a UofG team taking part in a Higher Education Business Continuity Network (HEBCoN) – led exercise examining the likely impacts of planned outages, should they arise as part of a potential government initiative to reduce demands on resources stretched as a result of the war in Ukraine. The event was well attended and fostered support for a larger UofG exercise to take part in 2023.

Exercise Programme

Part of the work to enhance the Business Continuity Management System (BCMS), is the establishment of a BC Exercise Programme which sets out the timelines for generic and specific BC exercises to be carried out by colleagues across the University. A draft version of the programme is in place and will be finalised and implemented in 2023.

Audit Review

The PWC BC audit carried out in 2021 includes recommendations for improvement and the activities mentioned above are a response to these. Progress will continue to be made into 2023 to address all the recommendations by the set deadline.

3. Collaboration and co-operation with external bodies

External Representation

The BSA, as part of the Northern Biosafety organising group, helped facilitate the Northern Biosafety Officers meeting in Spring this year which was hosted by colleagues at the University of Edinburgh. This was well attended, being the first face-to-face resumption of this meeting since before the pandemic. HSE attended this meeting to give a regulatory update.

The BSA remained Chair of the Institute of Safety in Technology and Research (ISTR) Biosafety Steering Group which represents the interests of UK biosafety nationally and internationally on behalf of ISTR. She facilitated a UK ALL Biosafety Officers meeting in summer 2022 where over 100 attendees joined this half day virtual meeting to discuss proposed changes to determining competencies for Biosafety Professionals within the UK sector. To support higher risk work activities in the sector the BSA also facilitated the formation of an ISTR CL3 Network.

The BSA is a member of the ISTR Executive Committee and attended general ISTR meetings throughout the year. As part of the Events Steering Group, she secured several excellent speakers to present at this year's highly successful ISTR 2-day Autumn Symposium held in York, including a regulator for the Department for Transport.

The BSA represented the sector at the Biorisk Professional Registration Scheme workshops throughout the year. Outcomes feed back to the UK Biosafety Strategic Leadership Group within the UK and inform required competencies within the sector and specifically, for work on higher risk materials.

The CSA continued to represent the University of Glasgow on the management group of the University Chemical Safety Forum (UCSF), an organisation dedicated to improving chemical health and safety in the Higher Education (HE) sector. Over 2022, he has organised and

presented at two online conferences run by the group attended by chemical safety advisers and other chemical safety professionals from across the UK.
In 2022, the CSA was also asked to join the UK Nano Safety Group as an HE sector representative. The group is preparing an updated version of the UK Nano safety Guidance document due to be published in 2023.

The CSA was also invited to speak at the annual ISTR symposium where he and a representative of the University chemical waste contractor discussed the recent transportation of hazardous substances to the ARC with delegates from across the UK.

All of the safety team remain active participants in the Universities Health and Safety Association and in regional groups - the Scottish Universities Safety Advisers and Fire Safety Advisers groups.

4. Training provision and staff development

Training provision

2022 proved to be a busy year for training and with most people having returned to campus on at least a part-time basis, demand for training was higher than normal. Courses were mostly able to be delivered face-to-face rather than online and the return to face-to-face training was welcomed by staff and students. Use of face coverings and distancing continued to be required and limited course numbers limited to 6 for much of the year, until we were eventually able to return to full courses of 12 by late summer. Central room booking arrangements were altered and meant that our full year's training programme had to be set in advance, limiting our flexibility to provide training based on demand.

IOSH Managing Safely courses were able to resume and continue to be in demand. Provision of the Managing Safely refresher course will be explored in early 2023 although SEPS resource capacity to deliver this is challenging. These courses are delivered by SEPS Biological and Chemical Safety Advisers who are both registered IOSH trainers.

SEPS received a prohibitively expensive quote in March 2022 for continued licensing of our online computer training and risk assessment package - a proposed increase to more than £13k per annum. We declined this and commissioned an alternative in-house course via the University's Digital Media Unit. We record our thanks to Neeraj Bhardwaj and Gareth Peevers who supported us in this and delivered a good quality course within a tight three-month timescale to have this available before licence expiry of the previous course. The new course can be found within Moodle. Moodle's inability to effectively record refresher training after the initial completion of a course remains a major deficiency in the University's staff training provision. This stems from its design as a teaching platform rather than a staff training system. It is becoming a growing priority for the University, impacting beyond HSW, that a staff training/ learning system should be implemented that can record refresher training and interface with the HR system.

We also updated our general safety induction, following the video format used on the Covid – Return to Campus training package. This was scripted in the early part of the year and recorded with the aid of the media team in August, finally reaching Moodle in December. This has a total run time of 24 minutes and will replace the current e-induction quiz.

Mental health first aid training continues to be in demand with courses run monthly (except in holiday periods in July/Aug and December.) Recent news indicates that a Parliamentary draft bill has been laid that seeks to make provision of such mental health first aiders a mandatory requirement in the workplace and, with the level of training already provided, the University should be well placed to achieve compliance if this requirement is enacted.

Over recent years, safety training delivered by SEPS has been recorded within the HR system and the longer-term aim has been to make this data directly available to Schools and Services. An element of the HR system known as 'Insight' has made this possible and, with the aid of Lucy McCormack in the HR team, SEPS training data is now available to view by Heads of Professional Services (HoPS) in all academic schools. We envisage that HoPS will act as gatekeepers for their unit and will pass on relevant extracts of the data, or may, via HR, request access for other local staff who have a legitimate management need to access this information. A further exercise will be required to identify individuals within Service units who can be provided with access to the training information.

Over 2022, the CSA developed and delivered two new training courses focusing on improving the health and safety knowledge of University staff. The Advanced Chemical Emergencies course was delivered to technical staff members to help improve their understanding of how to respond to incidents involving hazardous materials to improve their emergency response capabilities. The Safety Management in Research Groups course was aimed at Principal Investigators and Early Career Researchers to improve their understanding of their legal responsibilities and duties with regards to health and safety and how to build an effective safety culture in their research groups. Both courses were well received and have been added to our stable of health and safety training.

The CSA also provided input to new MSc and PhD students as part of the annual safety inductions on behalf of the Schools of Chemistry and Cardiovascular and Metabolic Health. In both cases this represented a good opportunity to provide chemical safety training to new students at the start of their research projects.

The Biosafety & Genetic Modification training delivered by the BSA continued remotely at the start of the year and in person training resumed in autumn. There was high attendance at training and demand remained high throughout the year. Eight courses were delivered throughout the year and the return to in-person training enabled better interaction/exchange with attendees and useful insight into the biological activities and processes taking place across the areas.

Cross-service support was also provided by the BSA who delivered a Health Safety and Security module, on three of the Biological Services led ScotPIL courses by Zoom.

Our specialist waste management courses covering chemical, biological and electrical wastes were rewritten and refreshed in the beginning of the year and were delivered from April onwards. 11 training sessions were administered, and 131 individuals trained. Feedback on the training sessions has been excellent and the attendees have engaged well with the conversational style of the training sessions.

Demand for SEPS courses has been high through the latter part of 2022 and this level of engagement is positive and encouraging. However, SEPS capacity to deliver these is at its limit and has been stretched both in relation to training space, availability of SEPS staff and in administrative capacity to arrange each event. We anticipate that this may be a backlog of training demand accumulated during Covid.

The fire safety team continues to provide a variety of fire safety courses to support both staff and students in fire safety awareness and to support our commitment to fire safety with increased demand for courses during 2022. Extraction of Moodle data relating to our online fire safety course continues to be challenging due to the technical limitations of Moodle as a staff training platform. In particular, the system is unable to record refresher training without first "expiring" any previous course completion and so only first completion of training is

currently being recorded by the system. This is beyond SEPS control as it is a technical feature of the Moodle system borne of its function as a teaching platform.

Participation in the "*Homeworking Essentials*" Moodle course has remained strong with only slightly lower levels of engagement than in 2021. Figures for 2021 showed 1213 participants over the calendar year, with 1192 completing the full course and assessment quiz. In 2022 the comparable figures showed 1536 participants and 1182 people fully completing the module. Most people will, by now, have experience of working from home and so some reduction in demand is expected. Due to limitations within Moodle, data is available for first completion of training only. (Figures presented last year include some participation from late December 2021 and so differ slightly from the 2021 calendar year.)

The table below shows the delivery of formal courses and training that was achieved during 2022.

Courses and training delivered 2022.

Subject	**Courses instances**	**No. Attendees**
Induction		
"e-Induction" online training for new employees	online	2306
IOSH Accredited courses		
IOSH Working Safely Course (1 day)	1	8
IOSH Managing Safely Course (4 day)	3	34
General and specialist safety courses		
Biological Safety and GM (1/2 day)	7	159
Biological Module within PIL (45 minutes via Zoom)	3	90
School of Chemistry PGR Induction (1.5 hours)	1	48
Infection and Immunity PGR Induction (1.5 hours)	1	60
COSHH and Chemical Safety (3.5 hours)	9	94
Chemical Emergencies (2 hours)	4	57
Advanced Chemical Emergencies (1 day)	1	8
Compressed Gas Safety (1 day)	2	35
Cryogenic Refresher (2 hours)	7	92
Safety in Research Groups (1 day)	1	12
Safe Work at Height (1 hour)	1	12
Chemical Waste (1 hour)	5	51
Chemical & Biological Waste (2 hours)	5	67
Special Waste Course (2 hours)	1	13
Manual Handling (1/2 day – external trainer)	15	100
Display Screen Equipment (to June 2023) Training and workstation assessment completed. *Training element partially completed* Overall participation	online	 70 33 103
Working Safety with Computers (from July 2023) *(Moodle completion data not currently available)*	online	n/a
Homeworking Participation in training element Completion of training and assessment element	online	 1536 1182

First Aid Courses		
First aid 3-day certificated course	11	95
First aid external 3-day certificated course	24	32
First-aid 2-day refresher course	14	108
First-aid external refresher course	9	13
Mental Health First-aid 2-day course	9	79
Fire Safety Courses		
Area Fire Officer/Fire Safety Coordinator (1/2 day)	13	113
Fire Warden (2 hours)	24	241
Fire panel testing demonstrations (1 hour)	7	19
Fire safety Nursing students years 2 and 3 (1 hour)	2	82
Staff fire safety awareness training (online Moodle) (first completions only – refreshers not included)	online	1689
Business continuity		
Clinical Waste exercise	1	24
Power outage exercise	1	18
Radiation Safety		
Radiation Protection (online) (Attended)	online	75
Radiation Protection Examination (Passed Examination)		53 (52)
X-Ray Safety Course (online)	online	87
Laser Safety Awareness (online)	online	97
Totals	**182**	**8839**

HSW staff development

In the latter part of the year, staff were once again able to attend face-to-face events and participated in Universities Safety and Health Association (USHA and Institute of Safety in Technology and Research (ISTR) events both as delegates and as speakers. Members of the team were also able to physically attend the Scottish Universities Safety Advisers' group meetings. Although held as an online meeting during Covid restrictions, personal attendance was felt by all participants to be more suitable for effective for discussion and networking.

Being relatively new in the role, and with the limitations previously brought by Covid, a first opportunity to attend the SUSAG meeting in June and the USHA conference in October was particularly welcomed by our Safety and Environmental Adviser as the first chance to widen his network of contacts. This has already been fruitful with best practices and advice being shared both ways on several topics.

Team members attended the Estate run asbestos 'expo' held within Bute Hall. This was an excellent event and allowed attendees to view, via CCTV, the asbestos clean-up works being carried out in the roof void and examine items of equipment used in such work. As an asbestos refresher training, this practical experience was useful and complementary to the more usual classroom training.

The CSA attended several online chemical safety seminars over the course of the year covering a range of topics with relevance to his role at the University. To improve his management skills, he also attended the Management Fundamentals training session provided by the University. This was a very valuable session delivered by the Organisational Development team which helped build a detailed understanding of management skills and of building an effective, positive team dynamic.

The safety adviser team continues to follow a professional body CPD programme under the auspices of the Institution of Occupational Safety and Health (IOSH).

James Gray, RPA, undertook 3 webinar training courses on radiation protection subjects during 2022.

Janice Thompson, RPO, undertook the 'Veterinary Compliance Issues with IRR and EPR' one-day webinar in November 2021, and 'Introduction to Radiation Shielding' webinar in September 2022. She also attended two one-day conferences, 'Radioactive Source Security' and 'Out with the Old in with the New' in December 2022.

Brian McLaughlin, Radiation Technician, undertook a one-day laser safety management course in December 2021, delivered by Public Health England.

Erin McAllister, Administrator, completed online courses in 'Understanding Unconscious Bias' in August 2022 and 'Digital Tools for Collaboration & Sharing' in September 2022.

5. Other Operational Activities

Activity	Description	Number in 2022 (2021)
Occupational Health		
Bloods	All bloods in OHU diary plus additional numbers from September screening and May titre clinic	1963 (1718)
DNA	Staff/students who did not attend appointment	325 (99)
Management Referral	New referrals	448 (253)
Review Appts	Management referral review appointments	204 (158)
Health Surveillance	All HS appointments at OH and paper screening. This figure also includes medicals for CERN, ionising radiation medicals and any HAVS appointments for the OH Physician.	372 (204)
Elective Work for students	Comprising: Elective consultations, elective paperwork completion and pre-employment FY1 paperwork completion	0 (0)
Fitness to Practice	UG students from MVLS referred to OH.	225 (73)
Research Passports	Research passport paperwork processed at OHU	38 (22)
Vaccinations	All staff and student attendances for vaccinations	1753 (1306)
Radiation Protection		
Ionising Radiation	Registration of new workers	69 (416) out of 512 registered workers
	Registration of classified radiation workers	0 (0)
	Issue of personnel dosimeters	634 (514) (512 body, 44 eye,78 extremity)
	Radiation monitors testing (4 required repairs, 110 batteries replaced)	187 (150)
	Swab tests of sealed sources (all passed)	176 (176)
	X-ray surveys (include electron microscopes and dedicated X-ray units)	0 (0)
Radioactive Substances	Contamination Surveys	19 (13)
	Source audits	31 (18)

	De-commissions (laboratory at Garscube)	1 (2)
	Isotope Order Management	90 (130)
	Contractor disposals of solid waste (MBq)	1(0) 70.5
	Liquid waste disposal – Gilmorehill (MBq)	1945.25 (2802.2)
	Liquid waste disposal – Garscube (MBq)	145.3 (256)
Non-Ionising Radiation	Laser surveys	0 (0)

6. University Performance Indicators

Table 1 Summary of incidents reported in 2022.

2022	Animals	Electricity	Explosion	Fall/Level	Fall/Stair	Fall/Height	Fire*	Handling	Glass/Sharps	Hand Tools	Hot/Cold	Machinery	Spill/Release	Sport	Strike Against	Struck by	Traffic	Other	Medical	Occ. Disease	Violence	Totals
Staff	21			14	7			4	29		3		19		21	16			2			136
UG Students	8			2				2	28		1		9	1	2	3		1	2			59
PG Students	3				1				8		1		5			1						19
Visitors/other																1						1
Total minor and over 3-day	32			16	8			6	65		5		33		23	21		1	4			**215**
RIDDOR reportable incidents	1			3	3			1	1							2						**11**
TOTAL work-related injuries	33			19	11			7	66		5		33		23	23		1	4			**226**
Work related injuries by year																						
2021	26			20	7	1		5	46		5	1	42		19	20			-	4		**196**
2020	20	1		18	3			8	52		5		27	2	8	13	2	1	-	3	1	**164**
2019	38			36	14	1		11	62		9	1	36	2	19	25	3		-	3	1	**261**
2018	35	3		37	16			12	92		9	1	35	1	17	19	1	1	-	6	2	**266**
2017	30	2		34	18	1	1	10	79		9	1	40		21	27	1	4	-	2	1	**281**

Other incidents - 2021																						
DO / Near Miss		7	1		1		8	5	6				48			12	1	2				91
Not work-related				8	1				1					18	1			5	10			44
Contractors													2		1	2						5

*Fire category covers incidents involving injury from fire only.

STAFF all work injuries frequency rate	**14.8 per 1000**	Comparator: SUSAG 2019 16.7 per 1000 SUSAG 2020 12.8 per 1000	Based on 136 minor incidents plus 6 RIDDOR (Total 142) and staff headcount of 9595 at July 2022 (Source UofG FOI webpage)
STUDENT all work injuries frequency rate	**2.1 per 1000**	Comparator: SUSAG 2019 2.0 per 1000 SUSAG 2020 1.6 per 1000	Based on 78 minor incidents plus 3 RIDDOR (Total 81) and assumed student headcount of 38k (Source UofG FOI webpage)

Table 2: RIDDOR incidents reported to enforcing authority in 2022 by reporting criteria.

Description of incident	Category	Totals
"Major" Injuries (RIDDOR defined)		
Slipped on stone steps sustaining a fractured rib.	Staff	**1**
Over 7-day incidents (RIDDOR defined)		
Injured back while handling tables by rolling them.	Staff	**5**
Overloaded trolley toppled over while moving animal feed, resulting in a cut to a wrist and muscle strains to operator.	Staff	
On entering a room without switching on the available lights, a Facilities Assistant tripped on an unexpected step resulting in bruising/strains to hands and knee.	Staff	
While helping with delivery of a fridge, the item slipped, and the sudden weight caused a muscle injury to the staff member. (Task was not within scope of employment.)	Staff	
Fell on pavement at John McIntyre building which was slippery with algal growth in localized areas. (Agency employee)	Staff	
Student/public to hospital for treatment		
Vet student trapped and injured arm while working with cattle in a cattle crush.	Student	**5**
Wheelchair overturned while using an excessively steep ramp at Tower door in Gilbert Scott Building resulting in injury to the user.	Student	
Student sustained a cut while inappropriately using a scalpel to separate an epoxy item from the mould resulting in a cut requiring hospital treatment.	Student	
Visitor fell on external steps sustaining head injury.	Visitor	
Celebrant fell on steps within University Chapel sustaining injury to arm.	Visitor	
Reportable dangerous occurrence		
No reportable dangerous occurrences recorded.	n/a	**0**
Reportable occupational disease		
TOTAL RIDDOR REPORTABLE INCIDENTS		**11**

Table 3: Fire incidents 2022

Building	Probable Cause
Major fires (significant damage beyond part of building immediately affected)	• Fire causing significant damage to washroom. Insurance-led forensic investigation carried out. Likely to have been caused by an unidentifiable electrical fault in water heater but unable to be fully determined. (Joseph Black)
Minor fires (localised fire or minor incident only)	• Hunterian Art Gallery Electrical contractors overheating within fuse box in switch room. • James Watt South Battery overheating following spot welding. • James Watt South- lift motor room Electrical short with the AC side of the lift windings, with some evidence electrical overloading on the lift motor which could have led the short circuit. • 12/10 Cardiovascular Building Small fire incident in room C341 due to small motor burn out • 18/11 Sir James Black Building Small fire incident at Skylight due to contractors
Other (Near Miss)	• Biomedical Building Overheating hotplate (near miss) • Lister House Occupier had left hob on with combustible material close by (drying towel and food packaging), AFA activated alerting occupier who extinguished flames. • Bower Building Compressor overheating with laboratory - isolated. • 4A South Park Terrace Occupier had left food packaging on top of hob – activating AFA, F&RS attended
External	• 12 external fires were recorded throughout the year consisting of small street furniture items (bins etc.) and grass and vegetation fires within or adjacent to the Garscube Estate

Table 4: Fire alarm incidents and activations 2018 – 2022

	2018	2019	2020	2021	2022
Genuine incidents					
Major fire	0	0	0	1	1
Intermediate fire (category discontinued)	5	-	-	-	-
Minor fire	4	10	3	9	5
External fire	1	3	0	5	12
Near miss	1	3	0	1	4
TOTAL GENUINE	11	16	3	16	22
Unwanted activations					
Accidental activation (good intent)	6	1	3	6	1
Alarm faults	13	15	8	32	22
Contractor activity/building work	20	33	18	23	41
Cooking	26	22	7	33	35
Deliberate/malicious	3	2	2	2	9
Occupant activity (other than cooking)	29	30	14	34	37
Water ingress/damp/steam	10	13	12	11	21
Unknown cause (unable to be determined)	32	41	26	77	97
Dust	5	4	10	3	7
					19
TOTAL UNWANTED	144	161	100	221	289
TOTAL ALL INCIDENTS	**155**	**177**	**104**	**237**	**311**
Of which activations in residential properties: -	28	31	14	79	76

Table 5: Detail of Unwanted Activations for 2018 - 2022

Year	No of Incidents	Fire Service attendances	As a % of Total Incidents	Attendance for Fire Incidents (no of incidents)	Attendance for non-fire Incidents (no of incidents)	Attendance for Residential (no of incidents)
2018	155	56	36%	10	46	28
2019	176	48	27%	8	40	23
2020	104	26	24%	1	17	8
2021	237	98	41%	8	11	78
2022	311	89	29%	6	11	76

7. Enforcing authority contact, visits and interventions.

Home Office

Our routine annual chemical weapons declaration was requested by the Home Office in December 2021 and a request issued to relevant unit to provide the required data. The legally required return was submitted, on time, by SEPS in January 2022.

Health and Safety Executive (HSE)

HSE MBU granted renewal of the University Specified Animal Pathogens Licence in January 2022 following their inspection in late 2021. The University was also able to confirm completion of actions on advice issued during the 2021 visit.

HSE's Microbiology and Biotechnology Unit (HSE MBU) visited the University on the 13th and 14th December 2022 to inspect biosafety management and Containment Level 3 work at two locations on the Gilmorehill Campus. Following post-inspection discussion, an Improvement Notice and enforcement letter were issued to the University on the 20th of December 2022 with responses required by March and October 2023. The BSA played a pivotal role both prior/during the inspection and will facilitate the collective actions and response from the University to the points raised by the HSE inspector. At the same time, a parallel inspection of large genetically modified organism (LGMO) facilities at both Garscube and Gilmorehill Campuses was undertaken, which resulted in no required actions.

HSE wrote to the School of Engineering seeking confirmation of action on two items of pressure plant located at their Acre Road site which had been notified to HSE as having defects by the statutory examination engineering surveyor. HSE notification is standard practice for certain classes of defect.

Department for Transport (DfT)

The Department for Transport was due to undertake a planned security inspection of University arrangements for transport of materials in March. However, this was postponed by DfT. No new date has been advised.

Scottish Fire and Rescue Service (SFRS)

Routine contact has continued over 2022, with several post-fire audits carried out, the most significant being that following the fire within the Joseph Black Building. Two other post- fire audits were conducted following incidents involving failure and overheating of electrical equipment. Neither incident was due to any maintenance deficiencies and no enforcement action was taken on any of the incidents.

Three regulatory inspections were also undertaken involving our student accommodation (HMO) licences and again offered advice only. The fire safety team also supported various SFRS familiarisation visits to our existing buildings and to new buildings as they were added to the University estate.

Police Scotland Counter Terrorism Security Adviser (CTSA)

Police Scotland Counter Terrorist Security Advisers (CTSAs) visited both Gilmorehill and Garscube with the BSA for our annual security inspections in the associated key areas for Home Office specified security regulated materials. No concerns were noted. CTSA also made

visits to inspect and to facilitate new proposed work at additional locations across the University requiring substantial input.

Scottish Environmental Protection Agency (SEPA)

There were no site visits or contact by SEPA in 2022 involving SEPS. However, SEPS began consultations with SEPA in December 2022, regarding removal of silt from the Mill Pond at Cochno. Routine renewal of our annual licence to permit composting operations at Garscube, carried out by the Estates Grounds team is currently in progress.

8. Major activities and key objectives for 2023

The following represent some examples of new activity or projects planned for 2023. These are mainly one-off actions or projects and do not include routine activities such as inspection and audit, investigatory or advisory work and training.

- Re tender Fire Safety Awareness and Homeworking courses.
- Retender First Aid training in preparation for contract renewal in Spring of 2024.
- Liaise with SEPA regarding authorisation and cleaning of Cochno Farm, Mill Pond.
- Introduce and deliver IOSH Managing Safely Refresher as a new course option.
- Update hazardous areas survey and work with IT team to make survey information within the UofG Life app and accessible to authorised users.
- Work with Security to introduce SafeZone-based first aider paging system to strengthen central first aid provision.
- Work with CMVLS to achieve compliance with HSE recommendations and Improvement Notice legal obligations by prescribed dates of 31st March and 31st October 2023 respectively. Actions are directed to management system improvements and not achievable by SEPS alone but will require significant College activity.
- Prepare for March 2023 HSE specialist biosafety inspection and manage outcomes.
- Support construction and handover of new buildings within Western Infirmary development – Clarice Pears, Adam Smith Business School and infrastructure.
- Deliver fire risk assessments for the three new buildings on the Western Campus Development site.
- Conduct review of the Gilbert Scott fire risk assessment
- Review and update chemical safety section and training sections of SEPS website.
- Complete and publish guidance on safety management roles and duties aimed at academic members of staff managing research groups.
- It is increasingly likely there will be a legislative requirement for a Laser Safety Adviser following recommendations to the Government by HSE. We propose to train Brian McLaughlin for this position, and he has completed a Laser Safety Management course run by Public Health England.
- Continue to evaluate the effectiveness of existing admin systems and looking to improve, streamline & reduce paper usage and carbon footprint.
- Disposal of ‘legacy’ uranium salts during 2023.
- Undertake workshops to develop strategic and activity business impact analyses, as well as business continuity plans for critical services
- Finalise and implement a BC training programme
- Finalise and implement a suite of BC documentation and templates
- Progress and complete audit recommendations by set deadline