GENERAL HEALTH AND SAFETY RISK ASSESSMENT FORM

| Site | | **Haworth Building, Edgbaston Campus** | | | **Department** | **School of Chemistry** | | | | | | | | **Version / Ref No.** | | |  | |
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| **Activity Location** | | **Haworth Building** | | | **Activity Description** | **Return to Campus COVID-19: Building Risk Assessment**  **Up to 50 Academics, PhD students and post-docs.** | | | | | | | | | | | | |
| **Assessor** | | **Katherine Webb** | | | **Assessment Date** | **06 October 2020** | | | | | **Date of Assessment Review** | | | **Recommended weekly during phased return** | | | | |
| **Academic / Manager Name** | | **Bryan Fryer** | | | **Academic / Manager Signature** |  | | | | | | | | | | | | |
| Hazard Assessment | | | | | Control Assessment | | | | | | | | | | Actions | | | |
| Hazard Category | Hazards Identified | | Who might be harmed?  Staff  Students  Contractors  Others | How might people be harmed? | Existing Control Measures | Initial Risk Rating | | | Are these adequate?  Yes/No | Changes to/ Additional Controls | | Residual Risk Rating | | | Owner | Due  Date | | Action Complete |
| S | L | R | S | L | R |
|  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  | |  |
| Organisational  Organisational | Psychological well being  Psychological Well-being | | Staff / Students  Staff/ students | Anxiety and stress caused by concerns around laboratory time lost during campus closure  Anxiety and stress caused by concerns around laboratory time lost during campus closure | Out-of-hours and weekend working may be permitted by the School for staff and students who wish to maximise the time available for laboratory work. All requests for weekend access must be submitted to their PI/ Technical manager/ Academic safety lead at least two weeks in advance of the requested access date.  Regular communication (via email reminders and group meetings) is in place to ensure that all members of the school are aware of the possibility for out-of-hours working and of the requirements which must be met for access to be granted.  Advice is shared with staff members and they have been fully briefed on the school policy for out-of-hours working (i.e. first aid provision, risk assessment). Regular updates are to be provided to PG students through existing communications.  This Risk assessment is to be shared. A detailed outline of the policy for Out-of-hours working is to be shared with students. Both documents can be found [here.](https://collaborate.bham.ac.uk/eps/soc-committees/Shared%20Documents/Forms/AllItems.aspx?RootFolder=%2feps%2fsoc%2dcommittees%2fShared%20Documents%2fChemistry%20Return%20to%20Research%2fChemistry%20R2R%20%2d%20General%20Area%2f)  New workplace/controls put in place to reduce risk of exposure to COVID 19 are documented in procedures and policies and disseminated to employees and students through Line Managers, Primary Investigators and the School Technical Manager.   * ***Return to Campus COVID-19: Out-of-hours Risk Assessment* (This completed Risk Assessment)**   Line managers are aware of how big changes to working arrangements may cause additional work-related stress and affect their employees’ mental health and wellbeing and individuals have been made aware via induction, team meetings, one to one meetings, health and safety committees/forums of guidance available in relation to this:  <https://www.hse.gov.uk/stress/>  <https://intranet.birmingham.ac.uk/staff/coronavirus/Coronavirus-wellbeing-support.aspx>  <http://www.selfhelpguides.ntw.nhs.uk/birmingham/leaflets/selfhelp/Stress.pdf> | 4  4 | 2  2 | 8  8 |  |  | |  |  |  |  |  | |  |
| Organisational | Psychological well being | | Staff/ Students | Anxiety and stress caused by concerns around laboratory time lost during campus closure | PI’s hold regular informal discussions in person, via Zoom/ Teams meetings and chats with their team and look at ways to reduce causes of stress.  Concerns on workload issues or support needs are escalated to PI as soon as possible, either via a one-to-one meeting or via email communication.  Students who are in clinically vulnerable groups themselves and identified to be considered in ‘at risk’ groups are not encouraged by PI’s to work outside normal building opening hours of 8am to 7pm Monday - Friday.  Existing risk assessments including those for new or expectant mothers reviewed and revised to reflect new working arrangements. Reasonable adjustments made, including those needed for PEEPs especially in relation to who will assist with their evacuation in an emergency, to avoid students that require them including disabled workers being put at a disadvantage. | 4 | 2 | 8 |  |  | |  |  |  |  |  | |  |
| Biological | Virus transmission in the workplace | | Staff/ Students/ Contractors/ Visitors | Exposure to respiratory droplets carrying COVID-19 from an infectious individual transmitted via sneezing, coughing or speaking. | ***Social distancing: Haworth Building checklist***has been completed to identify the control measures to consider reducing the risk of workplace infections.  Students who access the Haworth building outside normal building opening hours (Mon-Fri 8am – 7pm) only do so in order to complete laboratory based work which cannot be done at home.  PI’s ensure students with any form of illness do not attend campus. Where that illness is COVID-19 related, additional measures must be taken to decontaminate the individual’s workspace (office and laboratory) and to notify those who have potentially been exposed.  PI’s and Professional Services ensure students with any form of illness do not attend work until the illness has been verified as not being Covid-19.  PI’s keep track of when s students can return to work after the symptom free period. | 4 | 2 | 8 |  |  | |  |  |  |  |  | |  |
| Environmental  Environmental  Environmental  Environmental  Environmental | Virus transmission in the workplace due to lack of social distancing  Virus transmission in the workplace due to lack of social distancing  Virus transmission in the workplace due to lack of social distancing  Virus transmission in the workplace due to lack of social distancing  Virus transmission in the workplace due to lack of social distancing | | Students/ Staff  Students/ Staff  Students/ Staff  Students/ Staff  Students/ Staff | Exposure to respiratory droplets carrying COVID-19 from an infectious individual transmitted via sneezing, coughing or speaking.  Exposure to respiratory droplets carrying COVID-19 from an infectious individual transmitted via sneezing, coughing or speaking.  Exposure to respiratory droplets carrying COVID-19 from an infectious individual transmitted via sneezing, coughing or speaking.  Exposure to respiratory droplets carrying COVID-19 from an infectious individual transmitted via sneezing, coughing or speaking.  Exposure to respiratory droplets carrying COVID-19 from an infectious individual. | Workplace routines changed to ensure room/building capacity calculated to maintain social distancing is not exceeded including   * Review of access requests for out-of-hours work to ensure no crossover between students in different teams.   To help contain clusters and outbreaks and assist the University with any requests for data by the NHS Test and Trace service a temporary record of out-of-hours access is kept for 21 days.  Procedure in place for dealing with instances of unexpected individuals. If they do not have an appointment/ swipe card access, they will be refused entry.  Work has been arranged so that staff are able to maintain the government guidelines for social distancing based on our industry which are included in the ***Social distancing: Haworth Building checklist***  (The latest Guidance on these measures can be found by clicking the following link [Social Distancing Guidelines](https://www.gov.uk/guidance/social-distancing-in-the-workplace-during-coronavirus-covid-19-sector-guidance#shops-running-a-pick-up-or-delivery-service)).  Due to the potential increased risk of transmission from aerosol transmission steps have been taken to avoid people needing to unduly raise their voices to each other e.g. not playing music or broadcasts at a volume that makes normal conversation difficult.  All requests for out-of-hours access must include the name of a second student/ member of staff who will remain within hearing distance for the duration of the work as per normal procedure.   * Staff encouraged to remain on-site including bringing their own lunch and, when not possible, maintaining social distancing while off-site. * Where available safe outside areas used for break. * Social distancing is marked on the corridor floor prior to entry to the WCs (toilets). Smaller facilities have a one out one in policy. Larger facilities have signage posted on the outer door to indicate maximum capacity. Additional signage has been placed on facilities doors to announce people’s presence and to ensure hands are washed via correct method for handwashing prior to and after use. Building users are reminded to leave the facilities in a respectable condition.   Lifts are still to be used to move heavier / larger / hazardous goods as a planned operation ensuring the lift cannot be stopped on each floor or staff placed on each floor to prevent access to lift until equipment moved.  Staff and students are reminded of the importance of social distancing both in the workplace and outside of it before any out-of-hours access is granted. Social distancing measures are to remain in place outside of normal working hours despite the reduction in building capacity.  Near-miss reporting is encouraged to identify where controls cannot be followed or people are not doing what they should.  Where the social distancing guidelines cannot be followed in full in relation to a particular activity (e.g. transport of cryogenic materials), consideration has been given to whether that activity needs to continue, and, if so, all the mitigating actions possible to reduce the risk of transmission between staff have been included in a task specific risk assessment and are being taken. Mitigating actions include:   * Further increasing the frequency of hand washing and provision of hand sanitiser and surface cleaning. * Keeping the activity time involved as short as possible. * Using back-to-back or side-to-side working (rather than face-to-face) whenever possible. * Reducing the number of people each person has contact with by using ‘fixed teams or partnering’ (so each person works with only a few others). * Re-engineering the technical activity. * Improving ventilation by re-organising the indoor space to optimise the ventilation available. * PPE consisting of face masks and/or a clear visor that covers the face, and provides a barrier between the wearer and others, provided for staff working in close proximity to people and in particular a person’s face, mouth and nose, for an extended period of time (the majority of the working day). Re-usable visors are cleaned and sanitised regularly using normal cleaning products. * Individuals (including staff, students, visitors and contractors), unless exempt, are required to wear face coverings, inside University buildings where 2m social distancing isn’t possible and cannot be maintained. Information provided in the University and local communications and local inductions and signs displayed informing people of the mandatory requirement to wear a face covering within the building. * Individuals (including staff, students, visitors and contractors), unless exempt, are legally required to wear face coverings, in enclosed public spaces where 2m social distancing isn’t possible or where people come into contact with others they would not normally meet. Information provided in the University and local communications and local inductions and signs displayed informing people of the mandatory requirement to wear a face covering in specific areas within the building   Face coverings are not PPE and are not required to be worn in the workplace where 2m social distancing can be maintained. However where people choose to wear them PI’s support them. Where face coverings are worn in the lab, they must be suitable to the chemistry being performed and must be changed upon exiting the lab area.  Individuals have been reminded through email communications and group meetingsof how to use face coverings safely including the following:   * wash your hands thoroughly with soap and water for 20 seconds or use hand sanitiser before putting a face covering on, and before and after removing it * when wearing a face covering, avoid touching your face or face covering, as you could contaminate them with germs from your hands * change your face covering if it becomes damp or if you’ve touched it * continue to wash your hands regularly * change and wash your face covering daily * if the material is washable, wash in line with manufacturer’s instructions. If it’s not washable, dispose of it carefully in your usual waste * practise social distancing wherever possible   PPE is provided for individuals working in close contact roles for example, first aiders. The taking of PPE home is not permitted.  Adequate training has been made on what PPE is required (i.e. gloves, masks, aprons, Filtering Face Pieces (P3), goggles, the correct donning/doffing of PPE and face fit testing. Where social distancing cannot be maintained for periods exceeding 15 minutes, face coverings are to be worn. Suitable face coverings are to be determined by the nature of the task at hand and will be provided by the School.  Face coverings should only be worn in laboratory settings if they are suitable for the task at hand. Disposable or cloth face masks may be used by researchers if appropriate, and following consultation with their PI.  Public Health England (PHE) quick guides for correct donning and doffing of PPE for [non-AGPs.](https://www.gov.uk/government/publications/covid-19-personal-protective-equipment-use-for-non-aerosol-generating-procedures) (aerosol generating procedures) as well as for[AGPs](https://www.gov.uk/government/publications/covid-19-personal-protective-equipment-use-for-aerosol-generating-procedures). 19 has been utilised for examples in best practice for putting on and taking off (donning and doffing) gloves. | 4  4  4  4  4 | 2  2  2  2  2 | 8  8  8  8  8 |  |  | |  |  |  |  |  | |  |
| Biological  Biological | Suspected case of COVID-19  Suspected case of COVID-19 | | Staff/ Students  Staff/ Students | Exposure to respiratory droplets carrying and contact with an object that has been contaminated with COVID-19.  Exposure to respiratory droplets carrying and contact with an object that has been contaminated with COVID-19. | Staff and students must tell their line manager/ PI if they develop COVID-19 symptoms. Absence will be managed in accordance to the University guidance provided. Permission to work out-of-hours will be revoked if staff/students report a positive test.  All staff and students will also be required to complete an [on-line reporting form](https://forms.office.com/Pages/ResponsePage.aspx?id=z8oksN7eQUKhXDyX1VPp89SnBbAnJ6FCi5UiE0CXxflUQTM4VUVUM1FIV1VaN01GNE9MSEJDWVgwUC4u) in order to identify the areas of the building in which they have been working and any colleagues who may have been exposed. This information will be passed to EPS and all those who may be affected will be contacted directly by the Director of Operations with further advice. All rooms identified as having been accessed by those reporting a positive test result will be closed pending cleaning. These rooms will be indicated on a centrally maintained [Room Closure Monitoring](https://docs.google.com/spreadsheets/d/1sr5cfdO_dHMwhgXNeVECzfKwI553eJUBBMu9zlYKO0o/edit?usp=sharing) spreadsheet Responses will be monitored out-of-hours by the Technical manager or the Facilities manager  Response plan in place in the event a confirmed or suspected case of COVID-19 and communicated and includes:   * If a person becomes unwell in the workplace with suspected COVID-19, they must go home in accordance to the University guidance. Managers will follow the NHS Test and Trace workplace guidance: <https://www.gov.uk/guidance/nhs-test-and-trace-workplace-guidance> * The area will be cleaned in accordance with the specific Government [guidance](https://www.gov.uk/government/publications/covid-19-decontamination-in-non-healthcare-settings/covid-19-decontamination-in-non-healthcare-settings) * Provision and monitoring of adequate supplies of cleaning materials are in place. Other users of the space will be notified of the closure via email. Where possible, the doors to the affected areas will be sealed by the Technical manager, Facilities manager, Security or the Building manager * Those granted out-of-hours access reminded during email communications of actions to be taken in the event of someone being suspected of having COVID-19. * Staff must tell their line manager if they develop symptoms. Absence will be managed in accordance to the University guidance provided * Employees to follow the Government advice: <https://www.gov.uk/coronavirus> * Line managers will maintain regular contact with staff members during this time and monitor for signs of symptoms in the remaining workforce and keep Senior Managers informed of the situation whilst following the Government’s guidance for contact tracing: contact with co-workers: <https://www.gov.uk/guidance/nhs-test-and-trace-workplace-guidance> * If an individual tests positive for COVID-19 this will be managed in accordance with the University’s Outbreak Management Process. * If multiple cases of coronavirus appear in a workplace, an outbreak control team from either the local authority or Public Health England will, if necessary, be assigned to help the University manage the outbreak. The University will seek advice from the local authority in the first instance. * Students will be told to isolate if they:   + have coronavirus symptoms and are awaiting a test result   + have tested positive for coronavirus   + are a member of the same household as someone who has symptoms or has tested positive for coronavirus   + have been in close recent contact with someone who has tested positive and received a notification to self-isolate from NHS test and trace.   <https://www.gov.uk/government/publications/covid-19-stay-at-home-guidance/stay-at-home-guidance-for-households-with-possible-coronavirus-covid-19-infection> | 4  4 | 2  2 | 8  8 |  |  | |  |  |  |  |  | |  |
| Environmental  Environmental  Environmental  Environmental | Virus transmission in the workplace  Virus transmission in the workplace  Virus transmission in the workplace  Virus transmission in the workplace | | Staff/ Students  Staff/ Students  Staff/ Students  Staff/ Students | Contact with an object that has been contaminated with covid-19  Contact with an object that has been contaminated with COVID-19 and which subsequently transmits this to another person e.g. surfaces, any inanimate objects & touch points including work surfaces, work equipment, door handles, banisters, chair arms and floors.  Contact with an object that has been contaminated with COVID-19 and which subsequently transmits this to another person e.g. surfaces, any inanimate objects & touch points including work surfaces, work equipment, door handles, banisters, chair arms and floors.  Contact with an object that has been contaminated with COVID-19 and which subsequently transmits this to another person | Individuals have been instructed during their induction and are regularly reminded in team meetings to clean their hands frequently with soap and water for 20 seconds and the importance of proper drying in accordance with the NHS Guidance:  <https://www.nhs.uk/live-well/healthy-body/best-way-to-wash-your-hands/>  Soap and water and hand sanitiser are provided in the workplace and adequate supplies are maintained and are placed at the entrance to the building, in all lift lobbies and in welfare spaces. Further handwashing facilities are available in all laboratories and toilets throughout Haworth where they will be seen.  Individuals have been informed to check their skin for dryness and cracking and to inform their line manager or supervisor if there is a problem.  Individuals are reminded to catch coughs and sneezes in tissues – Follow: “Catch it, Bin it, Kill it” and to avoid touching face, eyes, nose or mouth with unclean hands. Posters are displayed around the workplace.  Cleaning services will not be in attendance during weekend working. Therefore, all students granted weekend access must ensure that they clean all touch points upon entry and leaving.  A review of the cleaning regime for the area to ensure controls are in place to keep surfaces clean and free of contamination, cleaning products and disposable cloths have been made available to all occupants and everyone has been briefed on the importance of keeping surfaces and work equipment clean during the building induction process. Reminders will be given when out-of-hours access is granted.  There is limited or restricted use of high-touch items and equipment, for example, printers or whiteboards.  Sharing of equipment is restricted where possible and cleaned / disinfected before and after use. Shared equipment is identified in individual lab risk assessments.  Objects and surfaces that are touched regularly are cleaned frequently (i.e. door handles and hand sanitiser units) using 1% Virkon solution. Keyboards and computer mice are to be cleaned with anti-bacterial wipes before and after use. Adequate supplies for cleaning and provision of adequate disposal arrangements have been arranged.  Use of hot desks and spaces avoided and, where not possible e.g. training facilities, workstations are cleaned by the users, technical staff and cleaning staff between different occupants including shared equipment.  Shared office spaces will be made available for use as a welfare space. In order to ensure social distancing is maintained, furniture has been rearranged and signage has been posted to indicate the maximum capacity of each room.  Personal items have been removed from the desk space. Desks are to be made available to all users, with IT equipment being cleaned before and after use by its users.  As designated welfare spaces, shared offices are to be cleaned twice daily by building users. Cleaning products will be provided for this purpose. Desks are to remain clear when not in use to facilitate cleaning. A cleaning report will be maintained in each office – to be signed off following each instance of cleaning.  Offices are not to be used for extended breaks. Where breaks exceed 30 minutes in length or the maximum occupancy limit of the room has been reached, lift lobbies and welfare spaces on the 2nd floor (209/ 216) are to be utilised. No kettles or microwaves are to be used in office spaces and fridges must be cleaned daily when in use.  There is clear desk policy in place to reduce the amount of personal items on desks and work benches to be practiced when the space is in use or not in use.  Areas where people directly pass things to each other, for example office supplies, have been identified and ways to remove direct contact, such as using drop-off points or transfer zones have been introduced.  Everyone is encouraged via team discussions and in regular email reminders to keep personal items clean; including washing spectacles with soap and water, clean phones, keyboards and shared machinery handles etc. before, after and during work.  Lab clothing and equipment such as goggles washed on-site rather than by individual staff members at home. Re-useable cloth masks are to be laundered regularly.  COVID-19 cleaning products used have a current valid chemical risk assessment in place and are used in accordance with all prescribed risk controls and monitoring requirements. They are stored so that they are readily available to all users and are labelled according to the Globally Harmonised System of Classification and Labelling (GHS). (See location specific chemical risk assessments for cleaning products used within the area).  All university students are encouraged to avoid direct personal contact with others i.e. shaking hands etc. For first aid incidents where personal contact is unavoidable, suitable PPE is provided by the University. | 4  4  4  4 | 2  2  2  2 | 8  8  8  8 |  |  | |  |  |  |  |  | |  |
| Organisational  Organisational | Exposure to Existing Hazards  Exposure to Existing Hazards | | Staff/ students  Staff/ students | Increased risk of harm due to controls included in existing risk assessments & safety arrangements affected by COVID-19 measures  Increased risk of harm due to controls included in existing risk assessments & safety arrangements affected by COVID-19 measures  Increased risk of harm due to controls included in existing risk assessments & safety arrangements affected by COVID-19 measures  Increased risk. | All relevant pre-existing (non COVID) risk assessments including lone working assessments and procedures have been reviewed to take into account the impacts of social distancing and other COVID counter measures.  PPE related risk assessments have been reviewed to ensure that PPE is provided on an individual basis. Usage is monitored to ensure suitable level of stock of certain PPE such as face masks etc. during this time due to global shortages. Individuals maintain their own equipment in a sterile condition. Storage has been reviewed to provide individual storage arrangements. The taking of PPE home is not permitted.  Emergency Procedures reviewed and revised including:   * **Communication**: people have been made aware via induction that in an emergency, for example, an accident or chemical spill or fire, people do not have to stay 2m apart if it would be unsafe. * **Fire procedures:** number and details of nominated fire warden(s) in place, fire muster point confirmed and PEEP (Personal Emergency Evacuation Plan) requirements defined including who will assist with their evacuation in an emergency. Required modifications to fire alarm practices and evacuation drills to cater for COVID-19 measures have been addressed; ensuring that the activity is still compliant with relevant building and fire codes. * **First Aid:** First aid needs assessment reviewed to take into account any new Guidelines issued by the [University](https://intranet.birmingham.ac.uk/staff/coronavirus/faqs-for-staff.aspx) or [HSE](https://www.hse.gov.uk/), and first aid information including the location of first aid kits and first aider contact information up to date. * **Hygiene:** Washing facilities with soap/gel available (see Cleaning below). People involved in the provision of assistance to others have been informed to pay particular attention to sanitation measures immediately afterwards including washing hands.   Security personnel are available on campus 24/7 and should be contacted via the emergency contact number of 0121 414 4444 (44444 if dialling internally) should first aid assistance be required or in the event of an emergency evacuation.  Security implications of changes made to operations and practices in response to COVID-19, have been considered and staff and student access rights have been updated accordingly.  Life-saving rules, will continue to be governed, enforced and communicated during COVID-19 in particular “speaking up” if they witness any unsafe behaviours, conditions or symptoms related to COVID-19. | 4  4 | 2  2 | 8  8 |  |  | |  |  |  |  |  | |  |
| Environmental | Virus transmission outside of the workplace | | Staff/ Students | Exposure to respiratory droplets carrying and contact with an object that has been contaminated with COVID-19. | On the outside / approach to the building there is signage to warn all prior to entering this building social distancing is in place (keep 2m apart).  There is signage advising staff to wash their hands regularly and not to touch their face.  There are three doors for access and three doors for exiting. Staff will be asked to wear a lanyard at all times.  Controlled access and egress is monitored via the Gallagher system to ensure it is followed. | 4 | 1 | 4 |  |  | |  |  |  |  |  | |  |
| Organisational | Travelling to work | | Staff/ students | Exposure to respiratory droplets carrying COVID-19. | Students encouraged to avoid public transport where applicable and use alternatives e.g. cycling, walking to work etc. Where students are unable to avoid public transport they do so in accordance with Government and University Guidance:  <https://www.gov.uk/guidance/coronavirus-covid-19-safer-travel-guidance-for-passengers>  <https://intranet.birmingham.ac.uk/staff/coronavirus/faqs-for-staff.aspx> | 4 | 1 | 4 |  |  | |  |  |  |  |  | |  |
| Mechanical | Machinery & Equipment | | Staff/ students | Exposure to respiratory droplets carrying and contact with an object that has been contaminated with COVID-19. | Equipment and surfaces that are touched regularly will be frequently cleaned and disinfected before and after use.  Sterilising chemicals and cloths are provided in the area to clean machines and equipment prior to the commencement of work and upon completion. If machines and equipment are shared, sterilising will be carried out between operations by the users and members of the technical staff. | 4 | 2 | 8 |  |  | |  |  |  |  |  | |  |
| Environmental | Ventilation | | Staff/ Students | Exposure to respiratory droplets carrying COVID-19. | Recirculation of unfiltered air within the workplace has been avoided or reduced as far as possible.  All ventilation has been serviced as required. All filters have been changed as required.  Building users are encouraged where possible to ensure windows are open. | 4 | 1 | 4 |  |  | |  |  |  |  |  | |  |
| Chemical  Chemical | Chemical or Biological Agents  Chemical or Biological Agents | | Staff/ Students  Staff/ Students | Exposure to corrosive materials, flammable liquids and vapours.  Potential adverse effects due to prolonged or repeated exposure to sensitisers, mutagens, carcinogens or nano-materials.  Exposure to corrosive materials, flammable liquids and vapours.  Potential adverse reaction due to exposure to Biological agents.  Potential adverse effects due to prolonged or repeated exposure to sensitisers, mutagens, carcinogens or nano-materials. | COSHH assessments are completed before any hazardous substances are used. Task specific risk assessments have been reviewed in conjunction with COVID-19 social distancing requirements and have been confirmed as appropriate. Written approval is required for all experimental work completed outside normal working hours.  A specific, approved risk assessment for biological agents has been carried out and reviewed.  Staff/ students do not come into contact with any hazardous substances in welfare areas or in spaces set aside for the completion of administrative tasks.  Staff/ students wear the correct PPE when dealing with any hazardous substances as per the COSHH assessment. This PPE is assessed in terms of suitability for the task at hand and is not to be taken home for any reason. Staff and students are responsible for ensuring that all PPE (i.e. laboratory coats, safety glasses) are kept in good condition and are cleaned regularly. When not in use, laboratory coats are to be kept in individual storage bags to prevent cross-contamination.  All substances are identified and listed; including the amount stored. Substances which are no longer in use are disposed of via appropriate waste management channels (see <https://canvas.bham.ac.uk/courses/32859/files/8887048?module_item_id=1447887>)  Flammable liquid storage is limited to 25L per storage unit in accordance with DSEAR regulations. All flammable materials must be stored within suitable flammable liquid rated cabinets when not in use.  All hazardous substances are substituted, replaced or eliminated where possible through a) changing the process/ activity so the substance is no longer required/ generated or b) using the substance in a safer form (i.e. pellets rather than powder).  All substances are stored in the correct COSHH rated storage cabinet according to specific hazards.  All control measures, including working practices are checked regularly. Where revision of control measures is required, this is to be communicated to individuals/ groups via team meetings and e-mail communication; with follow up in School discussions as appropriate.  Maintenance, examinations and tests are completed by competent individuals. **LEV plant has an examination and test at least once every 14 months.**  Staff/ Students are required to regularly clean their assigned laboratory benches and fume cupboards and to disinfect their workstations before and after use; for which cleaning supplies are provided. In the event of a chemical or biological agent spillage, no staff member or student is to attempt clean-up unless they have received appropriate training on a prior date. This does not include minor splashes. Appropriate spill kit materials are provided to all laboratory areas.  Checks are made for spillage of substances before use and lids are replaced correctly on containers which are not in use. Where spillages occur, these are to be cleaned up in accordance with MSDS and COSHH recommendations. This activity may require two trained individuals to work in close proximity; therefore additional PPE (e.g. face masks/ shields) is required.  All staff/ students working with reportable substances are to provide documentation of exposure to Safety Services and Occupational Health. Approval of control measures proposed must be obtained before work is initiated. Health surveillance will be provided where necessary. | 3  3 | 2  2 | 6  6 |  |  | |  |  |  |  |  | |  |
| Mechanical  Mechanical | Manual Handling of Gas Cylinders  Manual Handling of Gas Cylinders | | Staff/ Students  Staff/ Students | Compressed gases are stored at high pressure.  Damage to the cylinder can result in an uncontrolled release of potentially harmful gas. | Compressed gases in laboratories are secured to an immoveable object such as laboratory benches or brick walls in an upright position.  Transfer of compressed gas cylinders is to be performed only by individuals who have completed the online training course (<https://canvas.bham.ac.uk/courses/42406>); working in assigned pairs. As this procedure requires two individuals working in close proximity, additional PPE (e.g. face masks/ shields) will be required. These face shields are supplied by the School and are available for collection from Haworth 214.  Excess compressed gas cylinders are stored in the rear courtyard of the Haworth building; secured to an immoveable object in an upright position. Full cylinders are stored separately from empty cylinders.  Cylinders are to be transported using a suitable trolley, via the goods lift. One member of the assigned pair is to travel separately to prevent over-crowding.  All regulators are registered by the Technical Manager upon delivery and assigned a number. The date of delivery will be recorded. All regulators must be replaced every five years. | 2  2 | 2  2 | 4  4 |  |  | |  |  |  |  |  | |  |
| Environmental | Radiation | | Staff/ Students | Exposure to radiation through work with ionising and non-ionising radiation sources. | All work with radiation sources and materials will be identified and supervised at all times in accordance with the University Ionising and Non-Ionising Radiation policies (see below)  <https://intranet.birmingham.ac.uk/hr/wellbeing/worksafe/radiation/Radiation-Safety.aspx>  Radiation specific risk assessments and local rules have been developed and all works have been approved by the University Radiation Safety Group.  All usage of radioactive material will be reported via IsoStock (<https://intranet.birmingham.ac.uk/hr/documents/private/HSU/Policies/Standard-User-IsoStock-Software-Quick-Guide.pdf>)  The school Radiation Protection Supervisor should be consulted before the implementation of any changes to working practices. The University Radiation Protection Advisor can also be contacted for advice.  All staff/ students who regularly work with radiation sources must complete appropriate training. | 3 | 1 | 3 |  |  | |  |  |  |  |  | |  |
| Environmental | Transport of Cryogenic Materials | | Staff/ Students | Risk of cold burns and asphyxiation | The transfer of cryogenic liquids and solids must be completed by a minimum of two persons working in pre-determined pairs or groups.  As this tasks involves multiple people working in close proximity, additional PPE (e.g. face shields/ masks) are required. | 2 | 1 | 2 |  |  | |  |  |  |  |  | |  |
| Organisational | Lone Working | | Staff/ Students | Lone workers are vulnerable to delayed response in the event of an accident.  . | Lone working is avoided wherever possible and is not permissible in high risk activities or areas such as laboratories. Lone working outside of normal working hours will not be permitted under any circumstances.  A named ‘buddy’ must be present and remain within hearing distance at all times when working outside normal working hours. | 3 | 2 | 6 |  |  | |  |  |  |  |  | |  |

**Risk Assessment Guidance**

Risk Scoring System

The scoring system is provided as a tool to help structure thinking about assessments and to provide a framework for identifying which are the most serious risks and why.

|  | **Consequence / Severity score (severity levels) and examples of descriptors** | | | | |
| --- | --- | --- | --- | --- | --- |
|  | **1** | **2** | **3** | **4** | **5** |
| **Domains** | **Negligible** | **Minor** | **Moderate** | **Major** | **Catastrophic** |
| **Impact on the safety of staff, students or public (physical / psychological harm)** | Minimal injury not requiring first aid or requiring no/minimal intervention or treatment.  No time off work | Minor injury or illness, first aid treatment needed or requiring minor intervention.  Requiring time off work for <3 days | Moderate injury requiring professional intervention  Requiring time off work for 4-14 days  RIDDOR / MHRA / agency reportable incident | Major injury leading to long-term incapacity/ disability (loss of limb)  Requiring time off work for >14 days | Incident leading to death  Multiple permanent injuries or irreversible health effects |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Likelihood score** | **1** | **2** | **3** | **4** | **5** |
| **Frequency** | **Rare** | **Unlikely** | **Possible** | **Likely** | **Almost certain** |
| **Broad descriptor** | This will probably never happen/occur | Do not expect it to happen/occur but it is possible it may do so | Might happen or occur occasionally | Will probably happen/occur but it is not a persisting issue | Will undoubtedly happen/occur, possibly frequently |
| **Time-framed descriptor** | Not expected to occur  for years | Expected to occur  at least annually | Expected to occur at  least monthly | Expected to occur at least weekly | Expected to occur at least daily |
| **Probability**  Will it happen or not? | <0.1 per cent | 0.1–1 per cent | 1.1–10 per cent | 11–50 per cent | >50 per cent |

The overall ***level of risk*** is then calculated by multiplying the two scores together.

**Risk Level = Consequence / Severity x Likelihood (C x L)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Likelihood** | | | | |
| **Likelihood score** | **1** | **2** | **3** | **4** | **5** |
|  | **Rare** | **Unlikely** | **Possible** | **Likely** | **Almost certain** |
| **5 Catastrophic** | 5 | 10 | 15 | 20 | 25 |
| **4 Major** | 4 | 8 | 12 | 16 | 20 |
| **3 Moderate** | 3 | 6 | 9 | 12 | 15 |
| **2 Minor** | 2 | 4 | 6 | 8 | 10 |
| **1 Negligible** | 1 | 2 | 3 | 4 | 5 |

The Initial Risk Rating is the level of risk before control measures have been applied or with current control measures in place.

The Residual Risk is the level of risk after further control measures are put in place.