



## **HEALTH AND SAFETY COMMITTEE**

### **Report on Health and Safety in The University Of Sheffield** **1<sup>st</sup> January to 31<sup>st</sup> December 2009**

This Annual Report attempts to summarise the current position on health and safety activities performed by Safety Services and the PAT Service up to the end of 2009. I am pleased to report that the current position on health and safety in the University continues to be very positive, with good progress on most fronts and generally with excellent co-operation from departments. 2009 again saw a further reduction in the number of false fire alarms and other incidents across campus and a significant increase in fire safety and other training uptake at the University. The audit programme suffered again due to other University and safety initiatives taking precedence, including the concerns over Swine Flu, and will resume in January 2010. It is important to recognise that there are many other health and safety initiatives and activities being undertaken by departments across campus which are not reported here but should be acknowledged by the Committee. We believe this report provides the Health and Safety Committee with sufficient information to instil confidence in the state of health and safety in the University and enable the Committee to further its influence over the activities performed at the University. Comparative data has been included where applicable.

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## **1. Fire Precautions report**

### **1.a Fire Safety Legislation, British Standards and Guidance**

There have been no significant legislative changes to fire safety during the course of 2009. The only significant fire related British Standards to be published relates to portable fire fighting equipment. Minor amendments have been made to the colour coding and maintenance requirements which will be incorporated into our current systems of work over the coming year.

New guidance has been published on the design and installation of fire alarm systems and on fire risk assessment methodology. These new guides will be used to ensure we continue to meet the current best practice in these areas.

### **1.b Risk Assessments.**

Progress on the fire risk assessment program was slow during 2009 as the Fire Safety Assistant is still undergoing training to achieve the required level of competence. A schedule of assessments to be conducted during 2010 will be produced shortly and the relevant departments notified as appropriate.

Fire risk assessments have been conducted or revised for the following buildings during 2009:

- Jessop West
- Jessop Victorian building
- 301 Glossop Road
- 285 Glossop Road
- 287/289 Glossop Road
- 40 Victoria Street
- 45-55 Victoria Street
- The Arts Tower
- The Chelsi project (Chemical and process Engineering)
- The Sound House
- The Ridge (Ranmoor Village)
- SITRAN building.

Work on the fire risk assessment for the Mappin buildings is ongoing and is currently focussing on the design of the new external Means of Escape for the Broad Lane block and the new fire and emergency lighting systems.

A meeting was held in February 2010 to review the fire risk assessments for the residential buildings maintained by VLL. Re-introduction of a zoned alarm strategy at Crewe Flats to reduce the impact of false alarms on residents will be pursued during 2010. No agreement was reached with VLL regarding the provision of emergency over-ride facilities for emergency exit doors controlled solely by electronic locks.

### **1.c Fire Service Inspections**

An overview of inspections conducted by the Fire Service in 2009 is given

below. Due to our current good reputation with the Fire Service, University buildings tend to be inspected less frequently than in previous years, although the Fire Service have informed us that a significant number of buildings will be due for a revisit during 2010.

The few contraventions that were noted during inspections were all of a minor nature and have since either been rectified to the satisfaction of the Fire Service or an agreed course of action is in hand. There is still a degree of concern over the frequency of fire alarm and emergency lighting testing. Estates Services and Safety Services are continuing to work to bring about the necessary improvements. More detail is given in section 1.g below.

**Table 1. Summary of Fire Service Inspections & Visits 2006 - 2009**

<b>Inspection type</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
11 D familiarisation visit	5	11	15	5
Licence renewal inspection	2	2	3	3
False alarm strategy meeting	12	0	0	0
During use inspection	5	1	3	0
Risk assessment audit	1	24	18	7
<b>Total number visits</b>	<b>47</b>	<b>38</b>	<b>39</b>	<b>15</b>

#### **1.d Fire Drills 2009**

Fire Drills were conducted at all relevant University buildings during October 2009. At the non-residential buildings the results were consistent with last year's very good performance and no repeats were necessary. The performance at the residential buildings was much improved compared to the relatively poor results in 2008. Only one drill was deemed sufficiently poor to warrant a repeat, which was carried out in November and on this occasion was deemed to be satisfactory. A full report on the fire drills is available on Safety Services web pages.

#### **1.e Maintenance of Fire Fighting Equipment**

During 2009 the number of unscheduled visits to service fire fighting equipment that had been maliciously discharged has remained very low. In the residential buildings where fire fighting equipment is maintained by Safety Services there were 18 unscheduled visits during which 33 extinguishers had to be recharged. A further 24 extinguishers were found to have been discharged during routine service visits. Although any level of interference with safety equipment is unwelcome, the problem is much reduced compared to previous years.

This year's dry and wet riser testing program identified that all of the systems are in an operational condition. A number of minor defects were noted and forwarded to Estates Services to deal with on the maintenance programme.

#### **1.f Fire and Safety Signs in Central Teaching Spaces.**

All of the signs have now been installed. Work is currently in progress to

assess the additional pool teaching rooms that have come on stream as a result of new buildings and refurbishment work.

### **1.g Fire Alarm and Emergency Lighting Systems**

Replacement of the fire alarm systems in the Portobello Centre and the Kroto building is now complete. Following the move of the School of English to the new Jessop West building, the opportunity was taken to upgrade the fire alarm systems in some of the buildings on Shearwood Road prior to their reoccupation. New fire alarm and emergency lighting systems are currently being installed in the Sirius Labs and the Caledonian workshops on the St. George's Complex.

A number of the fire alarm systems in our buildings are reaching the end of their expected lifespan and difficulties obtaining replacement parts for these systems accounts for a high proportion of the 'system fault' false alarms. These systems have been identified as priorities for allocation of funding from the H&S Capital Projects Budget and Long Term Maintenance programme. Work is currently underway to design a replacement system for the Mappin complex, and the Hadfield/Chemical Engineering building is next on the list of priorities.

Safety Services continue to work with the Department of Estates to provide additional resources for weekly fire alarm testing in the larger central campus buildings and took on responsibility for alarm testing at an additional 10 buildings during 2009.

Considerable progress has also been made by the Department of Estates on meeting the testing requirements of the British Standard for emergency lighting systems. The University's policy of installing self-testing emergency lighting systems will help to improve our level of compliance in this area over the coming years.

### **1.h Emergency Incidents in 2009**

2009 saw a welcome continuation of the downward trend from the high-point reached in 2005 (see Table 2) largely due to the efforts being made by the University to reduce fire alarm calls.

**Table 2. Comparative Emergency Incidents Totals 2005 - 2009**

	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
Ambulance	107	105	94	79	94
False Alarms - Accidental	137	69	59	40	20
False Alarms - Malicious	35	11	15	6	3
False Alarm System Faults	112	73	52	30	17
Fires	21	19	20	19	20
Miscellaneous Incidents	8	2	4	2	2
	<b>420</b>	<b>279</b>	<b>244</b>	<b>176</b>	<b>156</b>

The number of actual fires in the University in 2009 was up 1 from 19 to 20, which equals our previous lowest yearly total. A summary of the fires in 2009 is given in APPENDIX 1b. The number of ambulance calls during 2009 (94) rose by 15 compared to the previous year but even so is still below the average for the past 5 years.. This rise is within the bounds of normal statistical variation and is not thought to be of concern. Although there will always be some variation in these figures from year to year, the long-term trend for both ambulance and fire calls is downwards.

The total number of false alarms to which the Fire Service was called to attend fell from 76 in 2008 to 40 in 2009. The reduction in unwanted fire calls this year exceeded the 5% target that had previously been agreed with South Yorkshire Fire & Rescue Service.

The majority of fire alarm incidents at the residences are now dealt with via the Residences Monitoring room and so are not shown in the Table 2 above. In addition to the fire incidents dealt with via the Central Campus Control Room, there were a further 274 that were dealt with via the Monitoring Room. These break down as follows:

- False Alarm – Accidental, 154. The majority of these were cooking related incidents, with steam from escaping from ensuite shower rooms and ‘over-zealous ‘use of aerosols accounting for most of the remainder.
- False Alarm – Malicious, 40. Most were due to activation of fire alarm call points or interference with detectors.
- False Alarm – System Faults, 71. The biggest single cause is detector faults, but this category also includes incidents where the cause could not be positively identified.
- Fires, 9. These were all minor incidents which were dealt with by residents or staff using the fire fighting equipment provided. Again these were mostly cooking related incidents.

Incidents that are dealt with via the Monitoring Room are referred to the Residential Mentoring team who will advise residents on how to prevent similar occurrences in the future and, where necessary, initiate disciplinary action.

### **1,i Disabled Evacuation**

Due to technical problems, the Evacuation lifts are still not in use, so the focus is still on ensuring that appropriate Personal Emergency Evacuation Plans (PEEPs) are put in place where staff or students work in areas where they can’t evacuate by their own unaided effort. Where necessary this has included training departmental staff in the use of ‘Evac-chairs’ that can be used to assist people who are unable to use the stairs. To avoid the need for assisted evacuation our advice remains that wherever possible disabled staff and students should be accommodated in areas where they can evacuate the building by their own unaided effort. To assist in this regard Safety Services and Department of Estates have collaborated in producing a “Directory Of Accessible Pool Teaching Rooms” which allows Course Administrators to book

suitable teaching space for their disabled students. A copy of this Directory can be found on Safety Services web pages.

To further assist departmental staff in anticipating the needs of people with disabilities, Safety Services delivered an awareness session for the departmental Disability Liaison Officers (DLOs) in January 2009. This focussed on the PEEPs process and the practicalities of assisting people to leave the building in an emergency. A similar session was provided for the Community Assistants who work at the student residences.

As part of our strategy for improving access and egress arrangements across the University estate, refuge communication points have been provided in a number of key buildings. The maintenance and monitoring of these systems is being considered by the Alarm Monitoring Review Group who are reviewing the University's current arrangements for the collation and monitoring of all alarms across the campus. They will report to the University's Business Continuity Operations Group with a strategic proposal to deal with current and future requirements.

#### **1.j Fire safety engineering assessments of new & modified building designs.**

The number of engineering drawings requiring a review of fire and other safety provisions remained high during 2009. Although the procedure for approval of designs of new and refurbished buildings is working reasonably well, discussions are underway with Estates Services to ensure advice is sought at an appropriate stage of the design process to avoid unnecessary changes to designs and to ensure costs take necessary present and future safety factors into account, and also that the Value Engineering stage takes the views of all stakeholders into account prior to final decisions being made.

### **2. Accident & incident statistics - 1<sup>st</sup> January 2009 - 31<sup>st</sup> December 2009**

2009 saw an increase of 12% in the number of total accidents incurred by the University population compared to the previous 12 month period. The main increases were under the headings "Falls", "Obstructions / Collisions" and "Medical illness", the latter being attributable to Relative Humidity problems at Jessop West which are being addressed. The increase in "Falls" isn't entirely attributable to the snow and ice conditions in January and February 2009 as increases were observed in all categories of "Falls". Similarly, the increase in instances of injury as a result of "Obstructions / Collisions" was not attributable to a particular event or cause. See Appendices 2a and 2c.

"The number of Reportable Accidents recorded (two "major" injuries and fourteen accident in which the casualty was unable to carry out their normal work for a 3-day period), indicates a significant increase over the previous year which had an exceptionally low number of "Reportable accidents", i.e. those that are required to be reported to the Health & Safety Executive under the *Reporting of Injuries, Diseases and Dangerous Occurrences Regulations*

1995 (RIDDOR). However, the total number of Reportable Accidents is more representative of the norm at the University. See Table 3 and Appendix 2b

**Table 3. Comparative accident statistics 2003/04 to 2008**

	04/05#	2006	2007	2008	2009
Total number accidents	584	508	442	448	502
Reportable accidents (major)	7	6	4	4	2
Reportable accidents (3-day)	9	16	9	1	14
Reportable Dangerous occurrences	0	0	0	0	1
Non-reportable Dangerous Occurrences	16	24	20	24	33

# = 12 month data for 1<sup>st</sup> July to 30<sup>th</sup> June in the respective years

APPENDIX 2a lists Type of Accident against the category of staff or student for the period 1<sup>st</sup> January 2009 to 31<sup>st</sup> December 2009 and the total number of accidents recorded by Usport for the same period.

The 2009 “Incidence Rate” (accidents per 1000 staff) for “Reportable accidents” for the University of Sheffield is slightly higher than the sector, as illustrated in the Table below, based on statistics for staff only. The figure in brackets indicates the number of “Reportable” accidents in each category.

	UK*	HE sector*	Un. Sheffield
Total reportable accidents	5.02	2.5	2.61 (16)
Slip, trip & fall reportable accidents		0.95	0.87 (5)
Manual handling reportable accidents		0.7	1.04 (6)

\* - data from UCEA Health and Safety Report 2009

APPENDIX 2b lists the Type of Accident for 17 of the larger buildings on campus for the period 1<sup>st</sup> January 2009 to 31<sup>st</sup> December 2009. Jessops West and Crookesmoor have been included in the list this year. The statistic which again stands out on this table is the number of glass injuries sustained in the Dainton Building, primarily due to the large amount of glassware used by the Department of Chemistry and the fact that the Department has a Glass Workshop where a Technician works full time creating specialised glassware for the department. The number of slips and trips in the Western Bank complex is mainly due to the large number of people who use the building rather than any particular problem area or process. The “ill-health” indicated at Jessops West has been discussed above.

APPENDIX 2c lists the RIDDOR Reportable Accidents and Dangerous Occurrences, and the Slip, Trip & Fall accidents for the period 1<sup>st</sup> January 2009 to 31<sup>st</sup> December 2009.

### **3. Health and safety training report**

APPENDIX 3 summarises the general health and safety, fire and radiation training carried out over the period by Safety Services, Central Mechanical Workshops and Departments doing their own “Out of Hours” training, of which there are currently 7, accounting for 18% of staff undertaking this training during the year.

In April 2009, the University set up a cross-campus Group to review the University’s requirements of health and safety training for the future, the report from which was submitted to the Health and Safety Committee in November 2009. The Review Group concluded that more online training options should be provided where appropriate and that more choice of training provider should be available especially for first aid training. A short report is being submitted to the Health and Safety Committee in March 2010 to update the Committee on actions taken against the recommendations made in the report.

The demand for first aid and health and safety courses and numbers of people attending those courses has increased by 10% over that in previous years, mainly due to the introduction of the online Out of Hours course and increases on fire safety training. Attendances at Radiation Protection lectures and induction courses have remained strong with a slight decrease in the numbers attending courses compared to 2008

Three online courses were introduced during the year, a “General Health & Safety Induction Training” package for new employees, an “Out of Hours” training package to replace the practical session for existing staff and all postgraduates, and a “DSE user training and assessment” package to replace the manual training and assessment requirement. In addition three new courses were introduced, one for Biological Safety Advisers and Senior Technicians in departments working with biological materials, and short courses on “Legionella Awareness” and “Radiation Awareness”, both aimed at Technical staff.

To take account of recent changes in fire safety legislation Safety Services have reached an agreement with the local Fire Service on the provision of practical fire fighting training. A trial course was run in January 2009, feedback from which has been used to tailor the course content to ensure that it best meets the University’s needs. A program of courses will be planned to take place during spring/summer 2010 and annually thereafter.

The number of staff and postgraduate students participating in fire training during 2009 showed a significant increase over the total for 2008: up from 3930 to 4315. The web based system was used by 2115 people, another 2187 people attended fire training lectures and 13 people participated in the trial practical fire training course. A review and upgrade of the current web based system was completed in January 2009. A few technical difficulties have been experienced but the service provider has these in hand. Although this year’s total represents the highest on record the proportion of senior staff



participating in fire training remains disappointingly low.

#### **4. Ionising and Non-ionising Radiations report**

2009 saw a reduction in the number of people registered to work with ionising radiations, largely down to a reduction in work with unsealed sources and people relinquishing their registration as more emphasis was put on currency of training. The average number staff issued with monitoring badges fell slightly but the number of people issued with finger rings increased. There are no classified workers at present.

The number of departments working with radiation sources remained at 28. Despite the reduction in work with unsealed sources, overall work with radiation sources has remained reasonably stable. *See APPENDIX 4 for comparative statistical information for the period 2005-2009*

The contract for centrally organised isotopes was awarded mainly to PerkinElmer (NEN) with GE Healthcare withdrawing their production of all research radiochemicals, except for custom orders, from the end of 2009. PerkinElmer has purchased GE's radiochemical assets and has expanded its product range. Costs have risen as indicated in last year's report.

The review of Personnel Doses for 2003-2008 continues the excellent record of protection of radiation workers with minimal personal doses recorded during the year. Data for 2009 is not yet available. A full review can be found in APPENDIX 5.

The year saw a further increase in the number of people registered to work with lasers, and an increase in the number of laser in use. There are now 196 lasers in use in total, of which 52 are Class 4.

Mr Moseley continues to represent AURPO and University interests on the Environment Agency's Small User Liaison Group, is Chairman of AURPO Scientific and Technical Committee. He continues to act as validator on the web based AURPO Certificate Course in Radiation Protection arranged through Strathclyde University.

#### **5. Genetic modification report 2009**

Twenty two proposals were submitted for approval to the Local Genetic Modification Safety Committee (LGMSC), of which twenty were Class 1 projects and two Class 2 proposals. All projects were approved by Committee and HSE (Class 2 only). There was one Class 2 transfer.

Work is ongoing to improve the way GM proposals are circulated for consultation between the Project Proposer and the Committee, and to network relevant databases for LGMSC members to provide the information required on "approved laboratories" and to facilitate access to existing project

risk assessments to update relevant data.

The Committee is reviewing its remit and membership in light of forthcoming legislation in 2010 where a single regulatory framework is to be introduced to cover all work with biological agents.

## **6. Health and safety surveys, audits and inspections**

Radiation surveys and inspections were carried out in most areas working with radioactive materials and x-rays. All statutory leak tests and monitor calibrations were completed satisfactorily. Monitor testing and calibration for external clients continue with services provided for three Universities, two local firms and SY Fire & Rescue Service. Standards found were generally satisfactory and the Service received good support from DRPSs and DLSOs in all areas.

The health and safety auditing regime to determine health and safety compliance for Type 1 and 2 departments saw only four audits of Type 1 Departments being completed during the year primarily due to other University initiatives taking precedence; in particular reviews of the health and safety training provision, PAT Policy and the Incident Management Plan; work to tender for the University radio system; discussions with suppliers for online training packages and the concerns related to the Swine Flu pandemic. In view of the difficulties experienced undertaking audits of academic and non-academic departments, audits will be restarted in 2010 using an external resource.

An audit of hydrofluoric acid processes and users was carried out at Molecular Biology & Biotechnology over the period.

A pedestrian walkway was marked out on Back Lane, with handrail sections to clearly define a "safe" route for pedestrians walking up Back Lane to minimise the risk of interaction with vehicles also using the lane. Restrictions on access onto the Concourse during periods of heavy pedestrian use have also been introduced and are being monitored by Room & Parking Services.

Visits were made to buildings and departments across campus to inspect laboratory facilities and equipment, perform noise levels measurements, carry out pre-occupation visits to premises, discuss Fire Marshall regimes, to check fire safety and gas storage facilities, discuss means for assisting staff and students with impaired mobility to evacuate buildings safely, and to discuss various other safety problems and to offer advice and assistance. An air quality survey was carried out at Jessop West in response to health complaints from occupants which identified a low "Relative Humidity" which is being addressed with the Faculty of Arts. Representatives from Safety Services are involved in all the newly formed Faculty Operations Groups across campus.

Safety Services continues to liaise with relevant enforcing authorities for antiterrorist activities related to biological organisms, radioactive substances and toxic substances and chemical weapons and precursors.

## **7. Health and safety policies and information.**

The 2009 revision of the Health and Safety Codes of Practice was ratified by the Health and Safety Committee in February 2009 and then by Council. As previously reported electronic copies are available for staff and students in PDF format from the University's home page in the "Staff" section.

Safety Services contacted all new undergraduate and postgraduate students by e-mail during October 2009 with the relevant web links to enable them to access the Health and Safety Codes of Practice they should be aware of and comply with during their stay in Sheffield.

During 2009 a small cross campus group was set up to review the Portable Electrical Appliance Policy with the remit of producing a document which could be applied by all departments whether their equipment was tested in-house, by the PAT Service or by external contractors. This Policy was approved by the Health and Safety Committee in May.

A Work-related Driving Policy was also drafted by the Transport Section and approved by the Health and Safety Committee in November 2009.

Work has been ongoing with the Department of Estates to develop and implement a revised Policy on the "Management of Contractors" which can be applied to all contracts involving external Contractors and used by any Department. Three training sessions were held with project staff from the Department of Estates as part of this process.

The monthly "Safetyline" health and safety updates have continued to be produced and placed on the Safety Services web site and the link sent out as an e-mail to departmental contacts.

Work has been ongoing to redesign the Safety Services home page and populate the website with information, links and training presentations relevant to the University community. The PAT Service website is also now accessible from the Safety Services home page. An "Online Training" button has been included to access the four online training programmes accessible from the homepage. PDF copies of UCEA documents have been added to the website where the documents were available for free download.

First aid cover for 20 Degree Ceremonies was provided by first aid volunteers from across the University and whose contribution is warmly appreciated.

## **8. Specialised Waste Disposal report**

### **8.a Solvent, oil and chemical wastes**

Two collections of solvent and oil wastes were undertaken in 2009 from 9 user departments. Volumes collected were similar to that collected in previous years. Two collections of waste chemicals were also taken for disposal from 8 user departments.

### **8.b Radioactive Waste Disposal**

Volumes of radioactive waste collected in 2009 were up on 2008 and the total cost of disposal was £10,550 ex VAT, of which all was recovered from hospital and University departments. Costs related to radiation “activity” are being minimised by making full use of the 6-month “decay period”.

## **9. Health & Safety investment report**

Investment in the University infrastructure to address specific health and safety deficiencies has continued. The principal projects for 2009 were:

1. Completion of the means of escape from the South West Tower of Firth Court and disabled access and egress;
2. Fire escape stairway and emergency lighting at Crookesmoor to facilitate the relocation of School of Architecture and Department of Landscape;
3. A new business radio system for the University based on transmitters located at the Hicks Building and the Edge;
4. Replacement fire alarm system for the Kroto Institute following serious problems with the previous system;
5. Upgrading fire doors in University House
6. Provision of fixed, secure dewars for liquid Nitrogen on Back Lane and pedestrian walkway;
7. Continuing the management of asbestos in all the University’s buildings, in particular the Chelsi project at Chemical & Process Engineering;
8. Site clean-up at the University bunkers at Buxton.

Work is ongoing to design the new fire alarm system planned for the Frederick Mappin Building and for asbestos removal work at Hick Building over the next year.

## **10. Legionella Control report**

During the year a new regime was introduced for assessing the Legionella risk in the University’s buildings due to concerns about poor rate at which the assessments were being completed. Four contractors have now been tasked with the assessments and these have now been completed on all the lower-risk buildings which had been delayed while assessing the “Delta” properties owned by Accommodation & Campus Services. Further work is required in the larger buildings to trace pipe runs, but “dead-legs” are being removed as part of the risk control measures and during refurbishment projects.

Temperature monitoring, sampling and treatment activities have progressed satisfactorily but positive Legionella samples were found at Tapton Hall of

Residence, the Hicks Building and the Arts Tower. All “failures” have been at the “First Action Level” requiring emptying and cleaning of the water tank, chlorination and re-sampling of the water system. All subsequent samples have proved negative for Legionella.

The Department of Estates has implemented a programme of cleaning and disinfecting cold water storage tanks in all buildings.

The remaining cooling tower at Kroto has continued to work effectively but has required significant effort on the part of the Legionella Contractors to remain Legionella-free. The Cooling Tower is due for replacement at Easter 2010.

The Legionella Policy was revised to ensure that it reflected changes to work practices and the work done over the previous 2 years. The revised Policy was approved by Health and Safety Committee.

Four “Legionella Awareness” training sessions have been carried out for Technical staff in Departments.

The Legionella Steering Control Group continues to meet every 4-months to monitor the effectiveness of the measures taken to control Legionella and to identify the long term investment required to eliminate and / or reduce risks. The Group takes the lead role on Legionella matters, e.g. developing and monitoring the Policy and practices, providing guidance and informing relevant personnel about key issues.

## **11. Compliance with Service Level Agreements**

The level of compliance with Service Level Agreements (SLA) continue to be high, both on measurable aspects and on the qualitative aspects as indicated by the “perception” feedback received from departments with the self-audit responses.

Between 2 and 12% of responses indicate dissatisfaction with the qualitative aspects and the few adverse comments received are about sufficiency and quality of training courses. Following the Health and Safety Training Review in 2009 several online courses have been introduced and in 2010 external first aid training providers will be contracted to run several of the certificated first aid courses; this will address most of the comments received. Where there are concerns about other types of courses, then the reduction in first aid and “Out of Hours” courses run internally will enable more of the other courses to be run if required.

## **12. Portable Appliance Testing (PAT) Service report**

The University has a legal obligation to ensure that it makes provision for the testing of its portable electrical items. 2009 has seen the introduction of the

## Portable Appliance Testing Policy.

In October 2009, the Portable Appliance Testing Services transferred to Safety Services from Central Mechanical Workshops following its incorporation into the Departments of Physics & Astronomy and Chemistry. The operational, administrative and financial processes of the PAT Service are under review and discussions taking place with the Department of Finance about possible changes to improve financial administration, the collection of monies from departments and clearer monitoring of staff salaries, three of whom are currently funded from PAT Services income.

Over the past 12 months the staffing levels within the Portable Appliance Testing Service has remained static. The Service operates with one full-time salaried technician and three full-time contract technicians, one on an open-ended contract and two on 6 months fixed term contracts which have been renewed. Managerial, secretarial and administrative support is supplied by existing Safety Services staff.

In 2009 the number of departments tested decreased from 155 (in 2008) to 121, largely due to long-term sickness of one of the full time technicians. Income from the 3 testers in 2009 was £59,150 which did not cover the salary costs of the four testers, resulting in a loss over the period.

The PAT Testing Service continues to provide a valuable service to many departments and continues to receive requests for testing from others. Despite the financial loss and in light of current climate of financial constraint across the University the charges should remain at their present level for the next year, unless alternative operational procedures are agreed with Finance.

### **13. Enforcement Agencies audits, inspections, visits and contacts**

The Home Office visited the Department of Chemistry in January 2009 to audit how Drug Precursors are managed within the Department. The inspector was satisfied with his findings.

In November 2009, HSE inspected a First Aid at Work course to review the registration of Safety Services as a First aid training provider. A letter was received in January 2010 indicating that Safety Services have been retained on their list of registered First Aid Training providers.

Radiation activities at the University were inspected by both the Environment Agency and Counter-terrorism Police in October 2009. Both agencies were satisfied with their findings.

### **14. New Legislation and Guidance introduced over the period.**

The following, relevant legislation came into force during the period: -

***The Chemical (Hazard Information and Packaging for Supply) Regulations 2009*** came into force on 6<sup>th</sup> April 2009. The Regulations, known as CHIP 4, dovetail the requirements of the CHIP Regulations with EC Regulation No. 1272/2008 on the Classification, Labelling and Packaging of Substances and Mixtures (CLP Regulations) which introduces into the EU the internationally agreed Global Harmonised System (GHS) on the classification and labelling of chemicals. GHS establishes a framework for describing and communicating the hazardous properties of chemicals for transport and supply globally. On a practical level, this will result in (minor) changes to the traditional hazard warning symbols on containers of substances in the UK.

The **Approved Code of Practice to the First Aid at Work Regulations 1981** was amended introducing revised guidance for employers. This change came into force on 1<sup>st</sup> October 2009. The “First Aid at Work” course has been reduced to 3 days in length (from 4) and a new “Emergency First Aid at Work” course introduced which, for regulatory purposes, will enable someone successfully completing the course can give first aid in the workplace. The decision on whether an employer should opt for the 3-day course or the 1-day course will depend on the risks present in the workplace rather than the numbers of people employed at the workplace. Annual refresher training will not be mandatory although HSE recommends that annual updates retain competence and currency of procedures.

The ***Health and Safety Information for Employees (Amendment) Regulations 2009*** came into force on 6<sup>th</sup> April 2009 allowing the HSE to change the information contained in the poster that employers are required to display in the workplace (unless they provide leaflets to employees). The old posters required employers to keep information on them up to date whereas the new posters have eliminated this requirement. Employers have 5 years to replace current posters.

The ***Health and Safety (Miscellaneous Amendments and Revocations) Regulations 2009*** came into force on 6<sup>th</sup> April 2009, which introduce minor changes to the *Noise at Work Regulations 2005*; revoke 224 sets of local mining Regulations; amend the paperwork aspects of the *manufacture and Storage of Explosives Regulations 2005* and the *Control of Explosives Regulations 1991*; amend the *Health and Safety Enforcing Regulations 1998* in respect of ammonium nitrate blasting and change the public record location of the *Genetically Modified Organisms (Contained Use) Regulations 2000*, following the relocation of HSE to Bootle in Liverpool.

The ***Health and Safety Offences Act 2008*** came into force on 16 January 2009. This Act increases penalties and provide courts with greater sentencing powers for those who break health and safety law.

The ***Carriage of Dangerous Goods Regulations*** were updated in 2009 but should now remain unchanged for the next 4 years. The University’s local rules

for carriage of radioisotopes have been amended to reflect minor changes to requirements.



## APPENDIX 1a

### Emergency Incidents 2009

Class	Description	No. Incidents
Miscellaneous incidents	Assault	2
Ambulance	Sporting injury	8
Ambulance	Alcohol / drugs related / violence	12
Ambulance	Natural causes / medical condition	28
Ambulance	Violence	5
Ambulance	Unknown / miscellaneous	18
Ambulance	Accident at Work	3
Ambulance	Falls	20
False alarms - accidental	Contractors creating heat, dust, smoke	6
False alarms - accidental	Steam from hot water, shower, kettle etc	5
False alarms - accidental	Cooking fumes	2
False alarms - accidental	Aerosol/hairspray used near detector	3
False alarms - accidental	Smoke/fumes/dust from outside	1
False alarms - accidental	Alarm activated with good intent – no fire	1
False alarms - accidental	Accidental breakage of call point glass	1
False alarms - accidental	Accumulated dust/insect infestation	1
False alarms - malicious	Damage/breakage of call point glass	3
Fires	Malicious ignition/arson	3
Fires	Experiment malfunction	7
Fires	Defective machinery/electrical equipment	6
Fires	Unknown cause	1
Fires	Human error - cooking related fires	3
Fire alarm system faults	Faulty detector	8
Fire alarm system faults	Water/moisture dripping into detector/system	1
Fire alarm system faults	Unknown causes	8
<b>Total incidents</b>		<b>156</b>

**Fires 2009**

Fires are defined as incidents requiring the use of fire fighting equipment or the intervention of the Fire Service, or where material damage is caused to the building or its contents.

<b>Date</b>	<b>Building</b>	<b>Details</b>
27-Jan-09	Florey	Activation by smoking centrifuge
30-Jan-09	Western Bank	Spillage of ethanol ignited a bin
03-Feb-09	Dainton	Small solvent fire
12-Feb-09	Addison	Smoke (unknown origin)
25-Feb-09	Dainton	Solvent spillage ignited
30-Mar-09	Stephenson South	Paper ignited in stairwell
29-Apr-09	Froggatt A	Tea towel left on stove, ignited
02-May-09	Library	Trellis box on fire
06-May-09	White Rose Centre	One of the bins in the bin store on fire
08-Jun-09	Dainton	Small solvent fire
25-Jun-09	Stephenson South	Plastic plates left on cooker smouldered
06-Jul-09	Dainton	Solid chemical waste auto-ignited
06-Jul-09	Alfred Denny	Electrical fan sorted & emitted a small flame
23-Jul-09	LCCU Crown Works, Beighton	Hot steel fell on acetylene line igniting it
27-Jul-09	2, Palmerston Rd	Heater smoked & burst into flame
14-Oct-09	Rivelin Appts	Oil in a pan ignited
27-Oct-09	Florey	Machine overheating
10-Nov-09	Hicks	Smoking from a loose machine belt
13-Nov-09	Firth Court	Ethanol fire in a safety cabinet
09-Dec-09	Florey	Spillage of ethanol ignited
	<b>Total No. Fires</b>	<b>20</b>

APPENDIX 2a

Accident Statistics from 1st January 2009 to 31st December 2009

	1: Academic		2: Technical		3: Clerical		4: Ancillary		5: U/G		6: P/G		7: Other		8: Work Ex.		Tota IM	Tota IH	Grand Total	%
	M	H	M	H	M	H	M	H	M	H	M	H	M	H	M	H				
A: Animal	1																1	0	1	0.2
B: Burns	1	1	2				7		3	1	2	1			1		16	3	19	3.78
C: Cuts	1		4		1	2	13	5	15	4	2	2	7	1			43	14	57	11.35
D: Dropping			2		2	1	8		2								14	1	15	2.99
E: Explosions												1					0	1	1	0.2
F: Falls	8	2	4	4	18	7	23	3	15	20	5		13	7			86	43	129	25.7
G: Glass			2	1			5	1	15	7	1	2	3				26	11	37	7.37
H: Handtools	1		1	2			1		1		1						5	2	7	1.39
I: Inhalation							2			1	1			1			3	2	5	1.00
J: Ingestion										4	1		1	1			2	5	7	1.39
K: Spills/Splashes	1	1	1		1			1	2	1	4			1			9	4	13	2.59
L: Lifting			7	1	4	1	5	3									16	5	21	4.18
N: Flying Particles				1					2		1						3	1	4	0.80
O: Obstruct/Collide	7	1	4	1	7	1	18	4	6	6	2	1	5	3			49	17	66	13.15
P: Electric Shocks			1				1										2	0	2	0.4
Q: Natural		5	1	1		1			5	16	1		4	2			11	25	36	7.17
R: Wood Splinters							1										2	0	2	0.4
T: Trapping	2	2	1	1	2		3		4	3	1		2	2			15	8	23	4.58
U: Unclassified							1	2	5	4	1	1	5	1			12	8	20	3.98
V: Vehicles			1														1	0	1	0.2
Y: Ill health (Work related)	1				6												7	0	7	1.39
Z: Violence							6	1	9	8		1	2	3			17	13	30	5.98
<b>Total(Type)</b>	<b>23</b>	<b>12</b>	<b>31</b>	<b>12</b>	<b>41</b>	<b>13</b>	<b>94</b>	<b>20</b>	<b>84</b>	<b>75</b>	<b>23</b>	<b>9</b>	<b>42</b>	<b>22</b>	<b>1</b>	<b>0</b>	<b>339</b>	<b>163</b>	<b>502</b>	<b>100</b>
X: Sports (routine)	2	1								37	18	6	5	30	12		75	36	111	

APPENDIX 2b

Accident statistics for the 15 largest University Buildings 2009

	Arts Tower	Bartholome house	Crookesmoor	Dainton	Dental School	Elmfield	Geography	Sir Robert Hadfield	Hicks	Information Commons	Jessops West Management School	Sir Frederick Mappin	Psychology	Royal Hallamshire	University House	Western Bank complex	TOTALS	
A: Animal																1	1	
B: Burns				3				1						1	4	4	13	
C: Cuts				2	9									7	5	7	30	
D: Dropping									1						4		5	
E: Explosion				1													1	
F: Slips, Trips & Falls	3	1		4		1	2	2	1	1	1			3	4	11	35	
G: Glass				9											1	5	15	
H: Handtools				1	1				1				1				4	
I: Inhalation	1																1	
J: Ingestion				1													1	
K: Spills/Splashes				4				1	1	1				1		4	12	
L: Lifting	1			1				2	1	2					1	2	12	
M: Machinery																	0	
N: Flying Particles					1			1									2	
O: Obstruct/Collide	1	2	1	1				1		2	2	2		1	1	2	18	
P: Electric Shocks												1					1	
Q: Natural		1		2				1			1			3		4	12	
R: Wood Splinters					1												1	
T: Trapping	1							1			1			3	1	2	10	
U: Unclassified	1			3										2			6	
V: Vehicles																1	1	
Y: Ill health (work related)											7						7	
Z: Violence																	0	
<b>Total(Type)</b>	<b>8</b>	<b>4</b>	<b>1</b>	<b>32</b>	<b>12</b>	<b>1</b>	<b>2</b>	<b>10</b>	<b>5</b>	<b>6</b>	<b>12</b>	<b>2</b>	<b>8</b>	<b>0</b>	<b>21</b>	<b>21</b>	<b>43</b>	<b>188</b>

## APPENDIX 2c

### RIDDOR Reportable Accidents & Dangerous Occurrences Jan 1<sup>st</sup> - Dec 31<sup>st</sup> 2009

Report Category	Incident Date	Status	Accident Description
<b>Major Injury</b>	7/1/09	UG	Broken ankle as a result of a slip on grass banking
	4/2/09	Lecturer	Broken arm as a result of a slip on an icy car park
<b>3-day Accident</b>	19/2/09	Technician	Injured shoulder (sprain) lifting compost bags
	13/3/09	Teacher	Suffered concussion after walking into a toilet door
	2/6/09	Porter	Slipped on a water spillage and strained back
	3/6/09	Catering Asst (Students Union)	Overbalanced & fell from a chair causing bruising to chest
	7/7/09	Porter	Injured back whilst moving a table
	17/8/09	Library Asst	Injured back whilst moving books along a shelf
	19/8/09	Security Patroller	Twisted knee whilst reaching for a smoke detector
	23/8/09	Cleaner	Fell whilst walking across a car park. Two broken fingers
	26/10/09	Research Asst	Strained neck whilst using a drill corer
	17/11/09	Service Coordinator	Weld on a gate gave way and it fell on him causing lacerations to leg
	17/11/09	Cleaner	Missed a step & fell, whilst walking downstairs causing sprained ankle
	4/11/09	Catering Asst	Walked into a pillar causing cracked ribs. Casualty is partially sighted.
	17/11/09	Research Technician	Trapped his finger whilst lifting a centrifuge causing broken finger
11/12/09	Ancillary Worker	Injured shoulder putting rubbish into a skip	
<b>Dangerous Occurrence</b>	9/12/09	n/a	Arts Tower. Lift failure whilst under test following major refurbishment
<b>Total number of Reportable Accidents &amp; Dangerous Occurrences = 17</b>			

### Slip, Trip & Fall Accident Statistics from Jan 1<sup>st</sup> 2009 to Dec 31<sup>st</sup> 2009

Fall Category	Minor	Hospital	Total	%
Falls on same level (misc & unspecified)	7	4	11	8.53
Falls on same level on/over objects	18	7	25	19.38
Falling on indoor steps/stairs	16	4	20	15.50
Falling on outdoor steps/stairs	4	0	4	3.10
Falling while climbing on chair, box etc	1	0	1	0.78
Falling on ice or snow	9	1	10	7.75
Falling on wet floor (general areas)	10	1	11	8.53
All other Falls	21	26	47	36.43
<b>Total Falls – all categories</b>	<b>86</b>	<b>43</b>	<b>129</b>	<b>100</b>

## APPENDIX 3

### Safety Training course statistics 1<sup>st</sup> January 2009 to 31<sup>st</sup> December 2009

COURSE TITLE	No Courses	No. Attended	No. Passed
First Aid at Work	5	28	28
First Aid at Work (Refresher)	1	5	5
First Aid Trainer	1	2	2
Practical Assistant (for OOH)	1	2	2
Appointed Persons	4	28	22
Emergency First Aid at Work	3	17	15
Preliminary First Aid	22	200	n/a
HF Use & First Aid	5	24	16
Cyanide Use & First Aid	1	2	2
Basic First Aid	1	8	5
Defibrillator training	2	7	7
CPR & "Heartstart"	5	23	n/a
Heartstart	8	43	n/a
Babyaid	2	11	n/a
Basic Manual Handling	1	10	n/a
Manual Handling Hints	1	2	n/a
Fire training (lecture)	36	2187	n/a
Fire training (online)	-	2115	n/a
Fire training - practical	1	13	n/a
DSE Trainer / Assessor	3	17	n/a
General Risk Assessment	2	15	n/a
Gas cylinder safety*	1	28	n/a
Visual Inspection	2	10	n/a
Cartridge Mask	3	14	13
Escape BA	1	5	5
Royal Soc.of Health Certificate	1	6	6
Managing Contractors	3	30	n/a
Out of Hours (by Safety Ser's)	71	1027	905
Out of Hours (by Department)	37*	339*	339
Out of Hours (online)	-	497	497
H&S Induction (online)	-	161	111 completed
Biological Safety Adviser	1	10	n/a
Legionella Awareness	4	34	n/a
Evac Chair training	3	15	n/a
Unsealed radioactive sources#	8	95	n/a
X-rays	5	46	n/a
Lasers#	7	88	n/a
Radiation Awareness	1	5	n/a
<b>Total</b>	<b>253</b>	<b>7169</b>	

\* Courses run externally to Safety Services

n/a = no formal assessment

## APPENDIX 4

### COMPARATIVE STATISTICAL INFORMATION 2005-2009

	2005	2006	2007	2008	2009
Number of user departments	29	24	24	28	28
Registered radiation workers at 31/12/07	532	455	432	414	325
Number registered during the year	65	33	51	39	39
Classified workers	0	0	0	0	0
Certificates & schemes of work at 31/12/07					
- Unsealed	162	131	138	138	115
- Sealed	13	13	11	11	11
- X-rays	43	45	45	41	42
- Neutrons	1	2	2	2	2
<b>Totals</b>	<b>219</b>	<b>191</b>	<b>196</b>	<b>192</b>	<b>170</b>
Isotopes ordered and tracked on IsInventory_ - number of batches	458	456	355	359	300
Body badges					
- average number of staff	284	265	207	198	191
- Total number of Body Badges issued	1135	1060	829	793	766
Finger dosimeters issued	304	380	280	244	292
Departmental Surveys	29	25	20	20	28
Number of statutory monitor tests: -					
- In-house tests	124	125	115	120	128
- Outside Test-House	7	7	4	4	4
- Tests for external companies	136	143	138	177	153
Sources leak tested (Statutory Tests only)	48	55	54	58	57
Total Sealed Sources Held at 31/12	131	130	127	131	142
No. of HASS Sources	3	3	3	3	3
Radioactive Substances Act 1993					
- Unsealed Source Registrations	3	3	2	2	2
- Sealed Source Registrations	3	2	2	2	2
- Waste Authorisations	3	3	2	2	2
<b>Totals</b>	<b>9</b>	<b>8</b>	<b>6</b>	<b>6</b>	<b>6</b>
New issues/renewals	0	1	1	0	0
Radioactive solid waste removed from Western Bank Store (Husband Building)					
- Volume in Cu metres	18.9	14.76	13.12	12.3	12.3
- Activity in MBq	870.9	479	498	491	688

**REVIEW OF PERSONNEL RADIATION DOSES 2003 - 2008**  
(2009 data will not be available until mid 2010)

**Table 1 - Whole Body Doses**

Year	TLDs /OSLs Issued	Depth dose in mSv (Limit 20 mSv)			Skin doses in mSv (Limit 500 mSv)			
		<0.5	0.5 - 1.0	>1.0	<0.5	0.5 - 2.0	>2.0 - 5.0	>5.0
2003	1355	43	1	0	43	1	0	0
2004	1239	44	0	0	46	2	0	0
2005	1135	29	0	0	34	2	0	0
2006	1060	43	0	0	43	0	0	0
2007	829	32	0	0	36	0	0	0
2008	793	18	0	0	24	0	0	0

**Note:**

- In 2008 the highest single recorded depth dose during the year was 0.22 mSv
- The highest single skin dose during the year was 0.27 mSv
- Highest individual depth dose for year was 0.42 mSv and the highest skin dose was 0.43 mSv.
- Doses can now be measured down to 0.01mSv but all those measuring less than 0.1 mSv are ignored in the above tables.

**Table 2 - Finger Doses (annual dose limit 500 mSv)**

Year	Pairs of rings issued	Issues with doses	Doses (mSv)			
			<0.5	0.5 - 2.0	>2.0 - 5.0	>5.0
2003	137	4	4	0	0	0
2004	158	9	6	3	0	0
2005	152	6	3	3	0	0
2006	190	4	4	0	0	0
2007	140	1	0	1	0	0
2008	122	1	1	0	0	0

**Note:**

- In 2008 highest individual finger dose was 0.4 mSv.