Version 1.1

RISK ASSESSMENT

&

GENERAL SAFETY INSTRUCTIONS

for

BUILDING 3150 R-001 and R-003

(ATLAS LEVEL-1 CALORIMETER

TRIGGER LAB-3150)

September 2005

C N P Gee

THIS IS REQUIRED READING FOR ALL USERS OF THIS LAB

Health and Safety in Building 3150 R-001 and R-003

The purpose of this document is to make users and visitors aware of the risks and hazards associated with use of the Level-1 Calorimeter Trigger lab in building 3150 at ATLAS point-1 area ("Lab-3150"). This is an important document which should be read by all users of the lab.

If you have comments on accuracy, or suggestions for improvements, please contact me.

Regular users and first-time users MUST be made aware of these safety requirements.

Norman Gee

30-September-2005

Risk assessment for 3150-R-001 and 3150-R-003

1.1 General description of lab and uses

The two rooms in building 3150 forming Lab-3150 are used for the assembly and testing of electronics and computing systems associated with the ATLAS Level-1 Calorimeter Trigger (L1Calo). Computer systems are used for the development, testing and operation of control and analysis software. These is no use of gases or high voltages. Part of the lab is used for equipment assembly and test prior to installation, and for storage of working spares. Together with the number of people, this represents a high occupancy.

1.2 Access

Lab-3150 consists of two adjoining rooms located on the ground floor and at the north-west (or Jura) end of building 3150. Access to the two rooms is via separate lockable doors from the main east-west corridor. A communicating door between the rooms is normally left open. From the corridor, double doors provide an exit to a car park area on the north side. A single door at the eastern end of the corridor provides a further exit, but this door is seldom used as it cannot be opened from the outside and gives onto a car park external to the point-1 security area.

Lighting in the main corridor is activated by pushbuttons outside corridor doors and at the building entrance. The light is on a time switch so the corridor is normally dark at night and dim during the day.

1.3 Procedure in the event of Fire

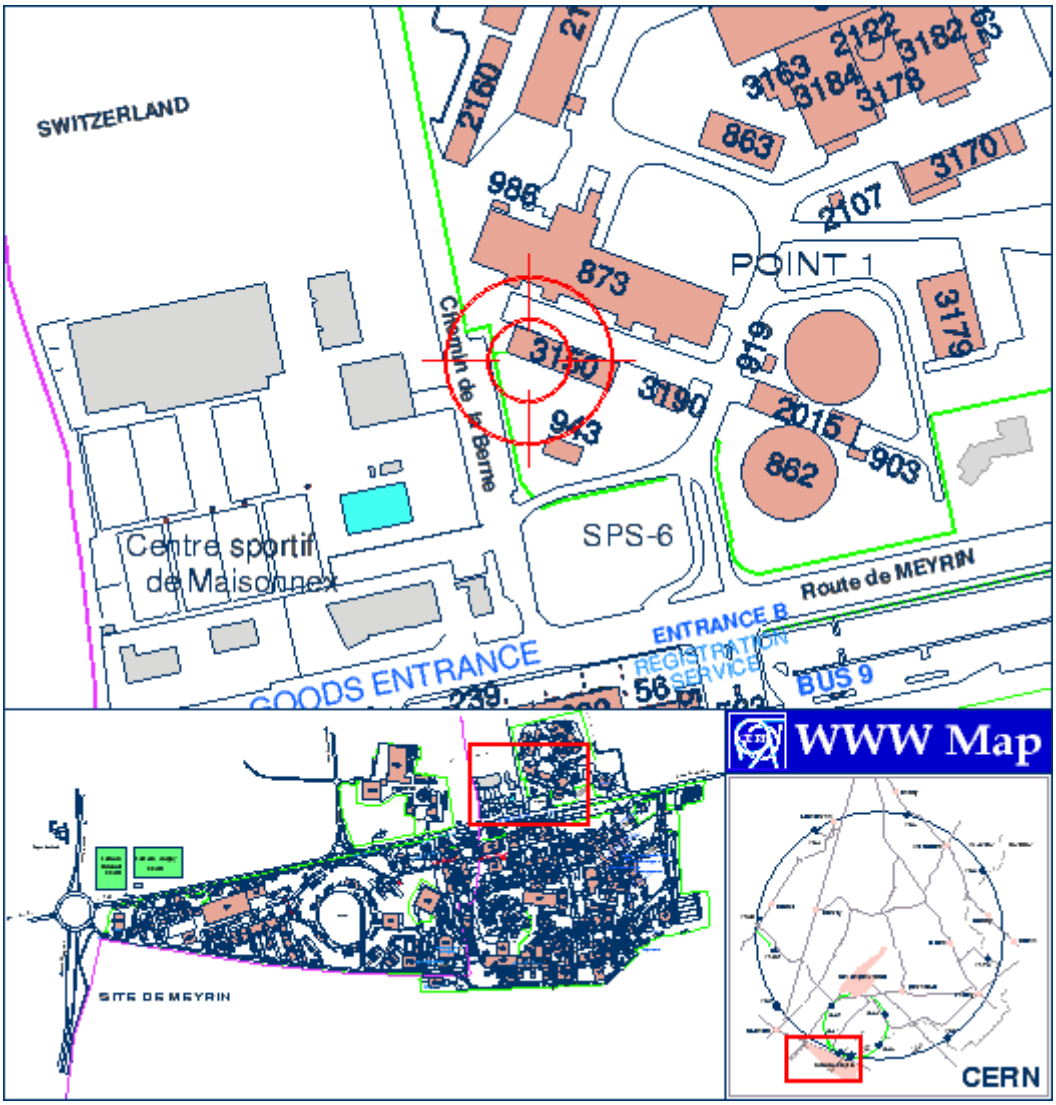
The building is prefabricated, and constructed of wood and other flammable materials. It has no fire detectors, fire alarm, designated fire exit, emergency phone, emergency break-glass alarm point, or fire extinguishers.

In the event of a fire, the normal procedure is to leave the building via the main double-door entrance and then to raise the alarm. If the fire is in the entrance area, there is no escape other than by use of the ground floor windows, which can be opened sufficiently to allow emergency exit for someone of normal mobility.

Once you have escaped from the building, the fire brigade should be called by dialling 74444. The nearest phone (outside building 3150) is on the external south-facing wall (i.e. facing towards the Cern site) of the security lodge, building 3190, at the entrance to point-1. Here there is also a red emergency phone – just lifting the red phone off the hook will summon the fire service. The same building 3190 is also the designated assembly point.

1.4 Medical Emergencies

The CERN infirmary is located in building 57 on the main CERN site. During working hours phone 73476 or 73802. Outside working hours, phone the CERN fire service on 74444.



1.5 Specific Hazards in Lab-3150

The entrance from the car park involves a step and care should be taken when carrying equipment.

Equipment including crates and computers will be moved and handled. The 9U crates are awkward and heavy, and should be moved only with the power supplies removed. Recommended procedures should be followed for safe lifting, with two people for crates. Some of the crates may have sharp metal edges. Protective gloves are available from stores if required, under section 50.43.

Crates and other equipment should sit on runners in racks and be secured by screws. Equipment should not protrude from racks.

In view of the limited access, care should be taken that floors are clear of trailing cables and thet the lab is generally tidy.

Equipment should not be left operating unattended unless required for testing, as there is no fire detection system.

Space should be left for air to circulate round the electric radiators.

Nothing should be stored above head height on top of cupboards or in racks (unless secured by screws).

As R-003 is the more congested room, it is desirable for those needing to access R-001 to unlock and use the separate entrance to that room even though it is slightly further down the corridor.

Soldering activities generate fumes. Solder fume extraction devices are provided and should be used during soldering. Where external temperatures allow, windows should be opened to aid fume dispersal.

1.6 Security

Due to the high rate of theft at CERN, both doors of Lab-3150 should be double-locked when unattended, even for a short time. For the same reason, it is useful to lower the blinds so that desirable equipment is not visible from outside.

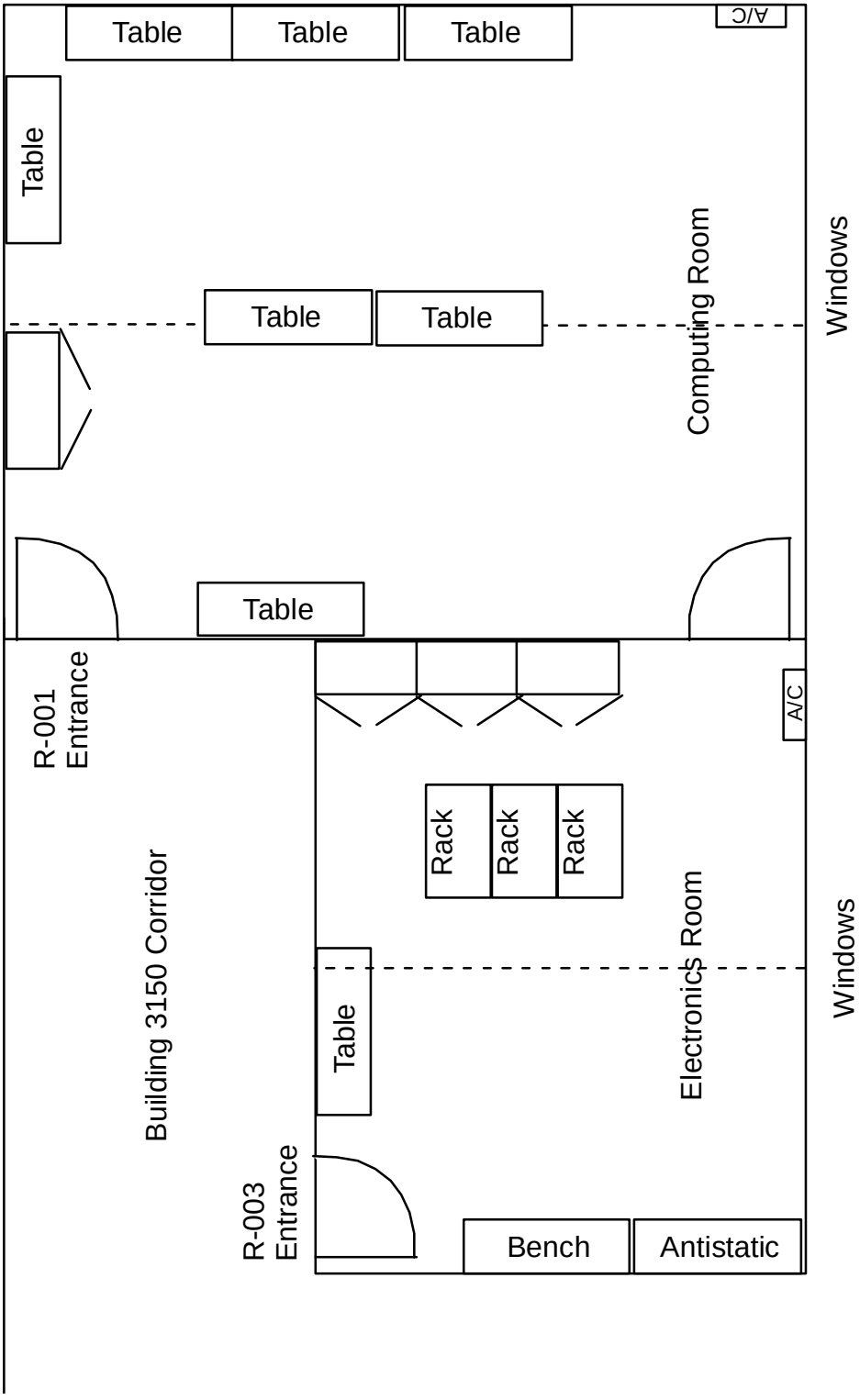
If safety equipment is stolen or extra equipment or tools are needed for safe working, there is an urgent stores withdrawal procedure for the CERN stores. Forms are available from the UK Liaison Office in building 168. The L1CALO-UK budget code is T187900.

1.7 General Safety

There are specific safety requirements for users entering the ATLAS pit, which must be observed, over and above the general CERN safety rules to which all users are subject. CERN safety rules and codes may be accessed on the web at http://safety-commission.web.cern.ch/safety-commission/SC-site/index.html (and not at the address given in the current CERN safety policy, "SAFETY POLICY AT CERN SAPOCO 42". The summary in SAPOCO 42 says:

- CERN must provide the members of its personnel with the means required to ensure their safety in the tasks allotted to them;
- CERN must ensure that all its programmes are carried out without any undue risk to third parties or the environment;
- Each of us has a responsibility for Safety in our work;
- Each of us must work so as to run the least possible risk and, to this end, must actively obtain a maximum amount of information to enable us to do so;
- Anyone responsible for the work of a team is also responsible for the safety of the endeavour and of the members of the team;
- No-one may avoid their Safety responsibilities by delegating all or part of their duties.

Note: The above assessment for this area may change during the trigger installation period. All users should be aware of potential differences between this document and the actual situation during the installation period.



Sketch of Point 1 Lab in Building 3150-R-001/003