



Health and Safety
Executive



Environment
Agency

Background to Generic Design Assessment of New Nuclear Reactors



Alan McGoff
Lead – New Nuclear Build
Environment and Business
Environment Agency

David Watson
Head of Project Management Office
Nuclear Directorate
Health and Safety Directorate

Birmingham, 6 July 2010



GDA's Origins:

Government 2005 requests to:

- HSE to report on consideration of “... the potential role of pre-licensing assessments of candidate designs”;
- Environment Agency to become actively involved in this work;

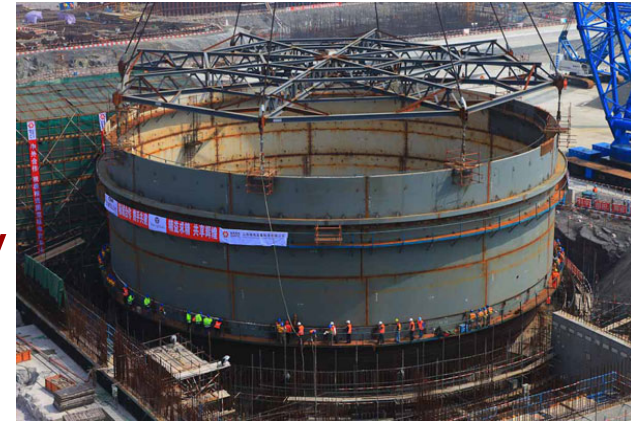
Drivers:

- Sizewell B experience;
- Expectations - regulators and industry.



Expectations - Regulators:

- Deliver proper protection of people and the environment;
- Provide early engagement, robust scrutiny and influence;
- Accord with better regulation principles;
- Increase public confidence - open and transparent;
- Recognise international standardised designs;
- Be effective and efficient; and
- Work together, aligning our processes.



Expectations - Industry:

- Reduce regulatory uncertainties, enabling well informed investment decisions;
- Enable effective competition between reactor vendors;
- Use well defined process and timescales;
- Adopt a staged approach;
- Provide for type approval of designs;
- Make use of foreign regulators' work; and
- Resolve issues at earliest opportunity.



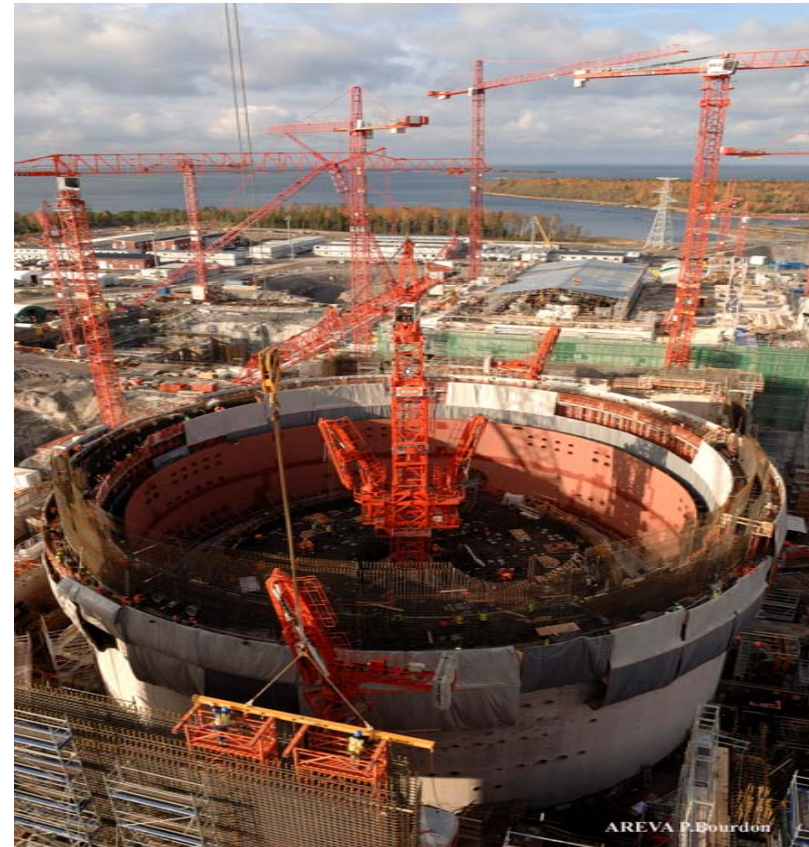
Regulating new nuclear build

Regulators must consider 3 key elements:

- reactor design
- site
- operating organisation



HORIZON
NUCLEAR POWER



Two phase regulatory process

- PHASE 1 : Generic Design Assessment (GDA)
 - NII, EA & OCNS working in close cooperation
 - Assess reactor design
 - generic site “characteristics”
- PHASE 2 : Site licensing and permitting
 - site specific
 - operator specific
 - using already assessed designs



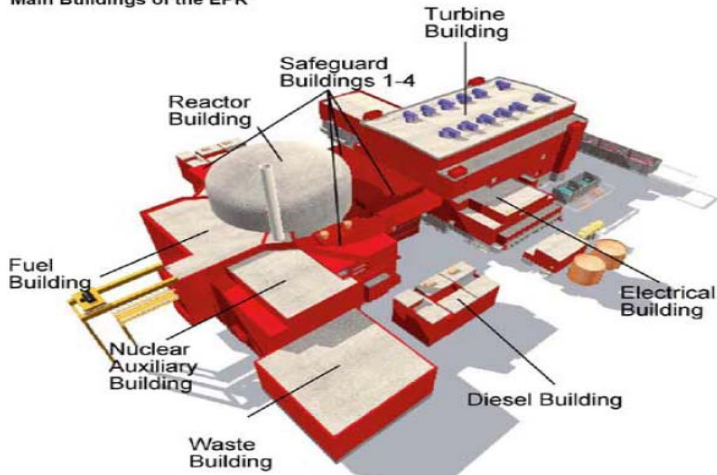
GDA – Innovations

- HSE and EA set up Joint Programme Office (JPO) as ‘one stop shop’
- Much enhanced openness by applicants & process for public involvement
- Application clarity
- Enhanced governance – independent Process Review Board
- Arrangements to allow us to recover assessment costs
- Progress reporting



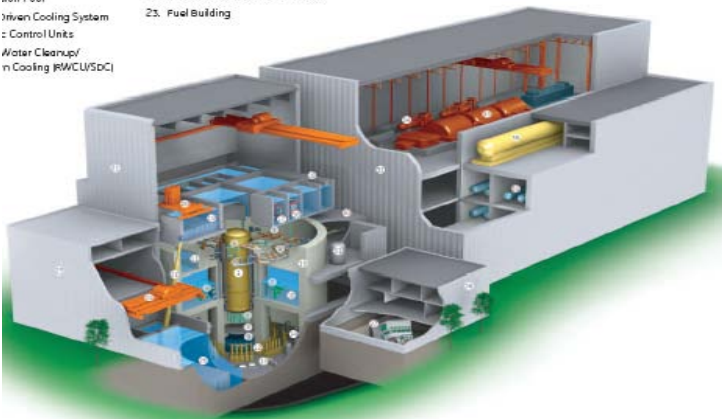
GDA Designs

Main Buildings of the EPR



21. Sump Pool
22. Driven Cooling System
23. Control Units
24. Water Cleanup/
25. In Cooling (RWCU/SDC)

26. Inclined Fuel Transfer Machine
27. Fuel Building





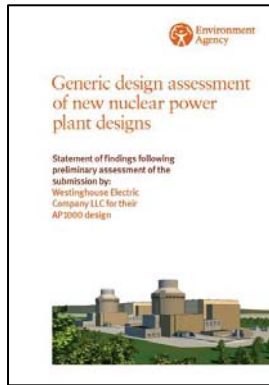
Health and Safety
Executive



Environment
Agency

Phase 1 - GDA

Phase 2 – Site Specific



Level of scrutiny

Step 1
Preparation

Step 2
Preliminary
review

Step 3

Detailed design assessment

Consultation

Site Permitting

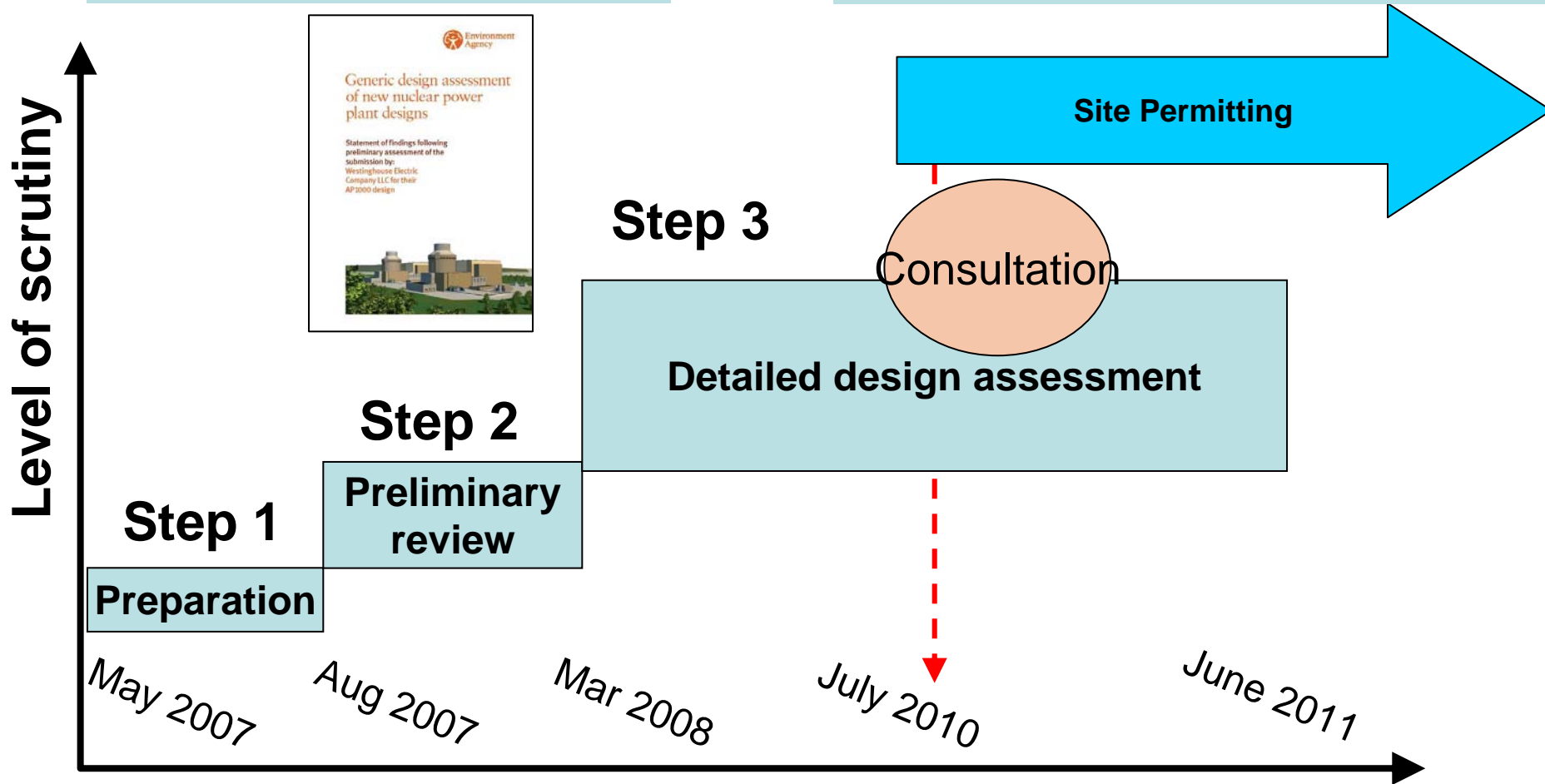
May 2007

Aug 2007

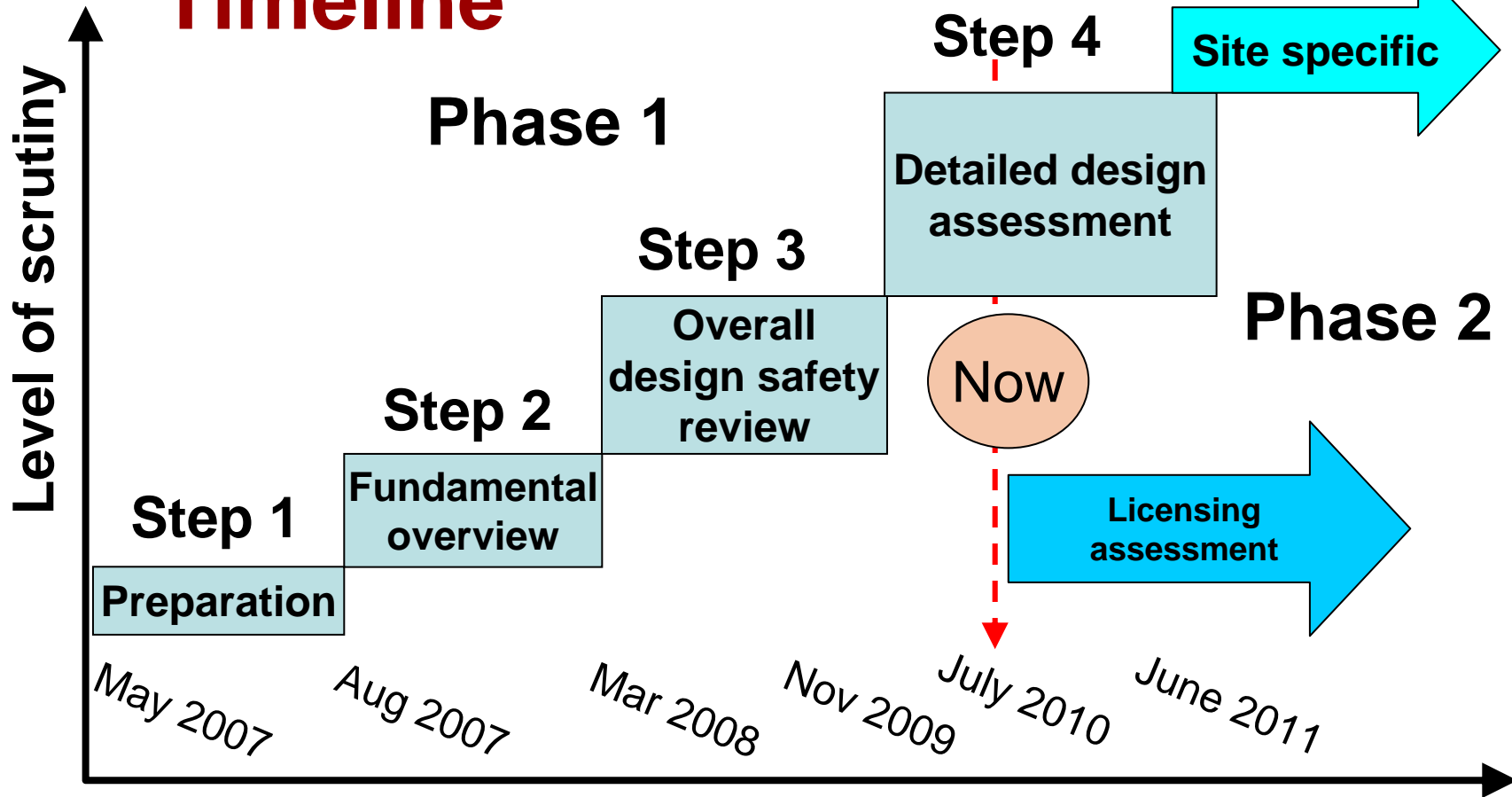
Mar 2008

July 2010

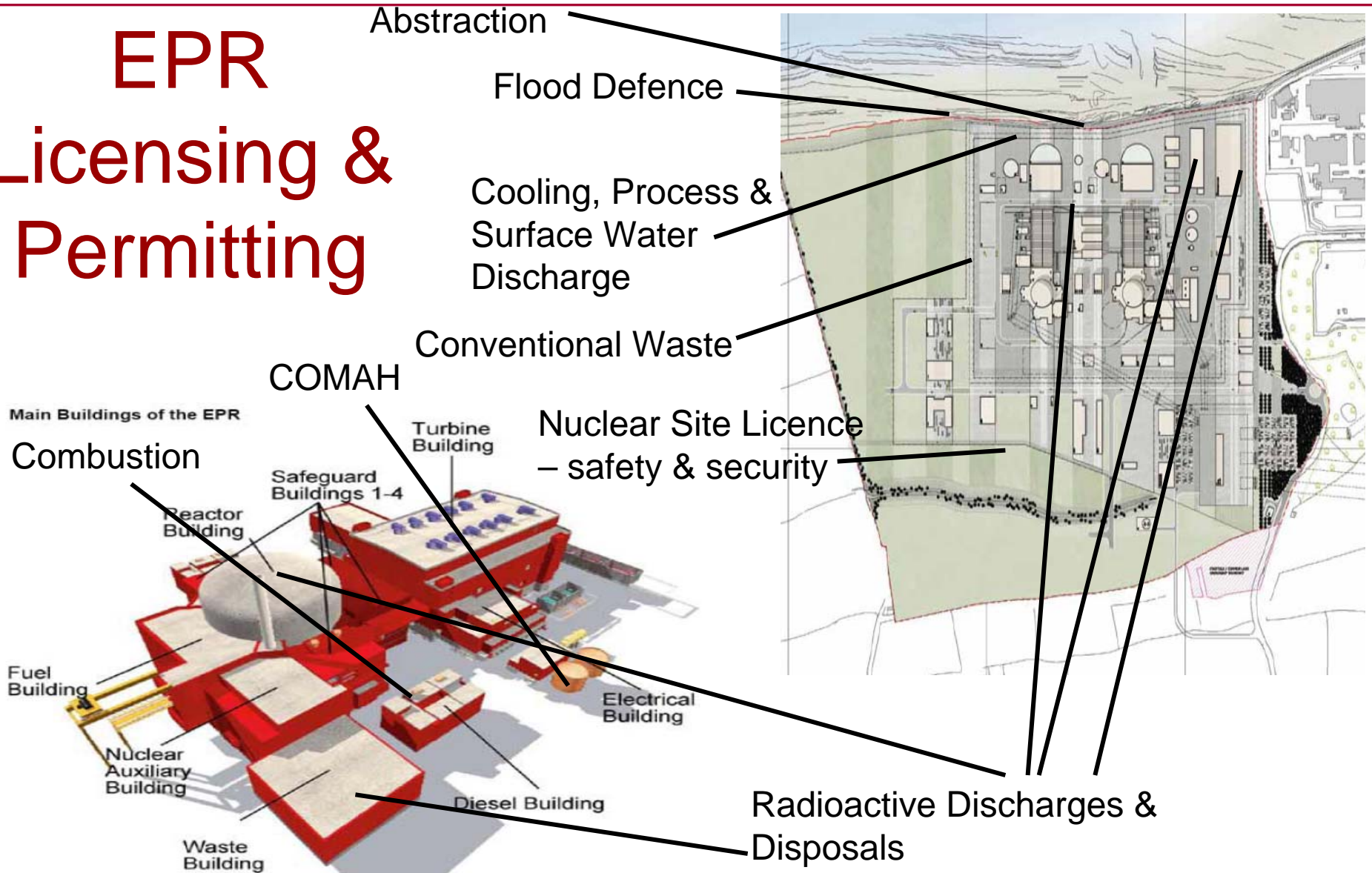
June 2011



GDA Timeline



EPR Licensing & Permitting





Health and Safety
Executive



Environment
Agency

More information at: www.hse.gov.uk/newreactors

HSE homepage | Contact HSE | Feedback | Help | A-Z index | Site map

Search HSE Website

HSE Environment Agency

New Nuclear Power Stations

New nuclear home

- New nuclear programme
- Progress so far
- How to get involved
- View designs and make a comment

Update
e-bulletin

Useful links
Contact us



Local search

New Nuclear Power Stations



The HSE and Environment Agency are working together to make sure that any nuclear power station built in the UK meets the highest standards of safety, security, environmental protection and waste management.

We are currently assessing two new nuclear power station designs:

- The UK EPR designed by AREVA and EDF**
- The AP1000 designed by Westinghouse**

New nuclear programme **Progress so far**

How to get involved **View designs and make a comment**

e-Bulletin
Want to be kept up-to-date about the assessment process? Subscribe now...

News story title 1
Thursday, August 21st, 2008
News summary. Nemo enim ipsam voluptatem quia.
[Read on...](#)

News story title 2
Tuesday, August 19th, 2008
News summary. Nemo enim ipsam voluptatem quia.
[Read on...](#)

Public involvement leaflet
Designs for potential new nuclear power stations - MSC70
[Download leaflet](#)

