Fire (Scotland) Act 2005
Fire Risk Assessment Review

Kelvin Building

Name and Address of Property	Kelvin Building Gilmorehill Campus	Dutyholder(s)	University Court of the University of Glasgow
Building Number	121		
No. of floors	Levels range between 4 and 6.	College/School /Institute	School of Physics & Astronomy (there are 10 research groups occupying the building.) Molecular Bioscience Radiation Protection Service (RPS) Part of Health Safety & Wellbeing
Estimated Occupancy	850		
Name and Role of Assessor	Alan Watson UoG Fire Officer	HMU	Professor David Ireland/Professor Helen Walden/Selina Woolcott
Date of Review	9th February 2023	Fire Safety Coordinator	Colin Craig
Date of Previous FRA	16th April 2013		
Details of any Significant Findings since the previous FRA	A programme of fire-stopping and fire-door upgrades has been undertaken since the last FRA, and more is planned when parts of the building are refurbished. However, there are still areas still in need of firestopping and doors that require to be maintained, upgraded or renewed. Please see further information below.		
Considerations for young persons and persons with impairments	Currently no young persons employed to work in the premises. Persons with physical impairments were identified as working within the building at the time of this review and PEEPS will be provided if required. One student with a disability will be studying in the building. There are currently ongoing discussions with the student as to how best the university can support there needs. A PEEP will be put in place after consultation with the student.		
Fire Loss	No fire loss has been recorded since last FRA Review.		
Details regarding Dangerous Substances	Radiation sources are used in lasers, X-ray machines etc. with access doors to rooms signed accordingly. Majority of radiation used and stored within the building is classed as low level risk. Further information can be obtained from RPS, particularly on areas containing a higher level of risk. Various types of chemicals are used within labs throughout the building. Hazardous Area Survey Forms can be obtained from building occupiers showing types, quantities and locations of chemicals used. Where applicable they are also posted on room doors. They were recently reviewed at the end of 2022 and the beginning of 2023. Where appropriate all chemicals should be assessed through COSHH and DESEAR. Compressed gas cylinders should be stored as per SEPS guidance note GN-CHEM/March 2020.		
Other	This review should be read in conjunction with the previous FRA in 2013. Also the proposed fire improvement works highlighted in the report from Aecom/Keppie in 2018, further plan drawings submitted by Keppie in 2019, the firestopping works completion report in 2021 and the fire door inspection report in January 2023. Rooms were sampled and room 211 on level 2 was not included as it is about to go through a major refurbishment.		

No	Fire Safety (Scotland) Regulations 2006	Details of deficiencies & action required	Action By	Priority		
1.	**Fire Safety Arrangements (Reg 10)** Effective management systems and recording processes etc. Recognition of young persons.	Not all the requirements for planning, organisation, control, monitoring and review of fire safety measures are in place. Once the attached fire action plan is complete all reasonable fire safety arrangements will be in place.	HMU/ ED		X	
2.	**Maintenance and testing (Reg 16)** Maintenance of all fire safety provisions and recorded in fire safety log.	Fire Alarm – weekly tests are being carried out but are a bit sporadic.	HMU		X	
		Fire Alarm – last maintenance test was on the 10th November 2022. 25% of the system was tested with the next test due in February 2023.	N/A			
		Emergency Lighting – Monthly testing is sporadic. Only 5 months in 2022 have been recorded. Last available annual certificate dated August 2021 states remedials required. No evidence available as to whether this work was completed.	ED		X	
		Means of Escape – Last recorded in September 2022 and sporadic before that. These checks to include any door locks linked to the fire alarm system and any door hold open devices. Checks should also include storage in escape routes.	HMU/ ED	X		
		Portable firefighting equipment – last recorded maintenance date was May 2022.	N/A			
		It could not be ascertained as to whether a lightening protection system is installed. If it is, then it is required to be maintained.	ED		X	
		No record available of testing and maintenance of temporary waiting space (TWS) communication system. Evac chair located at main entrance was last maintained in January 2023.	ED		X	
3.	**Fire Safety Training (Reg 20)** Are training provisions for Staff, Fire Safety coordinators (FSC) and Fire Wardens etc. adequate.	FSC has been appointed, and a deputy FSC has been identified and is awaiting formal training. Due to hybrid working and the occupier should consider if 2 FSC is sufficient.	HMU		X	
		There are 19 fire wardens in place. However, occupiers will have to determine if there are enough to assist in carrying out the fire action and evacuation plans due to hybrid working. Regular fire drills will help to establish this.	HMU		X	

		Fire drills – last recorded fire drill was October 2019.	HMU		X	
		An electronic record is available of staff training but occupiers need to confirm if all staff are up to date with fire safety training through Moodle.	HMU		X	
4.	**Staff Information (Reg 18)** Is staff made aware of emergency procedures, relevant risks & dangerous substances?	No premises specific fire action plan and evacuation plan currently in place. The contents of this FRAR should be made available to all staff.	HMU	X		
		Technical Operations Manager Sam McFadzean has developed a room Risk Assessment Summary (RAS) form. The benefit of this form is that it allows personnel such as firefighters to identify potential serious hazards very quickly. Consideration should be given to having this form displayed outside all rooms which may contain hazards.	HMU		X	
5.	**Firefighters Provisions (Reg 23)** Maintenance provisions for Dry/Wet risers & vent systems etc.	Parts of the building is circa 1906 with extensions added in 1952, 1959 and 1966. It is assumed that it met building standard regulations at that time. However, due to the height of the building a dry riser fire main should be installed to aid firefighters in the event of a fire.	ED		X	
		Not all escape stairs can be ventilated. Some have openable windows on various levels but not all can be opened. Stair D and F and protected corridor 56 on level 3 cannot be vented.	ED		X	
		Private fire hydrants are situated in the curtilage of the building and are maintained annually by the university. The hydrants, including the water main is very old and is currently being surveyed for replacement.	ED		X	
6.	**Dangerous Substances (Reg 6 & 11)** Are adequate control measures in place to mitigate or reduce ignition, exposure etc. of dangerous substances.	There are numerous chemicals used and stored throughout the building. Most are in small quantities with the flammable ones stored in locked metal cabinets and signed accordingly. Acetylene is no longer used in the workshops.	N/A			
		Some of the more notable potentially dangerous chemicals are, liquid nitrogen, cyanide, hydrogen, hydro fluoride acid, ammonium fluoride, thallium. Safety procedures and processes in place for their use and storage. A full list of chemicals is available.	N/A			

7.	**Means of Escape (MofE) (Reg 13)** Are MOE maintained effective including fire doors. Is there provision for assisting evacuation of physically impaired?	Some rooms open directly onto stair enclosures, therefore rely solely on single stair for means of escape. Although a direct primary route is available, an alternative escape route across the flat roof of the building is available for rooms 520 - 539. This route leads to the top of the alternative stair at level 5. There are 5 five escape stairs in total.	N/A			
		There is currently a compressed gas cylinder storage area located under an external stair leading from lecture room 312. The escape route could be compromised in the event of an incident in this area.	ED		X	
		Various fire doors require to be renewed or maintained. All doors leading directly onto the protected escape routes should provide a minimum of 60 minutes fire resistance and have intumescent strips and smoke seals fitted. These doors should also have self-closing devices fitted if required. “Bommer” type hinges to be replaced with conventional single swing hinges. All doors should be checked and where required maintained or renewed.	ED	X		
		Entrance/exit doors located on level 2 (241) require to open in the direction of persons make their escape from the building. Due to the size of the doors and proximity to the external stairs this might not be possible. Consideration should be given to creating a new lobby to these doors. Once created the existing doors can be opened when the building is occupied.	ED	X		
		Additional cross corridor fire doors should be installed in the middle third of corridors that are over 12 metres in length.	ED	X		
		The 3 main lecture theatres have double leaf door sets installed. However, not all leaves could be open without unlocking the bolts. Due to the occupancy of these rooms the full available exit widths must be available when occupied. This also applies to the final exits on level 2 stair D and level 1 stair A. Bolts should be removed and if the doors require to be locked then push bars should be installed on the doors.	ED	X		

		Electric locking devices that unlock on electrical power being withdrawn on activation of the fire alarm system and mains electrical failure are not suitable on doors that will be used by students. Doors that are fitted with these types of locks in student areas such as exits on level 2 (241) and level 1 (104) require to be replaced with mechanical locking devices.	ED	X		
		Thumb turn locks on doors that are used by students should be replaced by a more suitable type of lock if rooms require to be secured.	ED		X	
		Nonstandard fastenings (NSF) are fitted to some fire doors. These NSF should be replaced with suitable modern ironmongery and kept maintained.	ED	X		
		All fire doors should have appropriate mandatory signage attached. “Fire Door Keep Shut” “Fire Door Keep Locked Shut” “Fire Door Keep Clear” where applicable. Some doors are signed incorrectly. Where thumb turn locks and push pads are used, they should be signed to show how they operate and staff to be instructed on their use. These types of locks should not be used if students are expected to use them.	ED		X	
		Some fire doors were wedged open. It is particularly important for this not to happen in areas where there is a single means of escape.	HMU		X	
		Consideration should be given to enclosing the external escape route on the roof on level 5.	ED		X	
		The large gate to the pend accessed from Science Way is closed at approximately 17:00. This gate has a wicket gate installed to allow occupiers to exit from the courtyard during out of hours. As the gate can be used by students the current push pad should be replaced by a push bar and signed appropriately.	ED		X	
8.	**Emergency Lighting & Signage (Reg 13)** Is emergency lighting and signage adequate and relevant, internally and externally?	The standard of emergence lighting (EL) and signage is varied throughout the premises. A full survey is required to make sure EL and directional signage is adequate, particularly the external escape routes including the one on the roof.	ED		X	

		Fire action notices (FAN) located throughout the building should have the location of assembly point(s) marked on them instead of assembly point numbers.	HMU/ ED		X	
9.	**Housekeeping** Is storage and control of combustible materials adequately controlled internally & externally?	Storage in the building is required to be improved. This is particularly important in certain locations in order to reduce fire load and reduce the risk of a fire developing: - • Cupboards containing mains electrical equipment and plantrooms. • Escape routes should not be used as storage spaces. This includes cleaning materials, electrical cleaning equipment, vending machines, bins etc. • Escape stairs and corridors are not suitable areas for tea prep/kitchens and places of work i.e., level 6 stair G, level 4 corridor 438, level 4 stair D, level 0 stair B. • On level 5 where doors to lobbies have been removed, these lobbies cannot be used for office equipment and storage. There is also no automatic fire detection within the lobbies. • Compressed gas cylinders should not be stored in corridors or left randomly in cupboards. The old Butane cylinder left in the external cylinder compound should be disposed of. • Externally, combustible material should be kept clear of the building, particularly next to windows and vents. • Noticeboards on escape routes should be enclosed and kept locked.	HMU/ ED	X		
10.	**Ignition Sources (Elimination of Fire hazards).** Are control measures in place to mitigate ignition sources (electrical, smoking, Wilful FR, Portable Heaters, cooking:	CCTV in operation in parts of the building which can assist to guard against wilful fire raising.	N/A			
		There is a washing machine and commercial dryer in room 214 on level 2. Filters in these machines should be cleaned regularly and an instruction card should be placed in the room.	ED		X	
		It is recommended that the hob and grill is removed from room 139 and if required replaced with a microwave oven.	HMU		X	

		There was evidence of daisy chaining (two 4-gang adapters joined together) in room 157B on level 1. This has the potential to overload the 13A socket.	HMU		X	
		There is some evidence of portable appliance testing (PAT) being carried out in March 2020 although not all appliances have been tested. If this is carried out inhouse then the PAT machine requires to be calibrated.	HMU		X	
11.	**Firespread** Is compartmentation and separation maintained (ducts, ceiling voids etc.)	The main foyer (201) on level 2 forms part of fire escape stair A. The facilities room forms part of the escape route and should be adequately separated off from the entrance hall with a minimum 60 minute fire resistant partition and fire door. Alternatively, the partition forming the room should be removed or all combustible material removed.	ED	X		
		Due to the age of the building, there may be hidden voids throughout. In order to ensure escape routes are maintained in the early stages of a fire and to enhance property protection and business continuity a more invasive survey will have to be carried out. This should include the ventilation system if applicable, service risers and some walls enclosing escape routes.	ED		X	
		Internal linings such as the wood panelling in stair D do not comply with current standards in escape routes. Due to the listed building status of the building consideration should be given to treating certain areas with intumescent coatings.	ED		X	
		The HV/LV electrical transformers (25, 26 ,27) compromise the exit route from level 1. The university is currently going through a modernisation programme for this type of electrical equipment. When the work is completed, these spaces require to be enclosed with a minimum of 60 minute fire resistant partitions and fire doors.	ED		X	
12.	**Firefighting Equipment (Reg 12)** Is the provision of extinguishers & other firefighting media suitable & adequate?	Distribution of portable firefighting equipment (PFE) requires to be improved. Some areas are only covered by Co2 extinguishers and no water. A survey is required for the building to make sure	ED		X	

		all areas are covered appropriately with the correct firefighting medium.				
		Hose reels located in parts of the building should be removed and replaced with suitable PFE if required.	ED		X	
		Rooms 141 and 243D contain IT electrical equipment. Both rooms have a FM-200 (HFC 227ea) gas fire suppression system installed. Room 243D had a room integrity test carried out in March 2017 and failed the test. The report also recommended that the gas cylinders should be replaced. The cylinders appear to have been renewed. No report available for room 141.	HMU		X	
		The fire suppression equipment installed in room 243D was last maintained in June 2022. 6 monthly check is overdue.	HMU		X	
		IT equipment in room 141 is in the process of being decommissioned. It is unclear as to the future use of this room. If the gaseous suppression system is still required, then it will need to be tested and maintained.	HMU		X	
		The key to the control panel outside room 141 is required to be kept in a secure box next to the panel.	HMU		X	
		Staff who access rooms 141 and 243D are required to be trained in the use of the gas suppression system.	HMU		X	
		There is HV equipment on level 1. It contains an internal SF6 gas system used for arc quenching and cooling. The access door is signed appropriately.	N/A			
13.	**Fire Warning (Reg 12)** Is the means for giving warning in event of fire suitable & adequate?	Due to the occupancy numbers in the building and current issues with MOE a Category L1 system should be installed. All relevant certificates should be received from Dante Fire Alarm Engineers to establish category of system when work is complete.	ED		X	
		The maintenance report carried out in March 2017 for room 243D recommended that there should be an interface with the fire damper and the fire alarm system. It is unclear as to whether this work was carried out.	ED		X	

		Due to restricted access to HV rooms it could not be ascertained as to whether these areas have automatic fire detection and MCP installed.	ED		X	
14.	**Emergency Procedures (Reg 14)** Are the processes for evacuation, e.g., drills & competent person's adequate incl. visitors & contractor's arrangements?	There is no building specific fire action plan and evacuation plan in place. Evacuation plan is required to include persons with physical disabilities. Once these plans are completed, they can be evaluated by carrying out regular fire drills.	HMU	X		
		The last recorded fire drill was October 2019.	HMU/ ED		X	
		Plantroom 164 on level 1 has access to the enclosed East courtyard that contains a small amount of plant. If maintenance staff access the courtyard through the plantroom, then the access door on level 2 (260) should be available as a second means of escape.	ED		X	
		The building is provided with TWS which are provided with emergency voice communication systems. They are linked to answering equipment at the security gatehouse. The system should be included in the evacuation procedure and be tested and maintained.	HMU/ ED		X	
15	**Electrical & Gas maintenance**	EIC report dated October 2018 stated that the mains electrics is in an unsatisfactory condition. There is no written report available to determine if remedial work was carried out.	ED		X	
		There is no longer a mains gas supply to the building.	N/A			

Further Considerations/Observations:
Several doors in the premises have coded locks installed for security purposes. The codes are kept in a locked key box in the main foyer. It is imperative that the list of codes is kept up to date and if any code is changed it is changed on the list. Consideration should be given to changing these locks to Salto electronic locks.

Review date: February 2026	

Note: All deficiencies detailed within this assessment are matters that have been identified in accordance with the following Impact Priority Matrix.

Low	Deficiencies of a low risk that may be resolved on longer timescales, e.g., during a planned maintenance or refurbishment.
Med	Less significant deficiencies that should be completed as soon as practicable but with a lower priority than High (3 months.)
High	Significant deficiencies that should be dealt with as soon as is practicable (4 weeks.)

Action;
It is the responsibility of the dutyholder to ensure all action points are acknowledged and an action plan devised and implemented. The Fire (Scotland) Act 2005 identifies the dutyholder as the employer or a person who has control to any extent of the relevant premises such as the owner or occupier.

To meet its obligations, the University delegates certain responsibilities and tasks to Estates Directorate and to local Heads of Management Units, as outlined below.

HMU Head of Management Unit - Routine managerial or housekeeping issues that can be resolved locally with minimal resource considerations.

ED Estates Directorate & or HMU, where dual responsibility is identified.
Some of the deficiencies listed may require the development of management systems in order to satisfactorily control the fire risk and to prevent reoccurrence in the future; other areas will solely require to be attended by Estates Directorate.

Where an action recommends an improvement to notional fire resistance or structural alteration, it should be noted that the local authority building control office may require to be consulted.

Premises Occupational Risk Rating (PORR)

Built Environment (1-3)			*Activity (1-3)*			*Occupancy (1-3)*			*Management (1-3)*			*Fire Safety Provisions (1-3)*			**12/15**
	2			2			2				3			3	

Low Risk 5-8	Med Risk 9-12	High Risk 13-15

New Action Plan				
Ref:	**Action Required**	**Action By**	**Works Undertaken**	**Sign**
2.	All documentation pertinent to fire safety should be kept within the fire safety logbook as this will require to be inspected by the Enforcing Authority (Fire Service) if they audit the premises.	**HMU/ ED**	There are 2 folders at the Janitor's office in the new building. A red folder labelled Fire Precaution Register, containing a record of weekly tests, along with other information. A green folder containing maps, a list of fire head locations and their addresses. At the door of the old building, there is a yellow folder, containing lists of fire head locations and their addresses.	
	Weekly testing of fire alarm system shall be carried out as per BS 5839 Part 1. All MCP to be tested sequentially.	**HMU**		
	EL should be regularly tested and maintained as per BS 5266. Annual maintenance certificate was unavailable. This should be checked to make sure faults are rectified.	**ED**		
	All escape routes should be checked daily as per Scottish Government guidelines.	**HMU/ ED**		
	If applicable an up to date maintenance certificate is required for the lightning protection system.	**ED**		
	TWS voice communication systems are required to be tested weekly and tests recorded. They should be maintained to BS 5839 Part 9.	**ED**		
3.	Deputy FSC is required to be appointed. Due to hybrid working more than one may be required.	**HMU**	A Deputy FSC is awaiting training; the scheduled training in September was disrupted by industrial action.	
	Occupier to determine if there are enough fire wardens for the building. This decision should be based on staff working routines i.e., enough trained staff at all	**HMU**	There are enough fire wardens for the building. The list of fire wardens, and their building coverage, is given in the school safety handbook.	

		times to assist with fire action and evacuation plans.			
		Line managers to check that all staff are up to date with fire safety training contained in Moodle.	**HMU**	All research leaders and staff must complete the fire safety training contained in Moodle; the school Safety Committee maintains a list of trained personnel, and regularly reminds all staff to complete mandatory training.	
	4.	Staff to be made aware of emergency procedures that are specific to the premises and the contents of this fire risk assessment review.	**HMU**	This is specifically to do with updating the Kelvin Building fire register plans. An Emergency Fire Action Plan for the Kelvin Building is being prepared.	
		Consideration should be given to displaying RAS forms outside all rooms which may contain hazards.	**HMU**	A lab risk summary of what a first responder is likely to be facing if they open the door, will be displayed on doors outside all labs to include hazards. Risk documentation will be displayed inside all labs for everyone to see. Full documents including lab summaries will be uploaded to SharePoint as copies of documents held by each sector.	
	5.	At least 1 dry riser fire main should be installed in the building to aid firefighters in the event of a fire incident,	**ED**		
		Ventilation of escape stairs require to be improved. Windows on landings should be able to open. Feasibility survey should be carried out to see if ventilation of all stairs can be upgraded.	**ED**		
		A review of the water main and fire hydrants in the main campus is being carried out with a view to the system being renewed.	**ED**		
	7.	The cylinder store should be moved to an area that will not compromise the means of escape from the premises. Alternatively, the stair should be re-routed to the upper level path away from the cylinder storage area.	**ED**		

		Due to the amount of fire doors required to be upgraded, maintained or renewed it is recommended that all fire doors are examined for integrity and	**ED**		

		are checked as part of a regular maintenance regime with all defects recorded.			
		A new lobby should be created inside the entrance doors on level 2 (241). This would allow the existing final exit doors to remain in the open position while the building is occupied. The new doors in the lobby could then open in the direction of persons evacuating the building.	**ED**		
		Corridors more than 12 metres in length require 1 new set of 30 minute fire resistant cross corridor doors, including adjoining walls and partitions to be installed in the middle third of the corridors.	**ED**		
		Where occupancy on an escape route is over 60 and double leaf doors are installed both leaves are required to open in the direction of persons evacuating the building and neither leaf should be locked shut. Bolts on fire doors should be removed and if the doors require to be locked push bars should be installed.	**ED**		

		Electric locking devices that unlock on activation of the fire alarm and electrical power being withdrawn are not suitable on doors that will be used by students. Doors that are fitted with these types of locks in student areas require to be replaced with mechanical locking devices.	**ED**		
		Thumb turn locks on doors that are used by students should be replaced by lever handles or	**ED**		

		"Push Bars." Alternatively, if the room is required to be secured when empty a conventional lock can be used provided the key is removed.			
		Nonstandard fastenings (NSF) are fitted to some fire doors. These NSF should be replaced with suitable modern ironmongery and kept maintained.	**ED**		
		All fire doors should have mandatory signage fitted where required e.g., "Fire Door Keep Shut" Fire Door Keep Locked Shut" "Fire Door Keep Clear". Where thumb turn locks and push pads are used, they should be signed to show how they operate and staff to be instructed on their use.	**ED**		
		The practise of wedging open fire doors should be discouraged and should cease immediately, particularly in areas where escape is in one direction or the door leads directly into an escape route.	**HMU**	Anyone aware of fire doors, corridor doors or office doors wedged open or unattended, should remove the wedge and shut the door. The safety committee has reminded everyone of this, and all safety committee members will ensure safe practice.	

		Consideration should be given to enclosing the external escape route on the roof on level 5. This will alleviate any poor lighting issues and stop the route from being compromised during inclement weather.	**ED**		
		The wicket gate exiting onto Science Way should be fitted with a push bar and signed appropriately. Signage to include fire exit directional signage and fire exit keep clear signage.	**ED**		

	8.	A full survey is required to make sure EL and directional signage is adequate, this should include the external escape routes including the one on the roof.	**ED**		
		Having numbers marked on FAN has the potential to be confusing. The actual location would be more helpful.	**HMU/ ED**	Maintaining the signage is a matter for Estates.	
	9.	Combustible material should be kept clear of mains electrical installations. There should be restricted access to cupboards/voids containing electrical installations	**HMU/ ED**	This is strictly a matter for Estates, as they control access to all such cupboards.	
		All escape routes to be kept clear of combustible material. This is particularly important in escape stairs.	**HMU/ ED**	This is pertinent to storing items on level 1 underneath Stair A. Arrangements will have been made for surplus bins to be removed. Boxes being stored in the goods lift stairwell area on level 2&3 have been removed. The area under stair A is now clear of combustible material.	
		Escape routes are not designed as working areas. They should not be used as tea prep or kitchens.	**HMU**	The desk and chair at the top of the stairwell on level 4 of the old Miller Building will be removed. The kitchen on level 4 has stopped functioning. The coffee area on level 6 is no longer in use as a coffee preparation room. This area will only be used for waiting on a casual, ad-hoc basis.	

		Where doors to lobbies have been removed, these lobbies cannot be used for office equipment or storage. There is also no automatic fire detection within the lobbies.	**ED**		
		Compressed gas cylinders should not be stored in corridors or left randomly in cupboards. The old Butane cylinder left in the outside compound should be disposed of.	**HMU**	There is a cylinder sited in the level 1 corridor outside the IGR lab. The Safety Committee and Fire Officer have instructed that the cylinder be removed. Estates are exploring a new location for it in conjunction with IGR.	
		Combustible material should not be stored against the building, particularly next to windows and vents.	**HMU**	All unwanted material must be correctly disposed of. There will be no storage of random & combustible materials in the courtyard, corridors, under the stairs or against the building. Facilities and stores staff are each maintaining a careful watch on the courtyard; swift action is taken to remove any such material.	
		Noticeboards on escape routes should be enclosed and kept locked.	**HMU**	These need to be standardized with the same format. A request will be submitted to Estates. This does not require immediate action, because of the works in the Kelvin Building.	

	10.	Filters in washer/drying machines should be cleaned regularly and an instruction card should be placed in the laundry room.	**ED**	These have been removed	
		The hob and grill should be removed from room 139 on level 1 and if required replaced with a microwave oven.	**HMU**	These have been removed.	
		There is a danger of overloading a 13A socket when two 4 gang extension leads are joined together. All portable appliances to be checked.	**HMU**	Daisy-chaining of extension leads is against school safety policy; the single breach of this policy has been corrected.	
		All portable electrical appliances used in the premises are subject to PAT and should be tested accordingly.	**HMU**	The plan is to use in-house technical support for lab-based equipment. For office-based equipment, it will be put out to contract. The full strategy here is detailed in the Safety Handbook.	

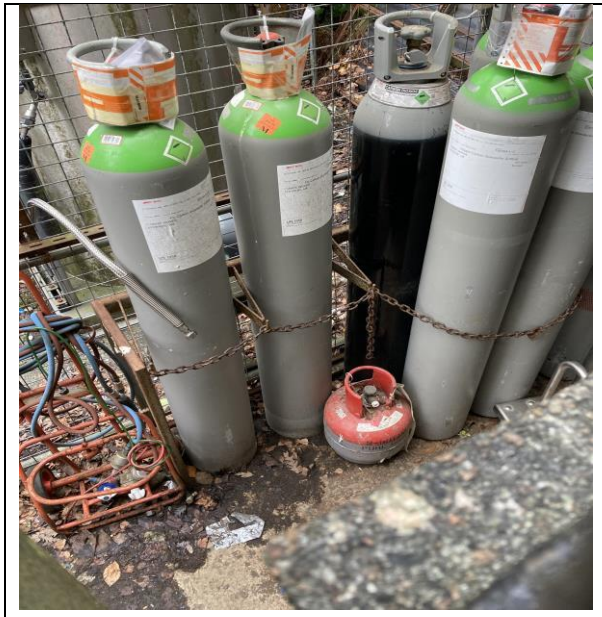
	11.	The facilities room on level 2 forms part of escape stair A and should be adequately separated off from the entrance hall with a minimum 60 minute fire resistant partition and fire door. Alternatively, the partition forming the room should be removed or all combustible material removed.	**ED**		
		Although some fire stopping has been carried not all work has been completed. Any further surveys should include the ventilation system, service risers and some walls enclosing escape routes.	**ED**		
		Due to listed building status consideration should be given to treating certain wall materials on escape routes with intumescent coating.	**ED**		
		When new HV/LV electrical equipment is installed, these spaces require to be enclosed with a minimum of 60 minute fire resistant partitions and fire doors.	**ED**		
	12.	A portable firefighting survey is required for the building to make sure all areas are covered appropriately with the correct firefighting medium.	**ED**		
		Hose reels located in parts of the building should be removed and replaced with suitable PFE if required.	**ED**		

		Currently rooms 141 and 243D contain IT electrical equipment and are protected by 2 gaseous fire suppression systems. The IT equipment in room 141 is being decommissioned and it is unclear as to the future use of the room. If the system in room 141 is still required a room integrity test should be carried out along with regular testing and maintenance.	**HMU**	141 is no longer used as a server room, and the fire suppression system has been disabled. 243D is currently under review, given that roughly half of the server requirement has now been removed.	
		Up to date testing and maintenance certificates required for gaseous suppression systems and evidence of any work carried out after room integrity test.	**HMU**	See above	
		The key to the fire suppression control panel outside room 141 is required to be kept in a secure box next to the panel.	**HMU**	Now not relevant.	
		Staff who access rooms 141 and 243D are required to be trained in the use of the gas suppression system.	**HMU**	Noted.	
	13.	Due the occupancy numbers and issues with MOE all areas require to be checked in order for the system to comply with an L1 Category of system.	**ED**		

		A check should be made to see if the interface with the fire damper and the fire alarm system in room 243D has been completed.	**ED**		
		HV rooms require to be checked to see if these areas have automatic fire detection and MCP installed.	**ED**		

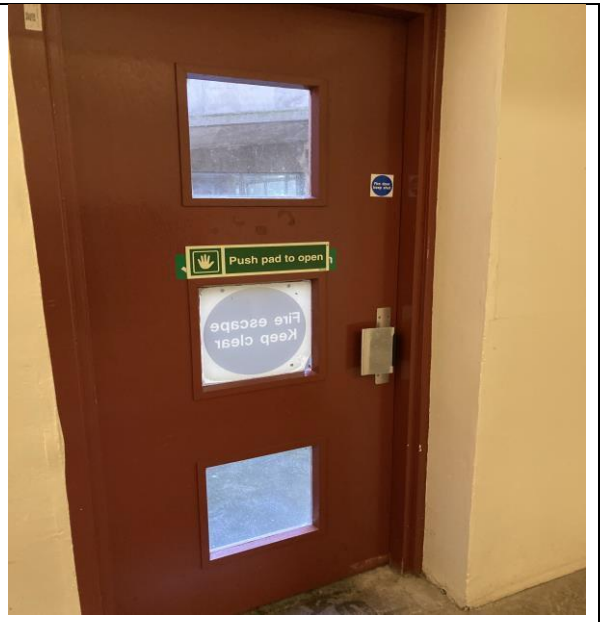
	14.	A building specific fire action plan and evacuation plan is required to be put in place. The evacuation plan is required to include persons with physical disabilities.	**HMU**	An Emergency Fire Action Plan for the Kelvin Building has been prepared, and is available on the school safety web pages.	
		One fire drill per semester should be carried out. Where possible, fire drills should be scenario based. These drills were suspended due to the recent pandemic crises; however, one should now be carried out as soon as practicable.	**HMU/ ED**	Fire drills will resume in the new semester.	
		The door on level 2 (260) leading into the East courtyard that contains a small amount of plant must be open if maintenance staff access the courtyard through plantroom 164 to provide a second means of escape.	**ED**		
		The TWS communication system should be included in the evacuation procedure and be tested and maintained.	**HMU/ ED**	Noted	
	15.	A check requires to be carried out to see if actions were taken after the EICR reported that the mains electrical system was in an unsatisfactory condition.	**ED**		

Photograph Annexe



Cylinder compound under external escape stair.

Evidence of fire door requiring maintenance and non-compliant hinges.

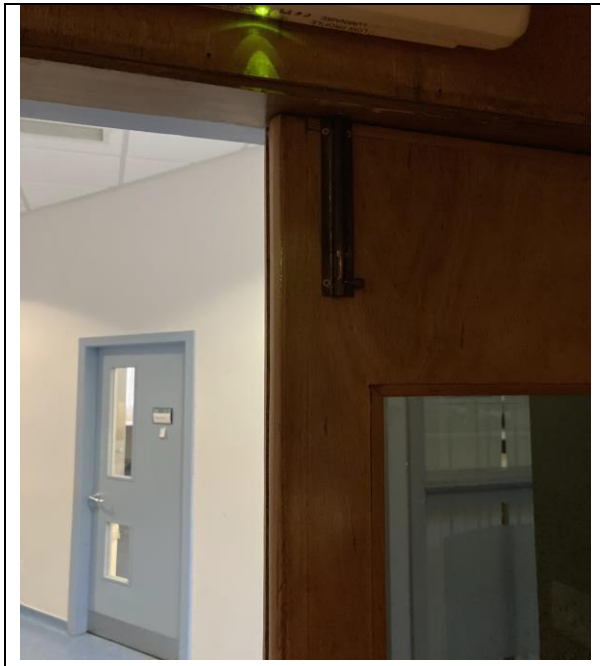
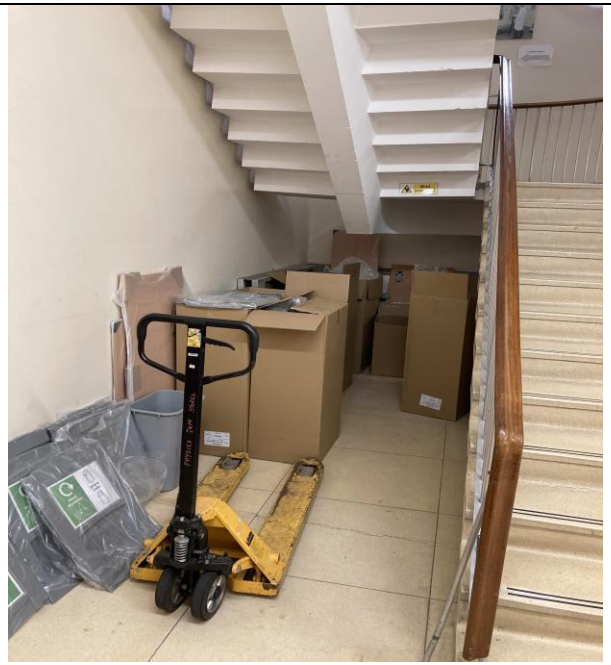
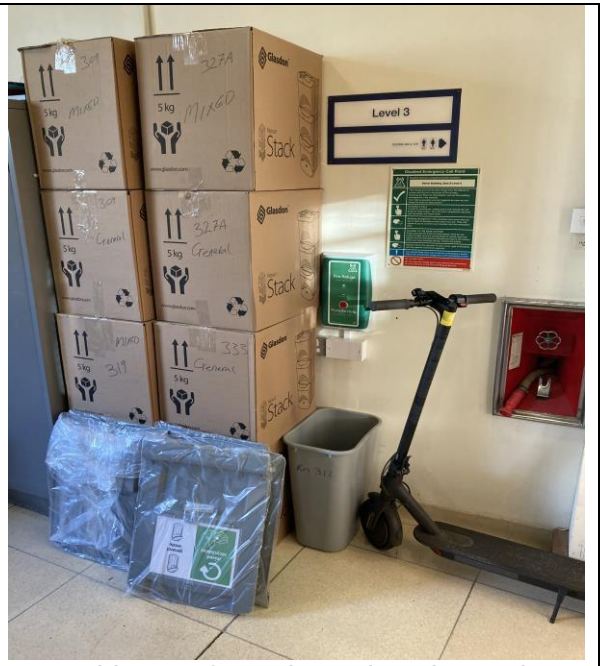


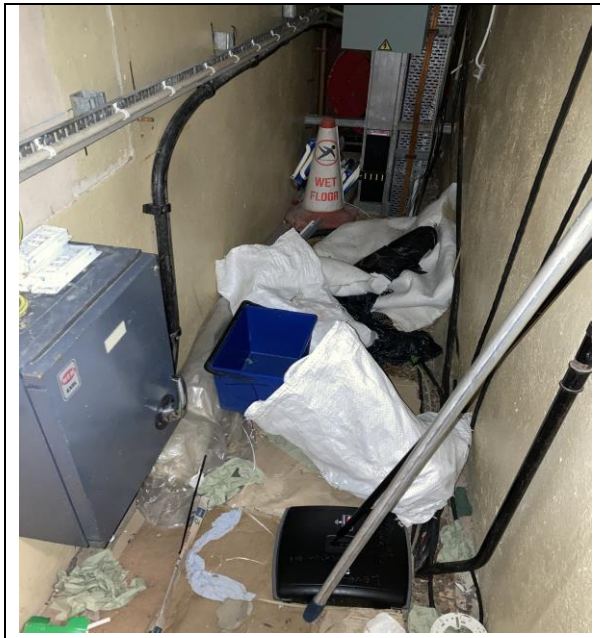
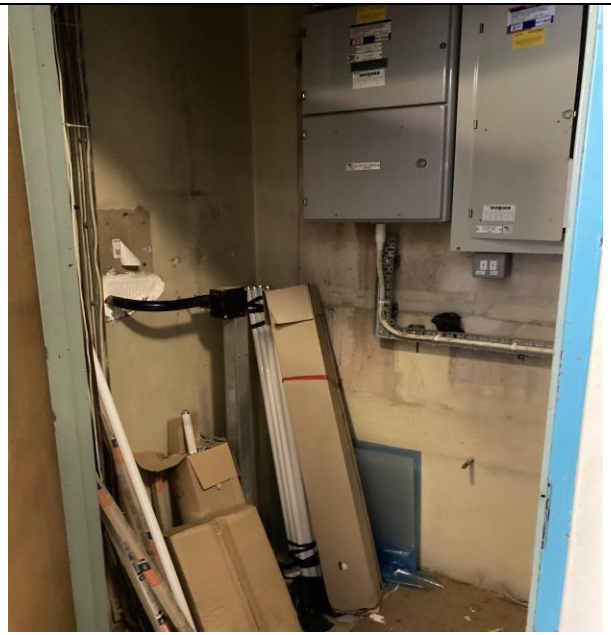
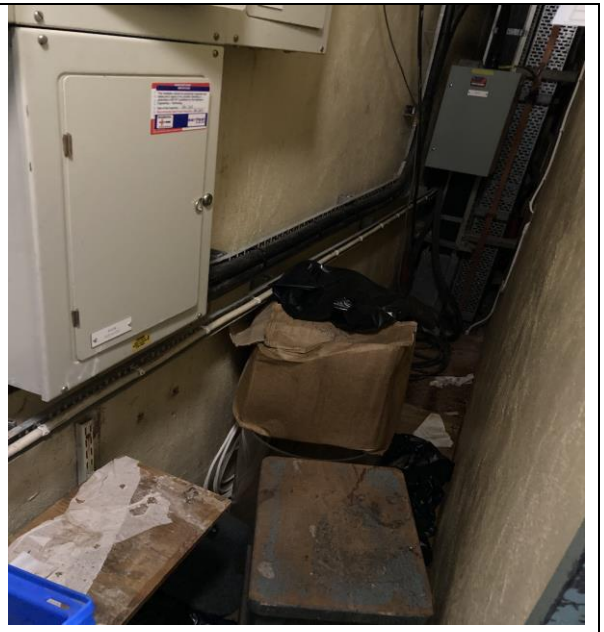
Nonstandard fastenings should be removed and replaced as required.

Final exit doors from lecture room require push bars and thumb turn lock removed.

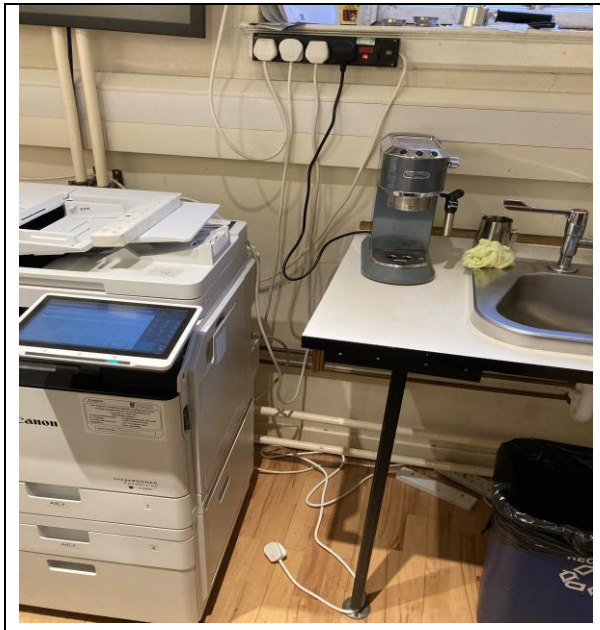
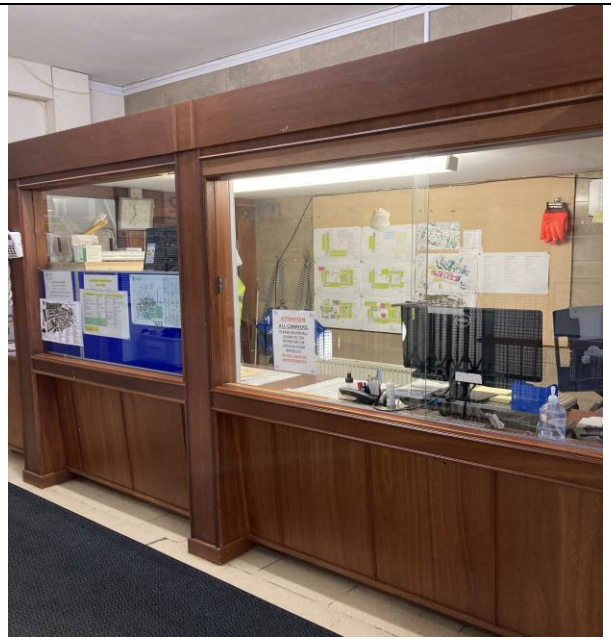
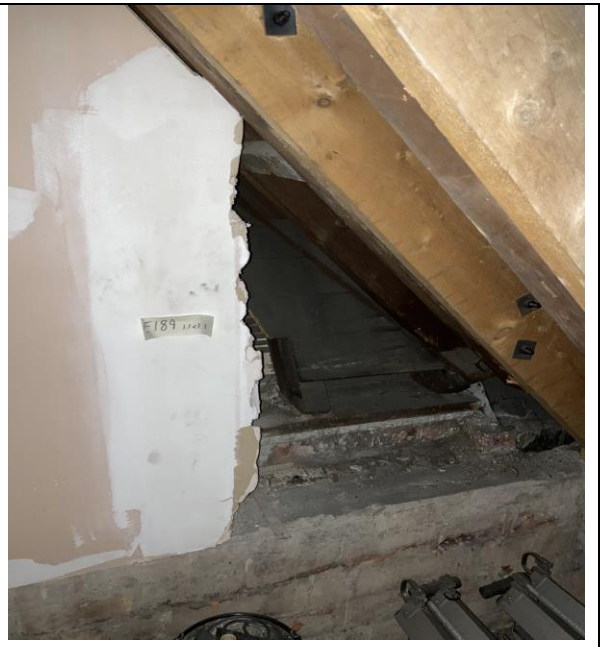
Evidence of no “fire exit keep clear” signage from lecture room.

Evidence of wrong mandatory signage on cupboard on escape route.

 Bolts on lecture room door.	 Evidence of poor housekeeping.	 Evidence of poor housekeeping and blocking TWS.
		
Unsuitable items in an escape route.	Unsuitable items in an escape route and blocking TWS.	Unsuitable items in an escape stair and blocking TWS.

		
Combustibles stored next to electrical installation.	Combustibles stored next to electrical installation.	Combustibles stored next to electrical installation.

		
Escape routes should not be used as kitchens/tea prep areas.	Escape routes should not be used as a place of work.	Compressed gas cylinder left in cupboard.

		
Evidence of daisy chaining.	This room requires to be separated from the escape stair by fire resistant material or removed.	Area (void on L4) for potential fire spread.
		
Area (void on L4) for potential fire spread.	Area (L3 stair B) for potential fire spread.	Door has been removed from lobby.

		
Combustible material stored next to building.	Compressed gas cylinder located in a corridor.	Example of older type emergency lighting.
