

# Requirements for a Class A Radioactive Lab

- Ventilation
- Control of all used water
- Flooring and walls
- Fire doors
- Access through changing rooms and decontamination area

# Ventilation

Assured under pressure

Air renewal  $>5$ /hour

Further under pressure for “high risk”  
zones

Hot cell  $\rightarrow$  under pressure 50Pa

Fume cupboards  $0.5\text{m}^3/\text{s}$  with 20cm  
opening

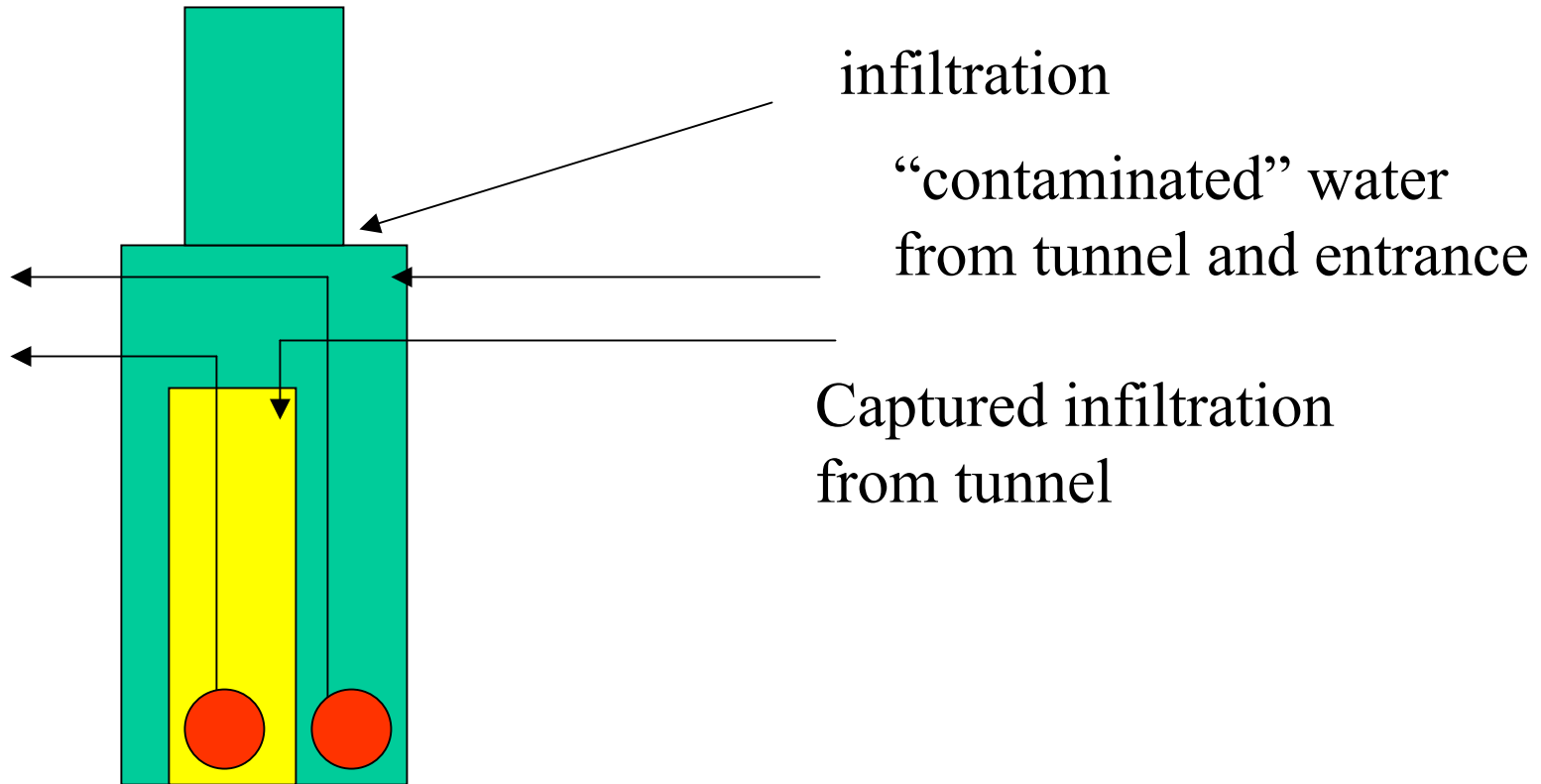
# Controlled water evacuation

Current status unsatisfactory

Limit water in zone

Pump “contaminated” water to tanks  
for control

# Current Water Evacuation Status



# Floor, walls and doors

- Floor should be impervious with continuous raised skirting boards.
- All walls should be impervious and washable
  - Building 179 and 838
- Doors should be fire and smoke proof
  - F90 T60 and R60

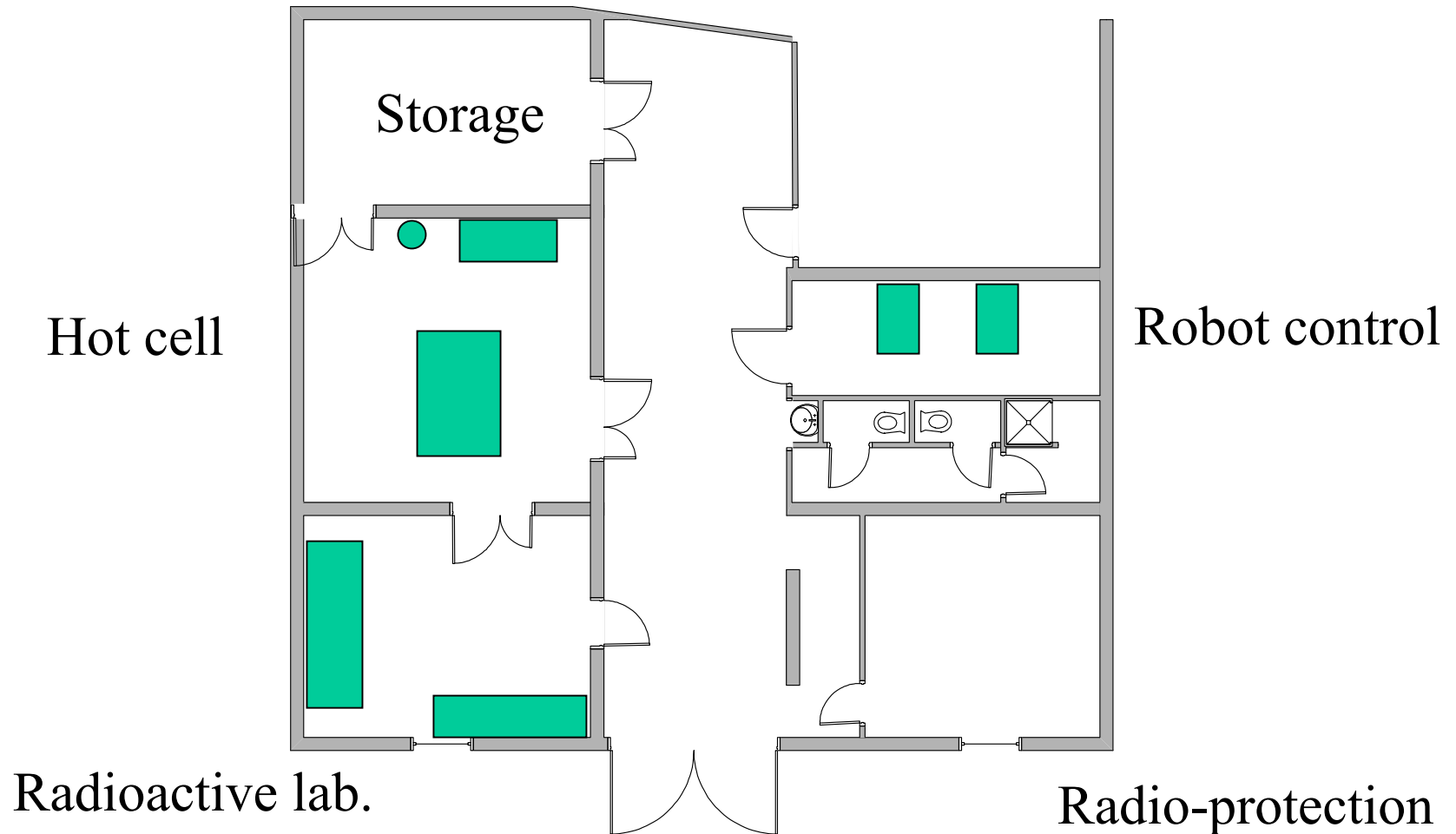
# Other considerations, part 1

- Changing rooms at entrance
  - SAS for material
- Access to bat. 838 for transport
  - Maintain large doors
- Robot control outside class A lab.
- Storage of Front End
  - Work shop for repair, test bench
- RABIT collections
  - Manipulation, bake out and measurement
- Hot Cell operations
  - target autopsies, other interventions

# Other considerations, part 2

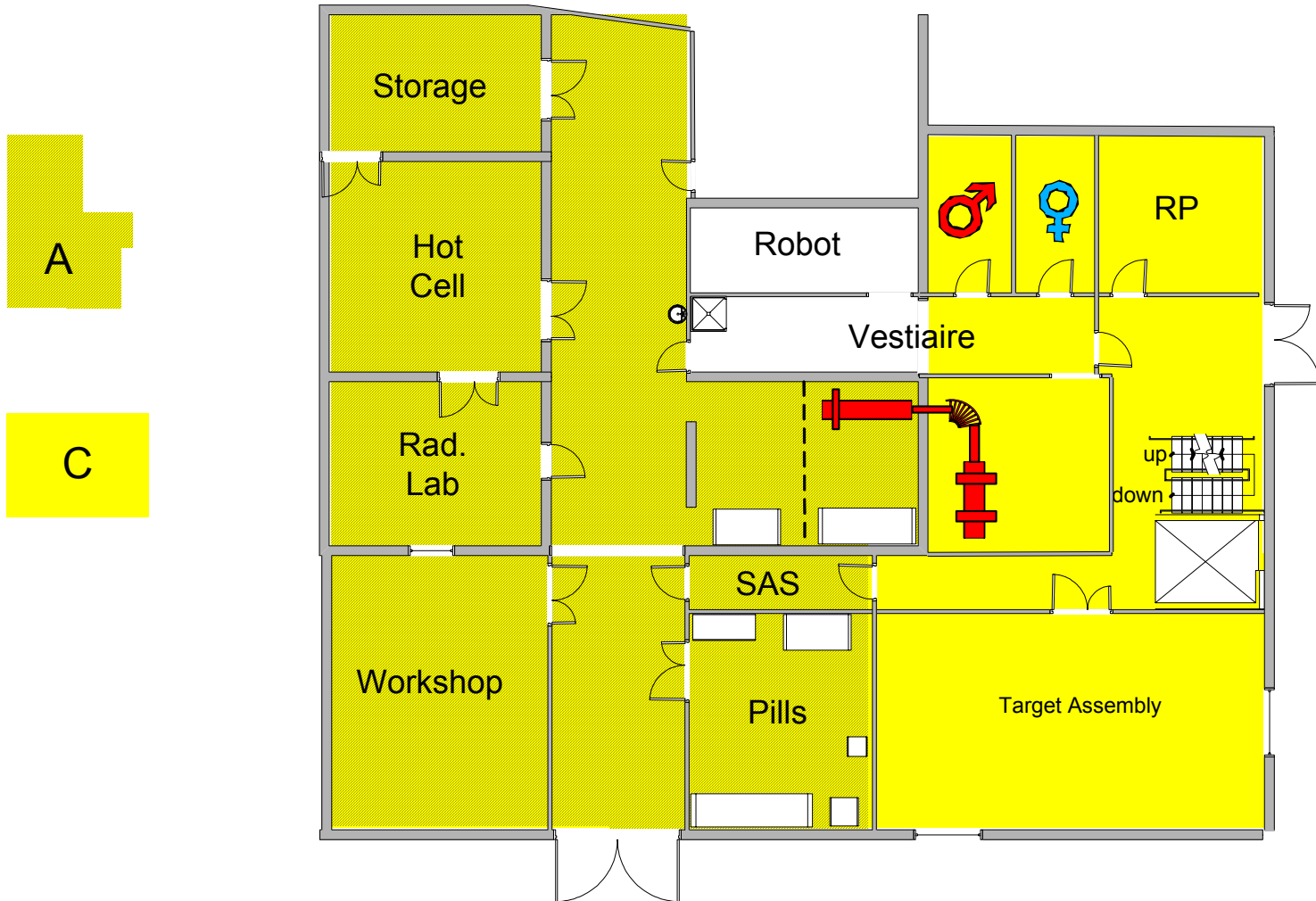
- Pill making
  - Storage, fabrication machines, out-gassing, target filling, calibration and off-line testing
- Test used targets
  - Vacuum and off line testing
- Fume cupboard operations
  - Scanners , vacuum pumps etc..
- nTOF

# Building 179

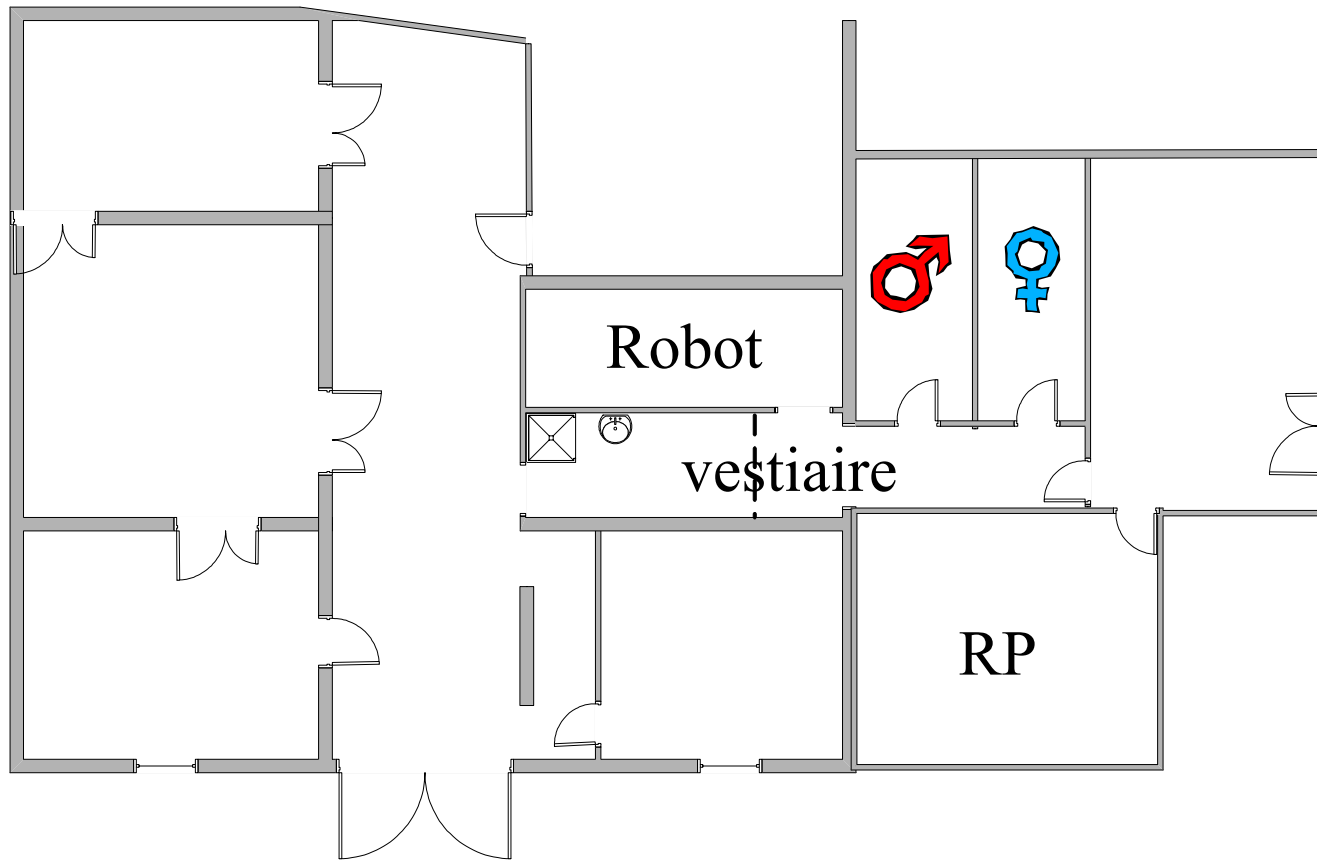




# Almost ideal situation



# Intermediate solution



# Conditions covered by intermediate solution

- Ventilation
- Water
- Floors and walls
- Fire doors
- Changing room/outside access for robot control
- SAS for material
- Heavy goods entry
- Pills/workshop/RABIT measurement
- nTOF
- Possibility to extend for “ideal” solution

# Agenda

- Contact all users of buildings
- Meet with ST (buildings and infrastructure)
- Technical specifications (september 2002)
- Shutdown work
  - Floors and walls
  - Fire doors
  - Ventilation
  - Water ?