

Phase 3 risk assessment (Chemistry and Materials Chemistry)

| Location(s): (where will the activity or task take place?) | | | | Chemistry Building, Materials Chemistry Building and Waste Store | Reference | COVID19_RA_Phase3 |
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| Description of task or Activity (enough information to establish the foreseeable hazards) | Hazards (things with the potential to cause harm) | Those at risk (people who could be harmed) | How could they be harmed? (nature of injuries, damage that could result) | Uncontrolled risk level (level of risk without control) | Required controls (how the risk can be removed or reduced by for example engineered methods, safe systems of work, training and/ or personal protective equipment) | Controlled risk level (level of risk remaining when controls are in place) |
| <p>The following is the phase 3 risk assessment for users of the chemistry and materials chemistry building as well as the associated hazardous waste and solvent storage building. Biosciences staff based in the building are expected to follow these controls and it also includes access to the faculty office and catering spaces but these areas should have their own risk assessments for their own activities/rooms. Phase 3 is to follow on from the initial reoccupation under phase 2 after the demonstration during phase 2 that the controls were effective and were followed within the department. In the event of the COVID-19 situation worsening, or the phase 3 measures not working, the department initially propose a regression back to the phase 2 controls and way of working. The department understand that the restricted working practises have caused stress and anxiety for our staff and students and have therefore made extensive efforts to re-open as much as is safe to do so, so people can operate as close to the pre-pandemic working arrangements as possible. It must be noted that all other risk assessments for the building are still in force and the following measures are additional to protect against the biological viral hazard covid-19.</p> <p>The department remains committed to their equality, diversity and inclusion policy and will ensure any pre-existing reasonable adjustments are respected by any changes in work plans, this might mean patterns of hours, access to bespoke computing resource or physical access issues. If anyone feels that the change in work plans disadvantages them on grounds of disability that have or haven't been disclosed, or that they have concerns that stem from belonging to a higher risk group for covid-19, the department encourages that person to bring this concern forward to their line manager who will engage with the relevant parties (e.g. HR, safety representatives) and individual risk assessments can be conducted.</p> <p>Occupancy of the buildings have been based on ~300 people at any one time. This comprises of about 150 staff and post-doctoral/postgraduate researchers and about 150 undergraduate students in 3 teaching laboratories and 9 centrally bookable teaching spaces.</p> | | | | | | |
| General considerations and access to the building and to circulation spaces | Biological viral hazard – covid-19 | Everyone including those on and off site | Inhalation of or mucocutaneous contact with contaminated droplets leading to infection with covid-19. The | Severity – 4 Likelihood – 4 | Staff who identify as Clinically Extremely Vulnerable, High Risk Clinically Vulnerable or Clinically Vulnerable should have individual risk assessments completed in line with the Return to campus guidance for staff at higher risk of severe covid-19 infection process and additional mitigation measures put in place if required, in certain cases this may include no face to face | Severity – 4 Likelihood - 2 |

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| | | | <p>effects of covid-19 infection range from minor respiratory symptoms to death.</p> | | <p>teaching.</p> <p>Everyone should self-isolate if required. This helps to protect others:</p> <p>The latest government guidance should always be followed, available at: https://www.gov.uk/government/publications/covid-19-stay-at-home-guidance.</p> <p>Extract at time of writing:</p> <p>“The most important symptoms of coronavirus (COVID-19) are recent onset of any of the following:</p> <ul style="list-style-type: none"> •a new continuous cough •a high temperature •a loss of, or change in, your normal sense of taste or smell (anosmia) <p>For most people, COVID-19 will be a mild illness. However, if you have any of the symptoms above you must stay at home and arrange to have a test to see if you have COVID-19. Tests can be requested using: https://www.nhs.uk/conditions/coronavirus-covid-19/testing-and-tracing/ask-for-a-test-to-check-if-you-have-coronavirus/.</p> <p>If you have symptoms of COVID-19 however mild, you must self-isolate for at least 10 days from when your symptoms started. You should arrange to have a test to see if you have COVID-19.</p> <p>If you are not experiencing symptoms but have tested positive for COVID-19 you also must self-isolate for at least 10 days, starting from the day the test was taken. If you develop symptoms during this isolation period, you must restart your 10-day isolation from the day you develop symptoms.</p> <p>After 10 days, if you still have a temperature you should continue to self-isolate and seek medical advice. You do not need to self-isolate after 10</p> | |
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| | | | | | <p>days if you only have a cough or loss of sense of smell or taste, as these symptoms can last for several weeks after the infection has gone.</p> <p>If you live with others, all other household members must stay at home and not leave the house for 14 days. The 14-day period starts from the day when the first person in the household became ill or if they do not have symptoms, from the day their test was taken. If anyone else in the household starts displaying symptoms, they must stay at home for at least 10 days from when their symptoms appear, regardless of what day they are on in their original 14-day isolation period.”</p> <p>If you are contacted by the NHS test and trace service (https://www.gov.uk/guidance/nhs-test-and-trace-how-it-works) you must follow any request to self-isolate as required by the service.</p> <p>Anyone self-isolating must inform their line manager, the department manager (chemistry.departmentmanager@durham.ac.uk), head of department (chemistry.hod@durham.ac.uk) and chemistry departmental safety coordinator (chem.safety@durham.ac.uk) with details about why they are self-isolating, when their self-isolation started, what they had been doing <i>within the department</i> for the 48 hours prior to self-isolation and who they had likely been within <2m contact with for 15 minutes or more in this period. This information must also be reported to hr.absence@durham.ac.uk as required by university procedures.</p> <p>Precautions in the department: The department will aim to minimise building occupancy by advising staff to work from home if it is possible, and only occupy the building for necessary, planned work; using designated work patterns approved in advance.</p> <p>Hand sanitiser is provided at entry points and</p> | |
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| | | | | | <p>throughout the department. Those who do not want to use an alcohol-based sanitiser (e.g. for religious reasons) should employ frequent hand washing.</p> <p>Each room has a maximum occupancy number stated clearly on (or next to) the door, which must be adhered to. This applies to all users of an area.</p> <p>Covid-19 safe-working posters are displayed around the Department to reinforce key messages.</p> <p>Corridors, stairwells and doorways are 2-way and a 'keep left' policy is in operation. All other doors should only be used one person at a time. Where indicated, follow individual doors as entry or egress only.</p> <p>Building circulation areas will be cleaned between 06:00 and 12:00 each day by E&F, following SOP CVD 05. Chemistry lab attendants will then clean circulation areas for a second time in the early afternoon, following the same SOP. Additional touchpoint will be completed by E&F during term time.</p> <p>Windows, including those set into office and lab doors, must not be covered so that occupancy of rooms can be clearly seen from corridors, and movement in corridors can be clearly seen from inside rooms, to prevent unexpected close contact. Any existing coverings on windows must therefore be removed.</p> <p>Guidance information has been given to all staff and visitors, including a formal Return to Work induction. A general induction is available on the university health and safety pages (https://www.dur.ac.uk/coronavirus/password/staff/hs/). Department level inductions have been completed for phase 2 and phase 3 and were recorded for those who could not attend.</p> <p>Behavioural controls expected from all building occupants:</p> | |
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| | | | | | <p>Social distancing should be maintained at all times with a 2 m distance being maintained.</p> <p>Employ good hand hygiene with regular and thorough handwashing.</p> <p>When coughing or sneezing, personnel should cover their mouth and nose with a tissue or with their elbow.</p> <p>Avoid physical contact with others.</p> <p>Face coverings should be worn when moving about within buildings, during queuing, and collection at catering outlets, in corridors and other communal areas in colleges, academic and other buildings including when using multiple occupancy restrooms. More information is available in the University policy on face coverings available at https://www.dur.ac.uk/resources/coronavirus/password/Facecoveringpolicy.pdf.</p> <p>It must be noted that while the use of face coverings is required, not everyone can wear face coverings for a variety of reasons. People therefore need to be careful when challenging others about using (or not using) face coverings – for EDI reasons people cannot expect others to disclose why they are not wearing a face covering.</p> <p>Laboratory PIs are responsible for managing access to their areas and ensuring the stated area occupancies are not exceeded.</p> <p>Compliance with social distancing measures will be monitored actively by the Chemistry Safety Committee and inspections may be made by UHSS. Concerns from individuals can be flagged to any member of the Chemistry Safety Committee directly, or, if preferred, the Chemistry Department Near Miss reporting tool can be used (http://community.dur.ac.uk/chem.safety/local/near_miss.html). Posters are displayed in the department with information of how to report</p> | |
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| | | | | | <p>concerns at the University level if people feel more comfortable reporting concerns outside the Department.</p> <p>Individuals reporting symptoms whilst in the department should isolate themselves in the faculty meeting room on the third floor, with the windows open, and seek further advice, until returning home wearing a face covering. If an individual is unsure whether they are suffering from a fever a non-contact thermometer is available within the faculty meeting room for them to be checked. They should identify themselves and symptoms to a first aider who will be able to help using the thermometer and appropriate PPE.</p> <p>Use of the Department as a thoroughfare for non-Chemistry staff or students should be prevented. To achieve this, signs will be displayed on entrance to the department that access is for chemistry users only and that there is no thoroughfare permitted.</p> <p>General health and safety information from the university can be found at https://www.dur.ac.uk/coronavirus/password/staff/hs/</p> <p>Department actions in the event of a positive test</p> <p>In the event of a being notified that a member of the department has tested positive, the department will make efforts to contact those within the department who have been in close contact with that individual where they were not socially distanced (either 2 meters or 1 meter plus extra mitigation such as a face covering) for 15 minutes or more and advise them to not attend site and that they should submit themselves for a test. The name of the person who has tested positive will not be divulged without their consent.</p> <p>In the event of a confirmed case of C-19, of a University member who has been on University premises, a deep clean of areas they frequented, in the previous five days, will be completed, as far</p> | |
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| | | | | | as is practicable, in terms of confirmation of locations, by an external, competent contractor. | |
| Use of communal facilities (toilets, kitchens, vending machines, mail racks, photocopiers, showers, lifts, Chemistry Café) | Biological viral hazard – covid-19 Transmission through use of communal facilities | Everyone including those on and off site | Inhalation of or mucocutaneous contact with contaminated droplets leading to infection with covid-19. The effects of covid-19 infection range from minor respiratory symptoms to death. | Severity – 4 Likelihood – 4 | <p>Toilets Users should use their nearest toilet facility to minimise movement around the building. Social distancing should be respected in toilet facilities. In order to help facilitate this, toilets have been marked out with some urinals and sinks marked as out of use. Cubicles provide a physical barrier so all cubicles can be used.</p> <p>If all cubicles and urinals are in use, people should queue outside of the toilet facility until there is space.</p> <p>Toilet seats should be lowered before flushing to prevent droplets from being dispersed. This message is reinforced with signage.</p> <p>Hands must be washed before leaving toilets. Signage is displayed in the toilet facilities to reinforce the need for good hand hygiene and hand washing technique.</p> <p>Kitchens Kitchen areas in the chemistry department are located in CG141, CG300D, MC005, MC109. Social distancing should be respected in kitchen areas, a queue will be demarked where heavy use of a kitchen area is anticipated.</p> <p>Touch points such as handles must be wiped before and after each usage. This should be done using Sani 4 in 1 following SOP CVD 05. Good personal hygiene with frequent hand washing and sanitising should be employed.</p> <p>Vending machines are available in the red atrium and in the Musgrave Room (CG141). They should be cleaned before and after use by the user using sanitising wipes.</p> <p>The Chem Café will be reopening as a click and collect service only from October 5th.</p> <p>Rest facilities</p> | Severity – 4 Likelihood - 2 |

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| | | | | | <p>The seating capacity in the Musgrave Room (CG141) has been reduced so that social distancing can be maintained. Some seats have been marked out of use and floor markings will be used to indicate where the other seats should be.</p> <p>In communal seating areas, wipeable chair coverings are used. These are plastic laundry bags covered over fabric chairs. These will be wiped clean after each use and the bags will be replaced weekly.</p> <p>If weather permits, the external spaces are also available for rest/lunch breaks.</p> <p>Washing facilities The non-emergency shower may be used but it must be sanitised before and after use using SANI4 in 1 following SOP CVD 05 by the user. All personal items should be removed from the washing facility after use.</p> <p>Lifts Lifts should only be used if essential (for example health and mobility issues or transport of articles – note that transport with cryogenics and other hazardous substances is not permitted due to hazards around creating a confined space). Occupancy should be reduced to one, with the exception of where a disabled user is required to be accompanied by a mobility advisor. Hand sanitiser should be used before and after use of the lift – a hand sanitising station is available next to each lift. Buttons will be cleaned during the touchpoint cleaning of the building.</p> <p>Personal storage Storage spaces should be individual and not shared. E.g. one locker per person, no sharing.</p> <p>Departmental facilities The open pigeon holes are not in use and have been taped up.</p> <p>Use of the communal photocopiers (MFPs) should be avoided where possible. Where this is not</p> | |
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| | | | | | possible they should be used as infrequently as is possible by grouping any jobs and completing them all in one visit. When using the MFPs, they should be wiped clean before and after use with the sanitiser provided. | |
| All departmental work | Welfare/Mental health | All | Adverse effects on mental health due to worry/stress and/or reduced social contact | Severity – 3 Likelihood -3 | <p>All personnel have been provided with a social contact to whom they can talk informally by any appropriate means. New PGRs/PDRAs and staff will be assigned a social contact as part of their induction to the department.</p> <p>The department have an appointed mental health first aid contact and advice and resources are available from the occupational health website: https://www.dur.ac.uk/hr/occupationalhealth/mentalhealth/</p> <p>Staff and researchers should be encouraged to access resources that are available:</p> <ul style="list-style-type: none"> • Report and Support tool for staff who are concerned for their safety or experiencing unwanted behaviours, including online harassment: https://reportandsupport.durham.ac.uk . • Guidance on working remotely and advice on how to improve mental wellbeing: https://www.dur.ac.uk/od/remotesupport/ • The Five Ways to Wellbeing, a set of evidence-based public mental health messages, to improve mental health and wellbeing. https://www.dur.ac.uk/od/wellbeingandworkdiff/fiveways/ • Modules are available on Duo for staff to build resilience and develop Wellness Action Plans. https://www.dur.ac.uk/hr/occupationalhealth/mentalhealth/counselling/. • Access to the full suite of SilverCloud | Severity – 3 Likelihood - 2 |

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| | | | | | <p>psychoeducation modules is available via mobile phone, tablet or computer, after registration.</p> <p>https://www.dur.ac.uk/wellbeing/silvercloud/ .</p> <ul style="list-style-type: none"> Employee Assistance Programme – an EAP is a confidential employee benefit designed to help you deal with personal and professional problems that could be affecting your home life or work life, health and general wellbeing. <p>https://www.dur.ac.uk/hr/password/occupationalhealth/employeeassist/</p> | |
| | Out of hours working (outside of working hours 07:00 until 19:00) | All | <p>Lower response time to emergency situations from out of hours working.</p> <p>Increased risk of lone working due to lower occupancy of department.</p> | <p>Severity – 4</p> <p>Likelihood – 4</p> | <p>Research workers must not undertake experimental procedures outside normal working hours unless their supervisor or the Chair of the Board of Studies authorises the work.</p> <p>Once the work has been authorised, the supervisor must send an email to chemistry.reception@durham.ac.uk giving details of:</p> <ul style="list-style-type: none"> Who will be working out of hours Where they will be working How long they anticipate they will be on site. <p>This information must be sent by 12:00 noon on the day of the out of hours working request. For weekend/bank holiday working, this must be sent by 12:00 noon on the final normal working day before the weekend/bank holiday.</p> <p>If work is permitted out of hours, workers must be working with a buddy competent to provide emergency help if needed. This means they have the required knowledge, training, skills and experience in the activities being completed to respond appropriately to any foreseeable emergency situation (e.g. shutting equipment down as required, cleaning up spills, summoning help).</p> <p>Hazardous work must not be undertaken out of hours.</p> | <p>Severity – 4</p> <p>Likelihood - 2</p> |

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| | | | | | <p>Students should normally leave the science site by 22.00. Any work between 22.00 and 07.00 needs specific permission from the supervisor and the Chair of the Board of Studies, as well as a separate risk assessment.</p> <p>Students and staff members must use the entrance next to the Security Office (red atrium) out of normal working hours. They must record their presence on the MS Teams shifts app regardless of the time or day that they are attending site.</p> <p>A person who is already in the Department at 19.00 on a normal working day and plans to stay in the Department beyond that time, must leave themselves clocked into the building on the MS Teams app.</p> <p>Out-of-hours, the only fire muster point for the building in the event of a fire alarm activation is opposite the red atrium at the front of the building. All building occupants must report here due to building fire wardens not necessarily being on site.</p> <p>First aid provision is through security (43333) as there is reduced first aider presence on site from the department.</p> | |
| Use of shared desk rooms | <p>Biological viral hazard – covid-19</p> <p>Transmission through use of desks, chairs, keyboards, lockers and other facilities</p> | Everyone including those on and off site | Inhalation of or mucocutaneous contact with contaminated droplets leading to infection with covid-19. The effects of covid-19 infection range from minor respiratory symptoms to death. | <p>Severity – 4</p> <p>Likelihood – 4</p> | <p>Building occupancy is being minimised by advising staff to work from home if it is possible, and only occupy the building for necessary, planned work; using designated work patterns approved in advance.</p> <p>Shared desk rooms may be used by users who are assigned occupancy in a lab space on the basis of the following conditions being met.</p> <p>Social distancing in desk rooms must be maintained at all times. To achieve this:</p> <ul style="list-style-type: none"> • Rotas should be considered. • Desks could be marked up with colours or days of the week in use to give a visual indication at the point of use about the plan. | <p>Severity – 4</p> <p>Likelihood - 2</p> |

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| | | | | | <ul style="list-style-type: none"> • If services allow (network and power points), moving the desks can be considered to help facilitate social distancing. • This will be coordinated locally by users and overseen by line managers. • Compliance will be monitored by the safety committee. <p>Maximum occupancies for desk rooms must be followed. This includes anyone using the desk room as a thoroughfare.</p> <p>For hygiene reasons there should be one desk, chair and workstation per worker (no hot-desking).</p> <p>Desks must be wiped after each shift using an appropriate disinfectant for example SANI 4 in 1 following SOP CVD 05.</p> <p>Personal storage spaces must not be shared, e.g. one locker per worker.</p> <p>Any common touchpoints in shared desk rooms, should be cleaned before and after use with an appropriate disinfectant, e.g. Sani 4 in 1 following SOP CVD 05.</p> <p>Good personal hygiene must be maintained through increased use of handwashing facilities and hand sanitiser.</p> <p>Any recirculating air ventilation unit in a desk room must preferably be switched off. If the unit cannot be switched off, the room should be limited to a single named user. If it is not possible to limit the room to a single named user, then the room should be limited to a small number of named users and efforts made to increase fresh air ventilation by opening windows. See also Chemistry Building – Ventilation Assessment.</p> | |
| | Incorrect use of desk spaces | Workspace users | DSE related injuries, e.g. musculoskeletal disorders, back | Severity – 3 Likelihood – 3 | Given the long absence from the department each worker must complete a DSE assessment of their workstation before starting work at their workstation. This must be repeated for any | Severity – 3 Likelihood – 2 |

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| | | | pain, eye strain, headaches. | | additional workstations to be used. DSE assessments are completed via DUO under the 'Health and Safety All Staff Training' heading. Completion will be monitored by the safety committee. | |
| Meetings | Biological viral hazard – covid-19 | Everyone including those on and off site | Inhalation of or mucocutaneous contact with contaminated droplets leading to infection with covid-19. The effects of covid-19 infection range from minor respiratory symptoms to death. | Severity – 4 Likelihood – 4 | Meetings should be conducted using video conferencing software (Teams is preferred due to close caption) to do the meeting remotely. Where this is not possible, a centrally bookable meeting space should be booked if available adhering to the maximum occupancy and any social distancing/local arrangements. The area must be cleaned down after use and face coverings worn. Furniture must not be rearranged in centrally bookable spaces. Where neither of these are possible, a 1:1 meeting in a large enough departmental space is permitted provided there are additional control measures in place. For example, social distancing is observed, face coverings are worn, windows and doors are opened to increase ventilation and good hygiene measures are followed including cleaning down surfaces. See also university guidance on meetings in staff offices. | Severity – 4 Likelihood - 2 |
| Emergency Cover | Various hazards relating to a reduction of people on site meaning an emergency response might be slower. | Fire | Insufficient fire warden presence. | Severity – 5 Likelihood – 5 | The Chemistry dynamic fire warden system will help with this. If the fire alarm sounds, all staff should leave by the nearest exit and proceed outside of the building to the security office for fire warden duties. Staffing levels in the building, during normal working hours on weekdays, should be maintained above the minimum number required to support this function. Building occupants should evacuate as normal, maintaining social distancing where possible. Any one-way systems should be ignored and occupants should leave by their nearest exit. Social distancing should be maintained once outside of the building. Re-entry to the building will be staggered to avoid overcrowding – this will be managed by the acting chief fire warden. | Severity – 5 Likelihood - 1 |

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| | | First aid | Insufficient First Aider presence. | Severity – 4 Likelihood – 3 | If first aid is required, security should be contacted on 43333, giving details of the incident and its location. Security will then contact the first aid channel (channel 1) on the hand-held radios and a first aider will attend. First aiders will arrive in PPE consisting of a face-shield, face covering and single-use nitrile gloves. | Severity – 4 Likelihood - 1 |
| | | Chemical spill | Insufficient breathing apparatus staff to cover a spillage. | Severity – 4 Likelihood – 3 | Chemical Emergency Response Team service is temporarily suspended. All experiments should be planned on the basis that the Chemical Emergency Response Team will not be available on site – i.e. in the event of a spill that would normally require the Chemical Response team, the area would need to be evacuated and taken out of use until follow up was possible with sufficient members of the Chemical Response team. | Severity – 4 Likelihood – 2 |
| Laboratory Research | Biological viral hazard – covid-19 | Everyone including those on and off site | Inhalation of or mucocutaneous contact with contaminated droplets leading to infection with covid-19. The effects of covid-19 infection range from minor respiratory symptoms to death. | Severity – 4 Likelihood – 4 | <p>Lab management</p> <p>In addition to the risk assessments normally in use, each area in operation has a risk assessment in place to cover the biological viral hazard of covid-19. Area managers have been provided with guidance and asked to prepare this for their individual areas and these risk assessments have been reviewed by the safety committee before reoccupation of that area. This has been reviewed for phase 3.</p> <p>Procedures and experiments for which existing risk assessments or SOPs are in place must consider the associated risks of covid-19 before any additional work is undertaken. This can be either in the form of a new assessment, or an update to the previous one.</p> <p>Covid-19 must be considered in any new risk assessments.</p> <p>Any specific activity where social distancing measures cannot be complied with should have a risk assessment and level of PPE determined – approved by the DSC (chem.safety@durham.ac.uk).</p> | Severity – 4 Likelihood - 2 |

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| | | | | | <p>For existing procedures that have no additional training element, risk assessments can be authorised remotely by a competent authority.</p> <p>For any procedures requiring additional training, a detailed risk assessment and associated plan for how supervision and training will be delivered is required before undertaking the work. This could be undertaken through the use of body cams and ear pieces, or if only short duration training is required, type IIR/surgical mask and visor should be worn where practical.</p> <p>Maintaining social distancing 2m social distancing in laboratories should be maintained at all times. To achieve this:</p> <ul style="list-style-type: none"> • Rotas should be considered and maximum occupancies must be adhered to. • One way systems can be used where practical, supported by floor markings. • Primary and secondary workstations could be marked out with floor markings to designate space that users will occupy. • This will be coordinated locally by users and overseen by line managers. • Compliance will be monitored by the safety committee. <p>In general lab groups will not mix within each others spaces. Users will use their own desk rooms and lab spaces for working within their own small cohort consisting of only their co-workers in their research space. Footfall around the department has been minimised and therefore cross contamination of areas and interactions with other researchers or cohorts has also been minimised. Within the cohort researchers will maintain distancing measures.</p> <p>Increased cleaning and personal hygiene All surfaces touched by hand must be wiped down after use with an appropriate disinfectant active against enveloped viruses for the manufacturer's stated contact time. For example, using Sani 4 in</p> | |
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| | | | | | <p>1 following SOP CVD 05 or Distel at 1:100 dilution with a 30 minute contact time. Please note however that some cleaners have chemical properties and these should be considered locally to determine whether that cleaner is suitable for use in the given environment.</p> <p>Ethanol and/or isopropanol should not be used as a disinfectant due to the added fire risk of spraying flammable solvents onto surfaces.</p> <p>A clearly identifiable sanitising station should be set up in each lab consisting of the appropriate disinfectant, disposable cloth to wipe with, sanitising wipes and, where applicable, hand sanitiser.</p> <p>Gloves could be considered for work involving multiple contact with shared surfaces if disinfection is not practical.</p> <p>Laboratory coats must be stored separately for each researcher, in a drawstring cotton bag. This should be kept inside the laboratory in a defined area per person; in most cases, on labcoats hooks inside the drawstring cotton bag. Other PPE, for example safety glasses, must also be stored separately for each researcher in a non-contaminated environment. PPE should not be shared.</p> <p>Where possible, researchers should be allocated personal fume cupboard and bench space.</p> <p>Shared facilities must be cleaned before and after each use with an appropriate cleanser.</p> <p>Face coverings are not required when working at a laboratory workstation as these areas have been laid out to ensure social distancing.</p> <p>Risk assessment may also exclude the use of face coverings where their use may pose a risk to safety:</p> <ul style="list-style-type: none">• Where they could become caught or snagged in equipment | |
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| | | | | | <ul style="list-style-type: none"> Working with open flames or other heat sources, pyrophoric or flammable chemicals Where they could risk the health of individuals, e.g. because of thermal exposure or where they could absorb or become contaminated with chemical or biological hazards used in activities Where they may impair safety critical communication. <p>In some circumstances, disposable face coverings may provide an acceptable alternative to re-usable face coverings. In these cases, disposable face coverings will be provided by the University.</p> <p>Keypad access systems should be removed or disabled where possible. Where removal is not possible, the keypad should be cleaned regularly.</p> <p>Where practical, arrangements should be put in place to minimise hand contact with door furnishings. This includes the use of kick panels and attachments that enable doors to be opened by arm. For fire safety reasons and COSHH safety reasons, doors to laboratories and offices should not be propped open.</p> <p>Use of cold rooms Due to the lower temperature and recirculating air, cold rooms have been highlighted as higher risk than other laboratory areas. For this reason cold rooms should be limited to an occupancy of 1 person at a time.</p> | |
| | Increased risk from Legionella due to infrequent use of the water systems | All | Legionnaires' disease is a type of pneumonia affecting the lungs and other organs of the body. | <p>Severity – 5</p> <p>Likelihood – 4</p> | <p>Each laboratory should have a rota for running all water outlets for at least two minutes each week to minimise risks. This should be recorded and the records kept locally until a departmental process can be put in place to maintain these records.</p> <p>A sock is available from stores to assist with the flushing of emergency showers and can be requested through the area's bubble manager.</p> <p>Checks will be made during safety committee audits to ensure this is being complied with.</p> | <p>Severity – 5</p> <p>Likelihood – 2</p> |

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| | Lone working | All researchers | <p>Social distancing and designated work patterns lead to single occupancy in labs</p> <p>Increased working from home, plus the potential for self-isolation could lead to insufficient academic staff to provide research cover</p> | <p>Severity – 4</p> <p>Likelihood – 4</p> | <p>Where rooms are singly occupied, a system must be in place to safeguard the lone worker. This will usually involve some form of regular checking in by the researcher. Personal mobile phones (at the risk of the user) may be used for this purpose only and must not be used for phone conversations until they have been decontaminated before leaving the laboratory.</p> <p>Where practical, academic staff should be grouped into teams according to competency. Any staff member in a competency grouping should be prepared to cover the supervisory role of any other. Laboratory work will be permitted if one member of the relevant competency team is in the department.</p> <p>Activities deemed high-risk should not be undertaken by a lone worker.</p> | <p>Severity – 4</p> <p>Likelihood – 1</p> |
| Management of departmental services | | | | | | |
| Maintenance of laboratory supplies and hazardous waste removal (i.e. solvents, waste, dry ice, and liquid nitrogen) | <p>Biological viral hazard – covid-19</p> <p>Transmission from increased footfall through the department.</p> | Everyone including those on and off site | Inhalation of or mucocutaneous contact with contaminated droplets leading to infection with covid-19. The effects of covid-19 infection range from minor respiratory symptoms to death. | <p>Severity – 4</p> <p>Likelihood – 4</p> | <p>Maintenance of laboratory supplies and hazardous waste removal should be completed by one laboratory representative each working day. This should be managed locally, however it is recommended that this job is rotated around the lab users.</p> <p>As per university policy, face coverings should be worn when moving around within buildings.</p> <p>The number of trips by the daily laboratory representative should be minimised by, for example, grouping jobs together, or collecting in bulk where possible, whilst still adhering to the building DSEAR controls (minimise the amount of flammable solvent in the building and store flammable solvent in flammable cupboards). Trolleys should be used where necessary to reduce the risks of manual handling related injuries.</p> <p>Solvents (SPS, Solvent Store) Laboratory solvents can be obtained from the external solvent store, which is naturally well</p> | <p>Severity – 4</p> <p>Likelihood - 2</p> |

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| | | | | | <p>ventilated for fire safety reasons. This therefore reduces the transmission risk.</p> <p>The occupancy of the solvent store and SPS room will be limited to 1 technician with the laboratory representative collecting their order from the doorway.</p> <p>For chemical safety reasons, the technician present wears single-use gloves, which are changed frequently and removed before leaving the solvent store.</p> <p>Order records will be monitored electronically by the solvent stores technician. Orders must therefore be submitted 15 minutes prior to solvent stores opening.</p> <p>Opening times extended by 15 minutes to facilitate social distancing. Opening times will be 09:15-09:45 and 14:15-14:45.</p> <p>Waste Hazardous waste is stored in our external hazardous waste store, which is naturally well ventilated for fire safety reasons. This therefore reduces the transmission risk.</p> <p>The occupancy of the waste store will be limited to 1 technician with the laboratory representative dropping their waste off just inside the doorway.</p> <p>For chemical safety reasons, the technician present wears single-use gloves, which are changed frequently and removed before leaving the waste store.</p> <p>Opening times extended by 15 minutes to facilitate social distancing. Opening times will be 09:15-09:45 and 14:15-14:45.</p> <p>Solid carbon dioxide The solid carbon dioxide box will be moved external to the building. This will therefore reduce the risk of COVID-19 transmission as the area will be naturally well ventilated. Ideally users should</p> | |
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| | | | | | <p>bring their own scoop to collect the dry ice with, but if this is not possible, the departmental scoop may be used and the handle should be cleaned before and after use.</p> <p>Liquid nitrogen Liquid nitrogen dewars are filled by a member of the technical staff and left in a cage external to the building, where they can be collected. This is a naturally well-ventilated area for cryogen safety reasons, and so the transmission risk is reduced.</p> <p>Ice Ice can be collected from the ice machines located outside CG127 and CG209 by the daily nominated laboratory representative.</p> <p>If possible, the laboratory representative should bring their own scoop from their lab to collect ice with.</p> <p>If this is not possible, hand sanitiser is positioned next to the ice machines and should be used before and after ice is collected using the department scoop.</p> <p>DI water DI water can be collected by the laboratory representative from the taps throughout the department. Hand sanitisers should be used before and after collecting DI water.</p> | |
| Workshops | Lone working | Workshop staff | Social distancing and designated work patterns lead to single occupancy in workshops. | <p>Severity – 4</p> <p>Likelihood – 4</p> | <p>Where workshops are singly occupied, a system must be in place to safeguard the lone worker. This will usually involve some form of regular checking in with a line manager by the lone worker. Personal mobile phones (at the risk of the user) may be used for this purpose only and must not be used for phone conversations until they have been decontaminated before leaving the workshop. Lone working alarms will be used in workshop areas where lone working is undertaken and a buddy system for welfare checking is not appropriate.</p> <p>Activities deemed high-risk should not be undertaken by a lone worker.</p> | <p>Severity – 4</p> <p>Likelihood – 1</p> |

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| | <p>Biological viral hazard – covid-19</p> <p>Transmission from increased footfall through the department.</p> | <p>Everyone including those on and off site</p> | <p>Inhalation of or mucocutaneous contact with contaminated droplets leading to infection with covid-19. The effects of covid-19 infection range from minor respiratory symptoms to death.</p> | <p>Severity – 4</p> <p>Likelihood – 4</p> | <p>Staff should contact the workshop staff through either Teams, email or by phone to discuss any work.</p> <p>The workshop staff will agree a pre-arranged time for any required consultation, and for people to drop off any items necessary. The workshop staff will notify the user when the work is completed and arrange a time for them to come and collect their item(s). This will be from the designated area inside each workshop. Social distancing should be maintained whilst collecting items from the workshops.</p> <p>Social distancing and increased hygiene measures should be followed at all times in workshops. Floor markings have been used to help with social distancing and sanitising stations have been set up to help with increasing hygiene.</p> | <p>Severity – 4</p> <p>Likelihood - 2</p> |
| <p>Analytical Services</p> | <p>Biological viral hazard – covid-19</p> <p>Transmission from increased footfall through the department.</p> | <p>Everyone including those on and off site</p> | <p>Inhalation of or mucocutaneous contact with contaminated droplets leading to infection with covid-19. The effects of covid-19 infection range from minor respiratory symptoms to death.</p> | <p>Severity – 4</p> <p>Likelihood – 4</p> | <p>Discussion with the analytical staff should be completed remotely via teams, phone or email.</p> <p>Maximum lab occupancies and social distancing measures must be adhered to and increased hygiene measures must be followed. Floor markings have been used to help with social distancing where required and sanitising stations have been set up to help with increasing hygiene.</p> <p>Service managers have put local procedures and risk assessments in place to operate their service. Services will operate as one of two types of service:</p> <p>Managed services</p> <p>This is a service which is managed by analytical staff, who take a sample and complete the analysis themselves. For these services, a sample drop off point will be set up and the sample will be collected, sanitised and analysed by the analyst. The sample can then be collected from the sample collection point (typically next to the drop off point). Specific arrangements will be managed locally by the service manager and included in the room/service risk assessment.</p> | <p>Severity – 4</p> <p>Likelihood - 2</p> |

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| | | | | | <p>Walk-up services These are services which are available as open access facilities for members of the department to use themselves.</p> <p>Where these facilities have recirculating air conditioning units, the guidance received in the E&F ventilation assessment should be followed. This is that they should ideally be switched off. Where they cannot be switched off, ventilation should be increased by opening windows where possible, occupancies should be limited and the use of face coverings should be mandated where this is safe to do so considering other chemical, biological and thermal hazards in the area.</p> <p>A queue will be set up outside of the walk-up services rooms to help facilitate social distancing. Space in the queue will be limited, and if the queue is full, users should return to their lab and try again later rather than dwell in the corridors.</p> <p>To increase hygiene in the walk-up services rooms, fabric chairs will be covered with a chair covering, or replaced for plastic chairs.</p> <p>Sanitiser wipes must be positioned near to the workstations and wipe-clean keyboards or keyboard covers must be used and wiped before and after each use.</p> <p>Where sanitising is not practical, mandating the use of gloves may be considered.</p> <p>When maintenance is required in these areas, the service will be closed and area isolated whilst the maintenance activity is completed. This will help to maintain lab occupancy numbers.</p> <p>Specific arrangements will be managed locally by the service manager and included in the room/service risk assessment.</p> | |
| Stores | Biological viral hazard – covid-19 | Everyone including those on and | Inhalation of or mucocutaneous contact with | Severity – 4 Likelihood – 4 | Stores orders will be collected by a lab zone representative for the given day during their allocated timeslot. When the order is ready to collect, this will be advertised on the lab zone | Severity – 4 Likelihood - |

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| | Transmission from increased footfall through the department | off site | contaminated droplets leading to infection with covid-19. The effects of covid-19 infection range from minor respiratory symptoms to death. | | <p>teams site and a representative should respond to say they will come to complete the collection for their zone.</p> <p>Timeslots will be allocated and collections for each area will only be permitted during this time. This is to manage any crowding and waiting outside of stores.</p> <p>Social distancing of 2 m should be maintained at all times.</p> <p>Face coverings in circulation spaces are required, so should be worn when collecting orders. It must be noted that while the use of face coverings is required in circulation spaces, not everyone can wear face coverings for a variety of personal reasons. People therefore need to be careful when challenging others about using (or not using) face coverings – for EDI reasons people cannot expect others to disclose why they are not wearing a face covering.</p> <p>A clear protective screen has been erected across the hatch area for people to stand behind when collecting orders. Floor markings are used to reinforce this message.</p> <p>A hand sanitiser station has been fitted to the wall outside stores and should be used as people are collecting their orders.</p> <p>A queue will be marked out in the corridor outside of stores.</p> <p>Stores staff can consult with users to come and collect urgent deliveries (e.g. large items or items delivered on ice that need to be moved into cold storage).</p> <p>The main door to stores should remain locked to help with social distancing and limiting room occupancies.</p> <p>External deliveries should be dropped at the hatch where possible. Otherwise a 1-in-1-out system will</p> | 2 |
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| | | | | | operate. | |
| Teaching | | | | | | |
| Teaching labs | <p>Biological viral hazard – covid-19</p> <p>Transmission from increased footfall through the department</p> | Everyone including those on and off site | Inhalation of or mucocutaneous contact with contaminated droplets leading to infection with covid-19. The effects of covid-19 infection range from minor respiratory symptoms to death. | <p>Severity – 4</p> <p>Likelihood – 4</p> | <p>Teaching labs CG021, CG193 and CG127 will open for undergraduate studies.</p> <p>Lab classes and occupancies have been adjusted in order to facilitate social distancing: CG021 will open for 18 students CG127 will open for 10 students CG193 will open for 20 students</p> <p>The key controls laid out in the Undergraduate and Taught Postgraduate Laboratory Practical Classes risk assessment will be followed.</p> <p>These are:</p> <ul style="list-style-type: none"> • Socially distancing (2 m) wherever possible, where not possible, adding additional precautions in place. • Enhanced disinfection and hand-hygiene procedures • Encouraging good respiratory hygiene (catch it, kill it, bin it) • Provision of clear information on expectations and behaviors • Encouraging those who are unwell not to attend practical classes by ensuring they are not disadvantaged by not doing so • Identifying staff and students who identify as having a higher-risk of severe Covid-infection and putting additional procedures in place where possible. • The use of face coverings must be considered in the local risk assessments. Where their use presents a risk to safety, the risk assessment may identify that they should not be worn. This is in accordance with the Undergraduate and Taught Postgraduate Laboratory Practical Classes risk assessment and University Face Covering policy. | <p>Severity – 4</p> <p>Likelihood - 2</p> |

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| | | | | | <p>Local risk assessments for each practical course will be adjusted to follow these principles and any points which are expanded upon in the Undergraduate and Taught Postgraduate Laboratory Practical Classes risk assessment.</p> <p>Toilet facilities close to the teaching spaces should be used to limit movement round the department. Central break-out spaces should be used for lunch and welfare breaks.</p> | |
| Face to face teaching by Chemistry staff | <p>Biological viral hazard – covid-19</p> <p>Transmission from increased footfall through the department</p> | Everyone including those on and off site | Inhalation of or mucocutaneous contact with contaminated droplets leading to infection with covid-19. The effects of covid-19 range from minor respiratory symptoms to death. | <p>Severity – 4</p> <p>Likelihood – 4</p> | <p>See face to face teaching in central-bookable rooms risk assessment for additional detail to the below.</p> <p>Individuals are required to wear a face covering during face-to-face teaching sessions, as well as in the wider building (accessing facilities/queueing etc.) unless they are unable to do so due to a medical condition or disability.</p> <p>Additional COVID-19 controls must be considered when preparing face-to-face teaching in accordance with the face to face teaching in central bookable rooms risk assessment. For example, session leaders should bring their own whiteboard/flip chart pens and slide changer/laser pointer.</p> <p>Measures have been put in place in the face to face teaching in central bookable rooms risk assessment for social distancing to be maintained prior to the sessions, on entry, during the sessions and at the end of the sessions. These measures must be followed.</p> <p>Increased hygiene measures through frequent hand washing and sanitising.</p> | <p>Severity – 4</p> <p>Likelihood - 2</p> |
| Use of teaching spaces within Chemistry | <p>Biological viral hazard – covid-19</p> <p>Transmission from increased footfall through</p> | Everyone including those on and off site | Inhalation of or mucocutaneous contact with contaminated droplets leading to infection with covid-19. The | <p>Severity – 4</p> <p>Likelihood – 4</p> | <p>The Departmental buildings contains 9 centrally bookable teaching spaces, the capacity for each has been determined to allow for 2m social distancing and this information displayed on the door of the room as well as timetabling and student allocation.</p> <p>Only students associated with the department have</p> | <p>Severity – 4</p> <p>Likelihood - 2</p> |

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| | the department | | effects of covid-19 infection range from minor respiratory symptoms to death. | | <p>been timetabled to use these rooms.</p> <p>Occupancy numbers are as follows:</p> <ul style="list-style-type: none"> • CG218, capacity of 7 • CG60, capacity of 9 • CG65, capacity of 12 • CG66, capacity of 11 • CG68, capacity of 6 • CG83, capacity of 14 • CG85, capacity of 17 • CG91, capacity of 12 • CG93, capacity of 27 <p>Additional seating has been removed.</p> <p>Windows must be open when room is in use to ensure adequate supply of fresh air, if this is required for that space.</p> <p>Information is displayed on room layout within the room, together with key instructions.</p> <p>Hand-sanitiser stations have been placed on the outside (or near to) of entrance/exit for students and staff to use.</p> <p>Students are asked not to attend the building until just before the face-to-face teaching session (information included in student induction/timetabling) to minimise numbers inside the building during change-over times.</p> <p>Immediately prior to entering the teaching rooms, students are asked to queue outside the entrance door(s) to each room, keeping single file, wearing face coverings and keeping socially distanced. This message is reinforced with local signage.</p> <p>Information on layout of each room and procedures will be displayed within the room (via overhead projector). Where possible this information will be shared in advance.</p> <p>Each teaching room will have provision for clean as you go (wipes) and foot operated lidded bins available for disposal of wipes at exits.</p> | |
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| | | | | | <p>Movable screens have been made available for staff to use as a physical barrier between students.</p> <p>For more information on face-to-face teaching.</p> <p>Teaching rooms will be cleaned daily by housekeeping services using an anti-viral disinfectant in line with the Housekeeping service level agreement.</p> <p>When not used for teaching, it is possible that teaching rooms in chemistry may be used for activities to improve the wider student experience. Maximum occupancy numbers and cleaning regimes will need to be followed for this to take place.</p> | |
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| Assessment prepared by: | | Assessment reviewed by: | | Review date |
|-----------------------------------|---|-------------------------|--|------------------------|
| Name: | Karl Coleman Connor Sibbald John Sanderson Paul Hofmann Emma Knighton | Name: | Nikki Irving (HSS) Gretta Roberts (HSS) | To be reviewed monthly |
| Signature: | | Signature: | | |
| Date: | 17/09/20 | Date: | | |
| Competency Level: | 1 | Competency Level: | Must be Competency Level 1 to authorise | |
| Assessment read and understood by | | | | |
| | | | | |

Health and Safety Risk Matrix

| | | Probability/ likelihood of risk realisation | | | | | |
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| | | Almost Impossible (1) | Not Likely to occur (2) | Could occur (3) | Known to occur (4) | Common occurrence (5) | |
| | | Health and Safety | A freak combination of factors would be required for risk to be realised | A rare combination of factors would be required for risk to be realised | Could happen when additional factors are present otherwise unlikely to occur | Not certain to happen but an additional factor may result in risk being realised | Almost inevitable that risk will be realised |
| Potential Consequences | Severe (5) | One or more fatalities. Irreversible health problems | 5 | 10 | 15 | 20 | 25 |
| | Major (4) | Partial or medium term, disabilities or major health problems | 4 | 8 | 12 | 16 | 20 |
| | Moderate (3) | Lost-time injuries or potential medium-term health problems | 3 | 6 | 9 | 12 | 15 |
| | Minor (2) | Minor, very short-term health concerns on recordable injury cases. | 2 | 4 | 6 | 8 | 10 |
| | Insignificant (1) | Inherently safe, unlikely to cause health problems or injuries | 1 | 2 | 3 | 4 | 5 |

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| Extreme risk | High risk | Medium risk | Low risk |
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