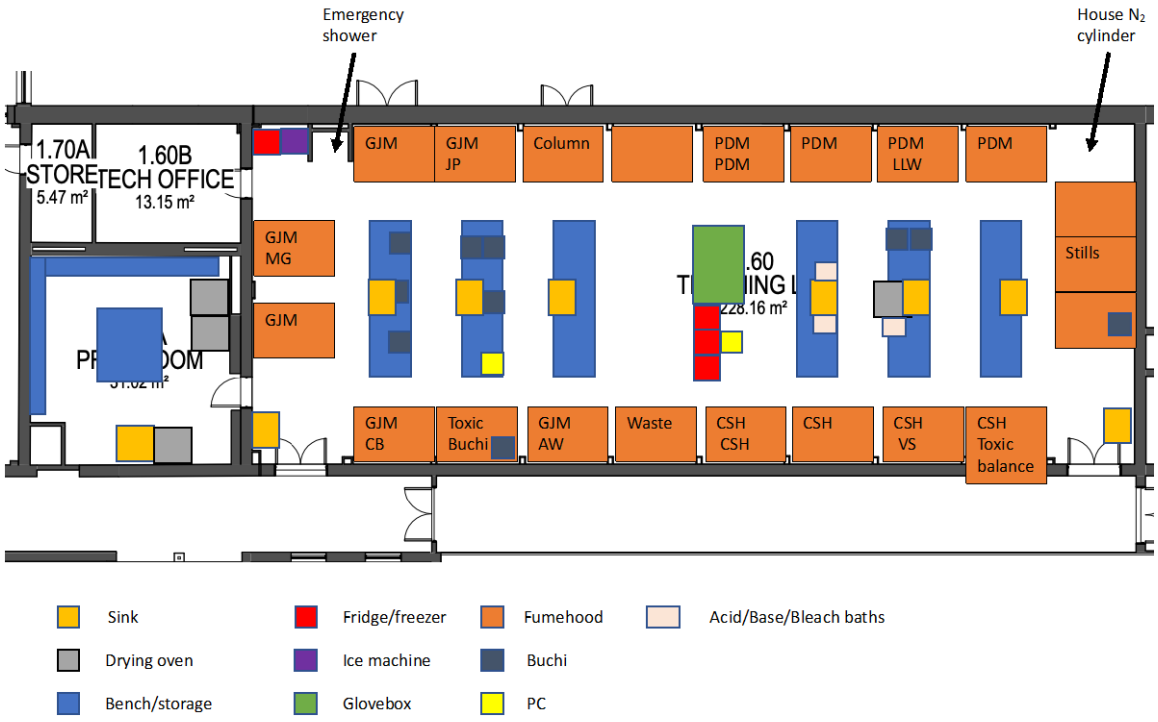
COVID-19 – Return to Research in LJ1.60 Synthesis Laboratory



The laboratory doors will be one-way – the one nearest the prep room is the entrance, the one nearest the NMR room is the exit.

Every researcher will be spaced by 1 fume hood. Each fume hood is 2 m wide, so social distancing will be easily maintained. Users can access their fume hoods directly by travelling up the corridor between benches. The access corridors will be 2 way, with only one person allowed to travel on them at any time. This is practical owing to the low numbers of researchers in the laboratory and the excellent line of sight over the benches. Markings will be placed on the floor of the vertical corridors designating waiting zones whilst someone is in the transit corridor.

When passing a researcher at a fumehood, the fumehood worker will be asked to step back into the corridor to a position that is 2 m away and has been marked. This is practical owing to the 1.6 m wide walkways.

Equipment that is used as a 'walk-up/walk-off' type, e.g. waste solvent/chemical drop off, the auto column, toxic balance, stills and toxic Buchi will be moved into the fume hoods closest to their most frequent users. These will allow easy access, but owing to the time limited nature of their use will not require a permanent blocking of the corridor. Equipment will be placed nearest the common users, i.e. Auto column (GJM), toxic Buchi (GJM), stills (PDM), toxic balance (CSH).

Solvents are currently stored in appropriate cupboards underneath the fume hoods that will be empty. This plan allows easy, safe access to them without asking anyone to move.

General Considerations

The left-hand door will be an entrance and the right-hand door an exit.

The prep-room will be limited to one person at a time, with a one-way circulatory system marked on the floor. Line of sight into the room is good, so it will be easy to monitor.

The fridge/freezers have been moved next to the central area in the laboratory. The freezer located next to 1.60B is used to store historic samples and as such is not frequently opened so can remain in place.

Moving PDM's drying oven from the prep room to the bench behind his acid/base bath will cut the majority of the PDM group trips to the prep room by 90%. This will reduce circulation.

GJM chemicals are stored under GJM fume hoods. PDM & CSH chemicals are stored under PDM fume hoods. This minimises circulation around the lab. Markings will be placed in the vertical corridors for users to step back to if someone requires access to the chemical storage under the fume hoods.

An enhanced cleaning process for cleaning the communal equipment such as rotary evaporators will be implemented, so that they are cleaned down with iPrOH after each use.

Each researcher will be issued with 3 lab coats: 1 to be worn, 1 clean in case of emergencies and 1 being laundered. Lab coats will be stored in the researcher's locker and not on hooks in the laboratory. Lab coats will be laundered on a weekly basis.

Each researcher will have a dedicated box of gloves, to avoid the need to have multiple people touch a single cardboard box with their bare hands.

Taps, emergency shower etc will all require flushing through before research can commence.

PDM, CSH and GJM will have a duty rota stating which academic is responsible for the safety of the students and laboratory. During this time they will be present either in the laboratory or their own office.

Students

The PhD students will not have access to their office. They will each be supplied with 3 lockers: 1 for their personal belongings, 1 for their clean lab coat and 1 for their dirty lab coat. The expectation is that if they are in the building then they are working in the lab – analysis and write up is to be performed remotely. If an experiment has a short break period then the student will either remain in the laboratory preparing for the next step/reading papers or exit the LJB.

Analytical Equipment

The bench space on the right-hand side of the laboratory is clear, this is the best place for IR, UV-vis and Fluorescence spectrometers to be placed. Usage of this equipment is low and so this is not essential. Other equipment such as GC-MS (1.52) and elemental analysis (Birchall) will need considering.

Preparative Work

Benches will need clearing down, floor marking and fridges/freezers moved. Some equipment may need moving. Sufficient PPE will need to be supplied.

Technical Support

There are options for the way in which technical support is managed, which are detailed below:

Stores/Waste Solvent

Two trolley system.

1) Technician loads trolley with requested stores consumables (inc. solvent and chemicals) and delivers to prep room (access through 1.70). Exchanges trolley for waste loaded up by researchers. Technician empties waste bottles into skip, empties solvent and then has trolley ready for next delivery day.

Liquid Nitrogen/Gas cylinders

1) Technician refills liquid nitrogen dewar and places in 1.60 for local dispensing. Technician changes gas cylinders.