

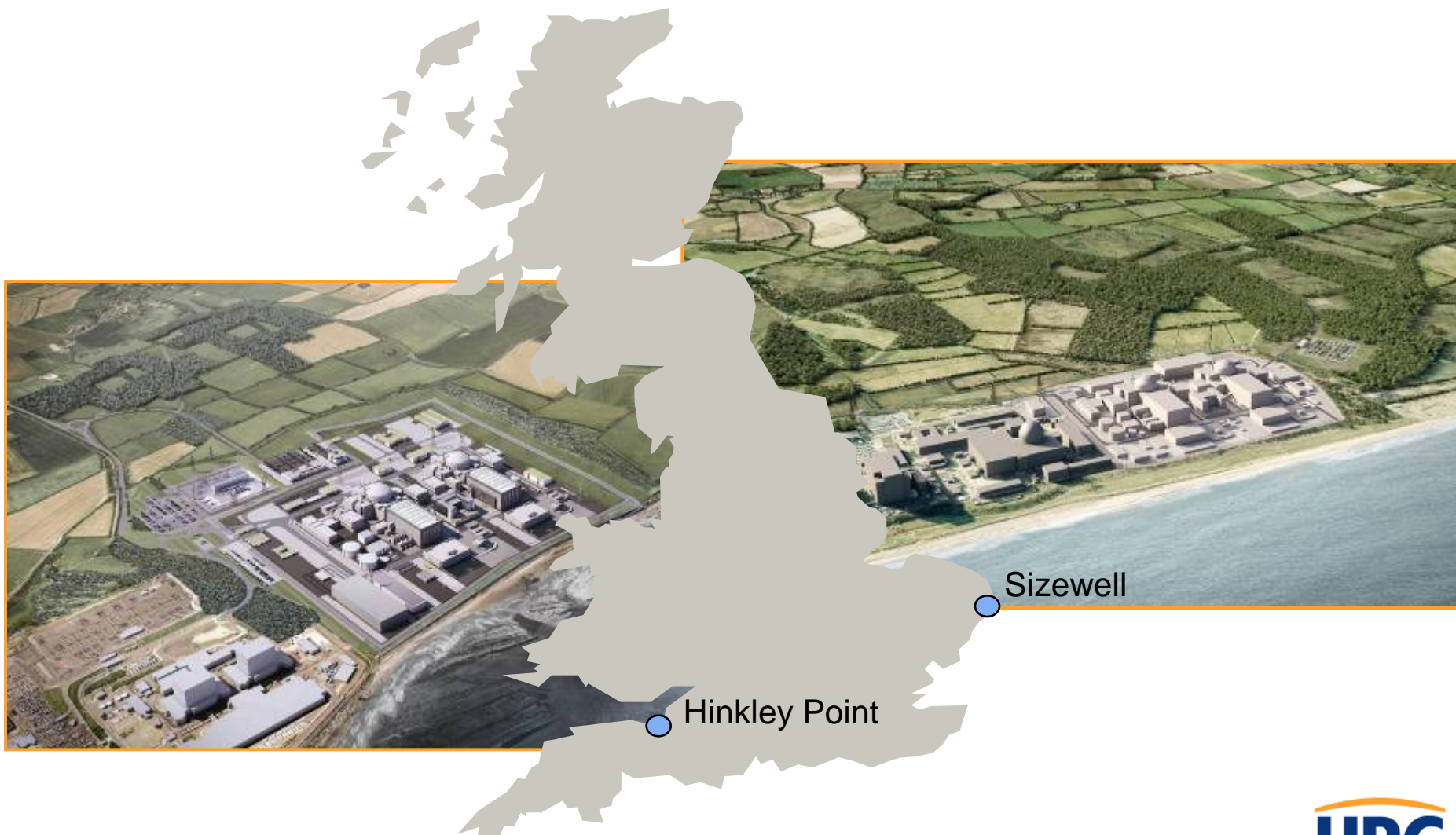
*Building **better energy** together*

Radiation Protection in design of the UK EPR

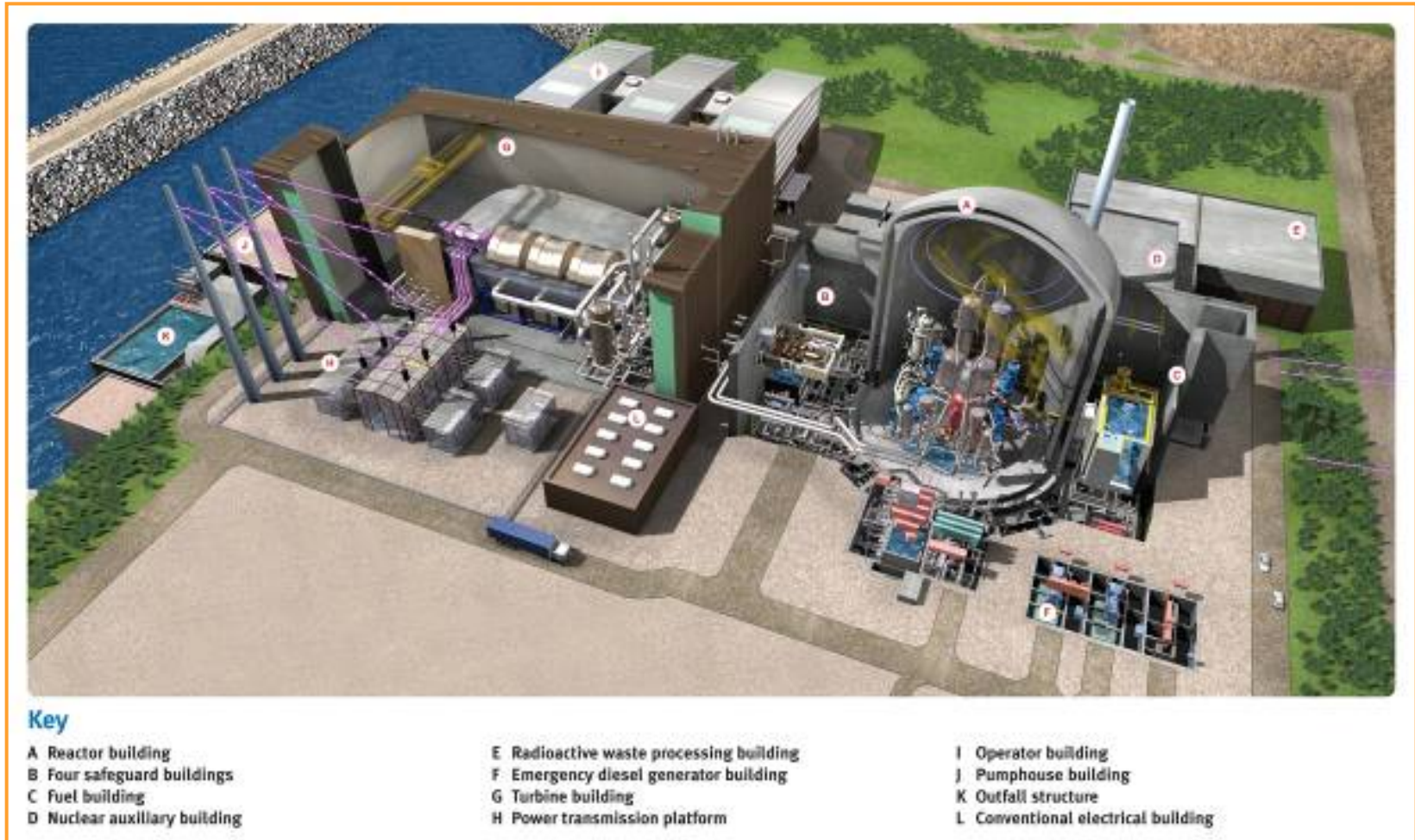
H. Hale (NNB, UK) & J-B. Richard (EDF, France)
with thanks to P. Auclair (EDF, France)



EDF Energy's Nuclear New Build projects



What We Want to Build

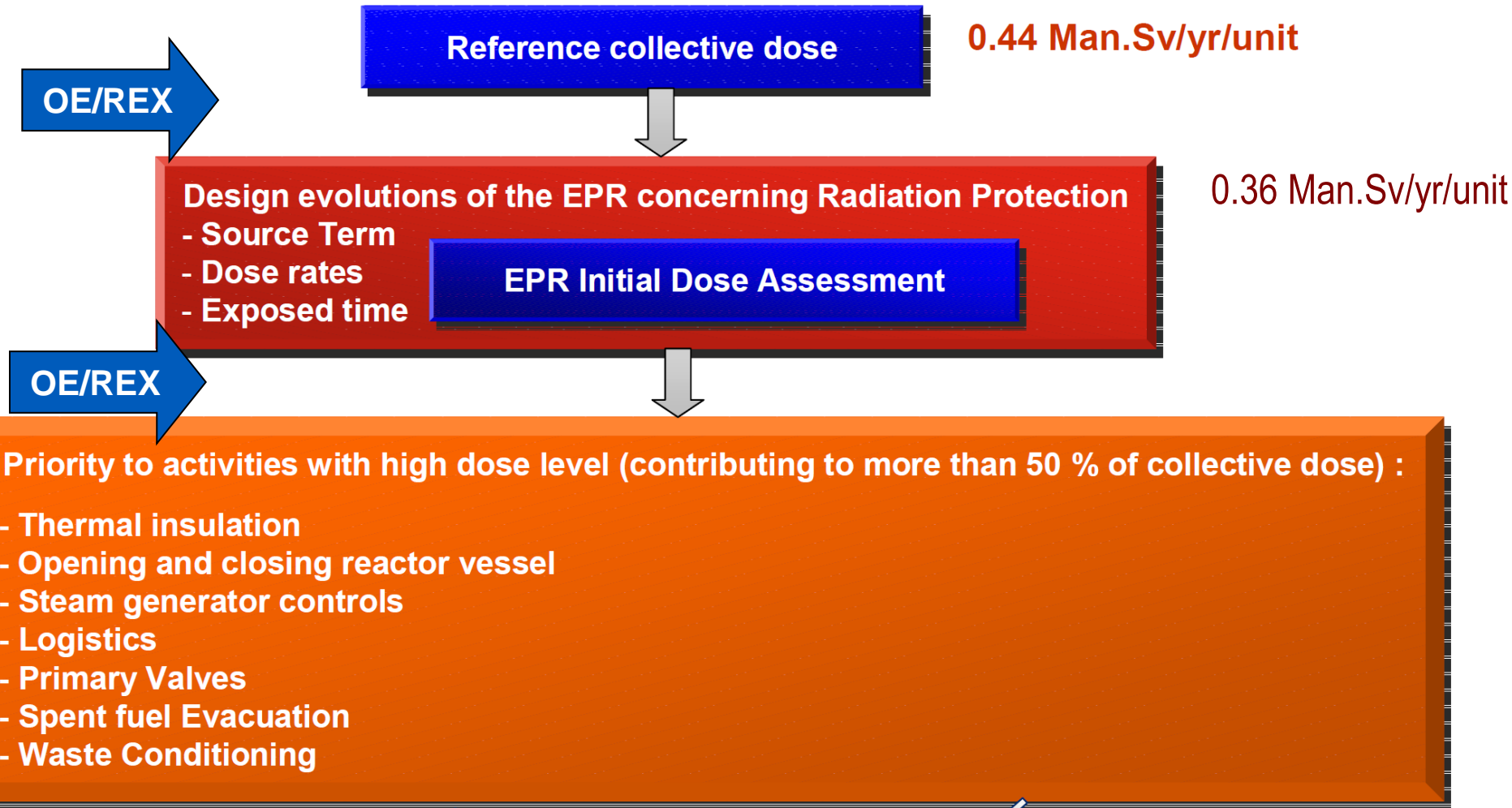


Cross section of single UK EPR (illustrative layout)

Designers & Engineers – One team with the Operators

- We will attain good Radiological Protection...
...Together
- We set challenging dose targets...
...Together
- We make choices which optimise doses...
...Together
- We optimise the design to prepare for the UK context...
...Together
- We have a strategy to prepare for the future...
...Together

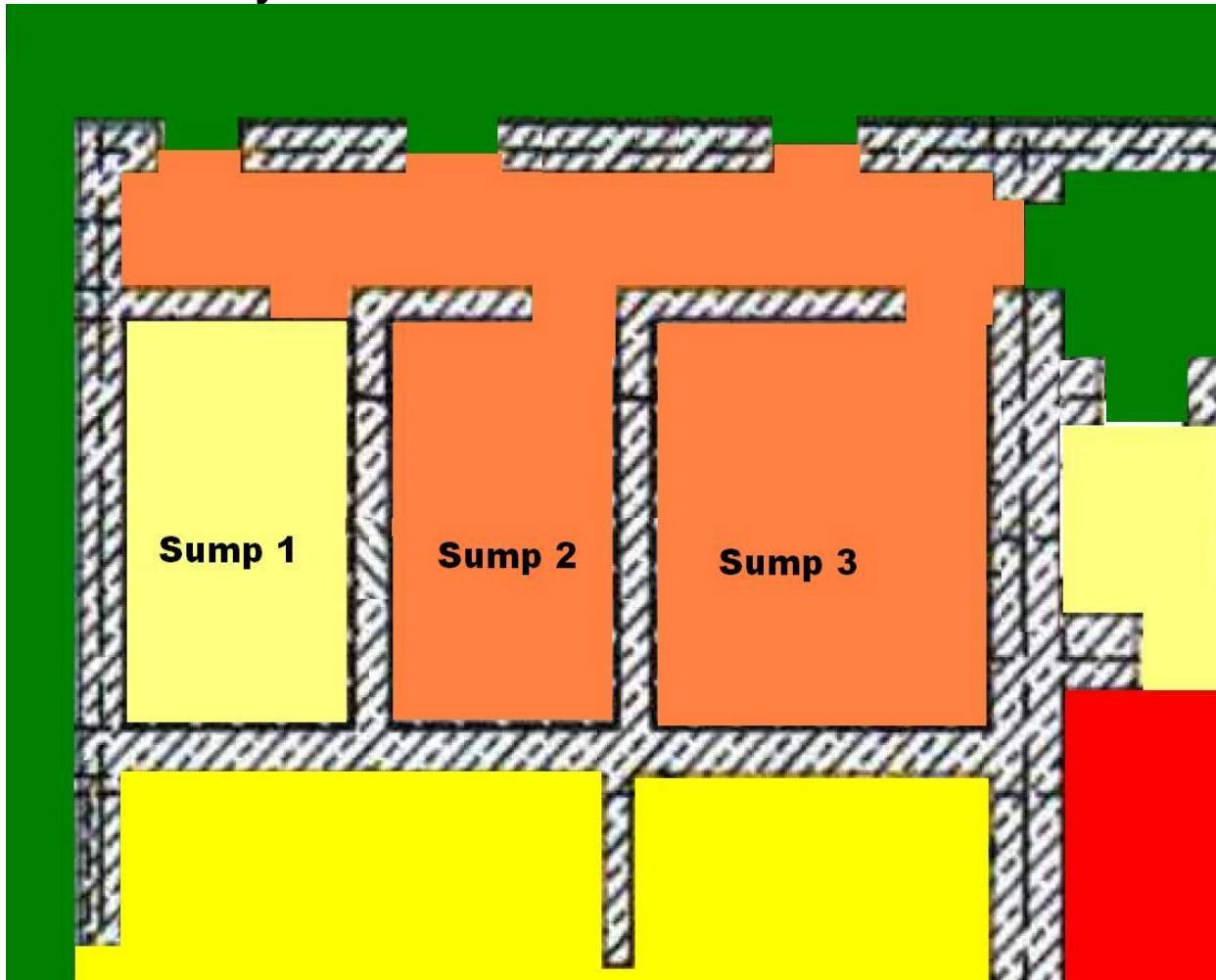
EPR ALARP approach (Setting the dose target)





Choices which optimise doses – ALARP studies

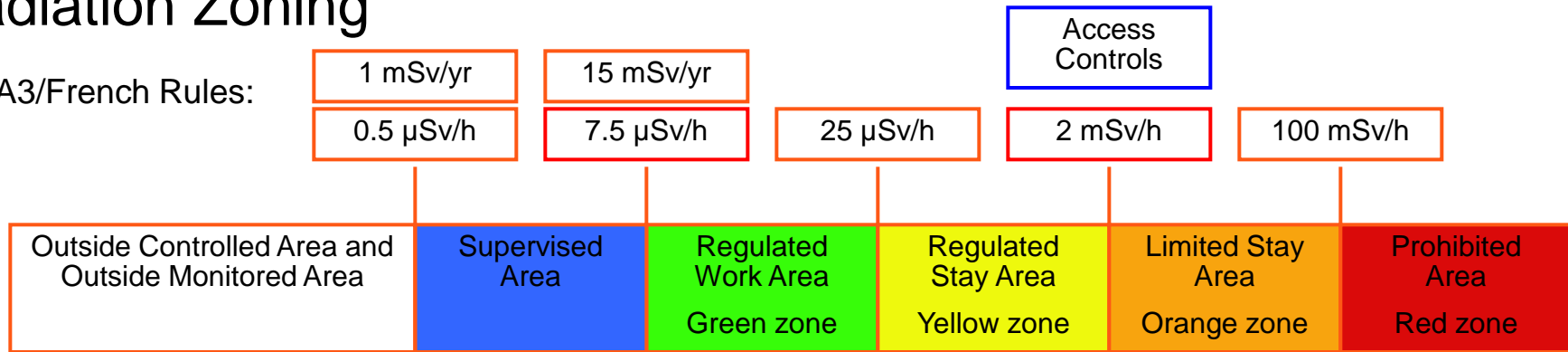
- Systematic layout reviews



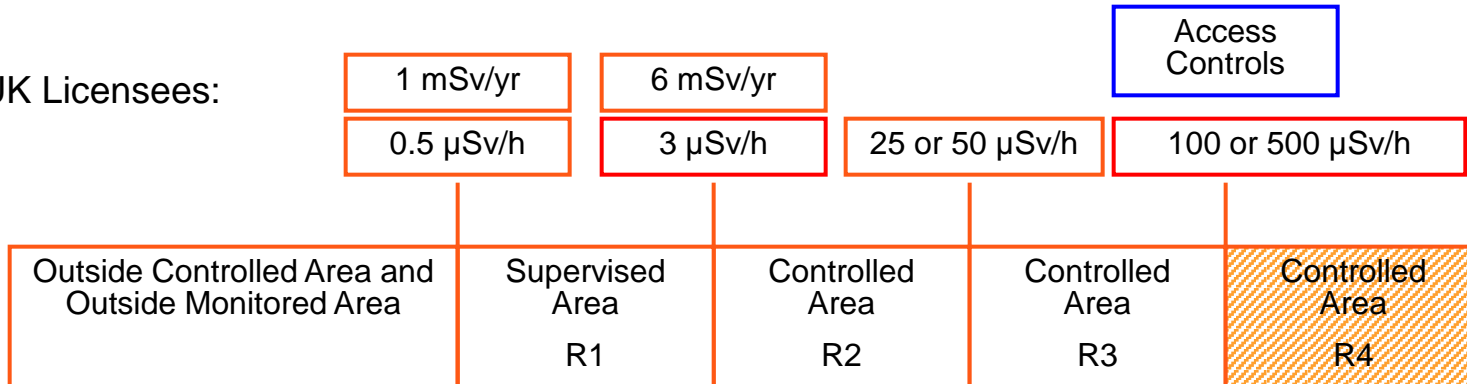
Optimise design to meet UK context

Radiation Zoning

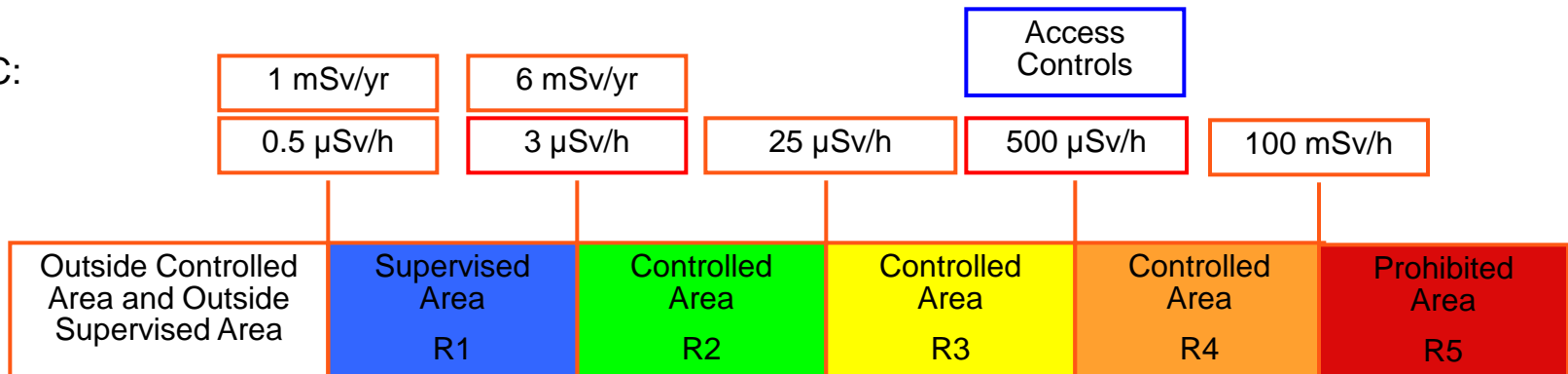
GDA/FA3/French Rules:



Most UK Licensees:

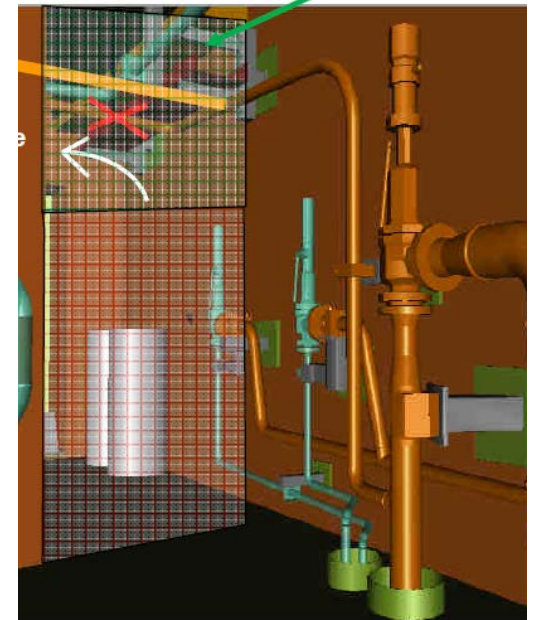


EPR UK HPC:



Optimise design for UK context

- UK context modifications
 - 0.5mSv/h - UK best practice, doors are locked
 - 2mSv/h - France, (EPR design) doors are locked
- Simple solution?
 - ... yes, BUT
- Heavy neutron doors
 - French practice designed to stay open access for the whole outage.
 - ... Implementation of gates



Make a strategy to work together

- Recognise cultural differences...
...Different isn't the same as wrong
- Embrace the diversity of solution that you can bring...
...The results can surprise you
- Don't be afraid to challenge it if it doesn't seem right
...It's ok to disagree
...and then work together to find a solution
- Communicate a lot...
...Using all communication methods & languages
- But above all...

...Share a passion



THANK YOU

