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DSG(2020)C040

Dounreay Site End State Review – update for DSG Business Meeting



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End State Review – Background

Final End State (FES)

- Final condition of the land and anything that might remain when decommissioning is complete
- Regulatory Guidance ('the GRR', published 2018) limits what can be left
- Buried waste and below ground redundant structures could be left, provided it has been shown to be safe (via a Site Wide Environmental Safety Case)
- FES has to be shown to be optimised – balance between factors of interest to stakeholders




Current Dounreay End State

- Developed in 2006/07 – *'a restored site with early release of land'*
- Contract in 2012 stated specific End State objectives for structures and facilities on the site
- Focus has been on decommissioning above ground structures – *increasing need to consider work required to deal with the ground/subsurface*

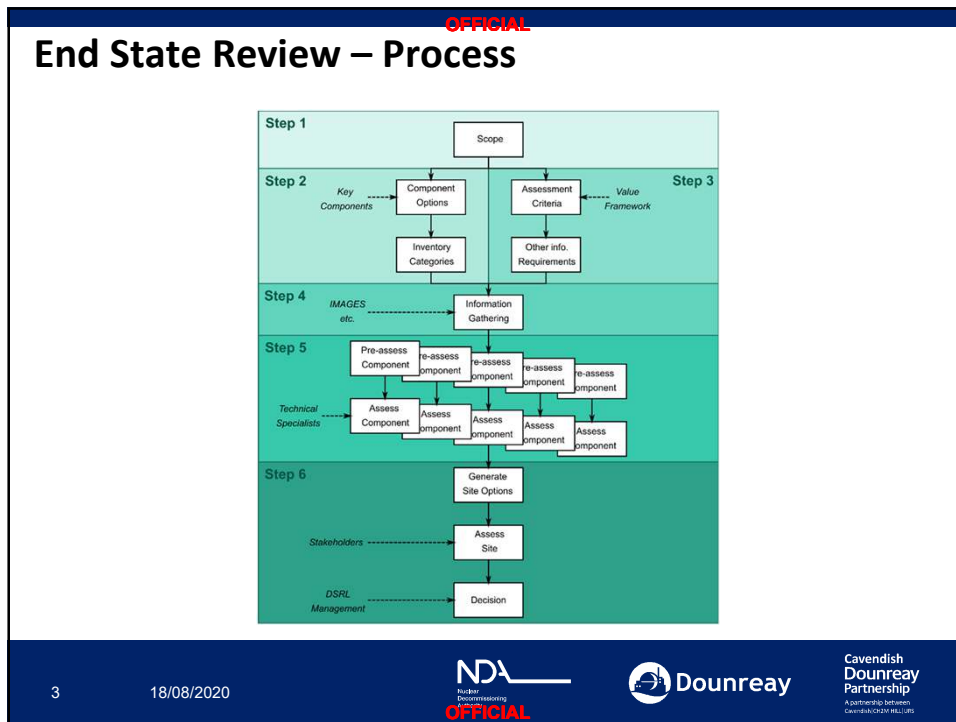
Reasons for Review

- **Periodic review** – recognition thinking may evolve
- **GRR** – improved guidance facilitates better optimised End State

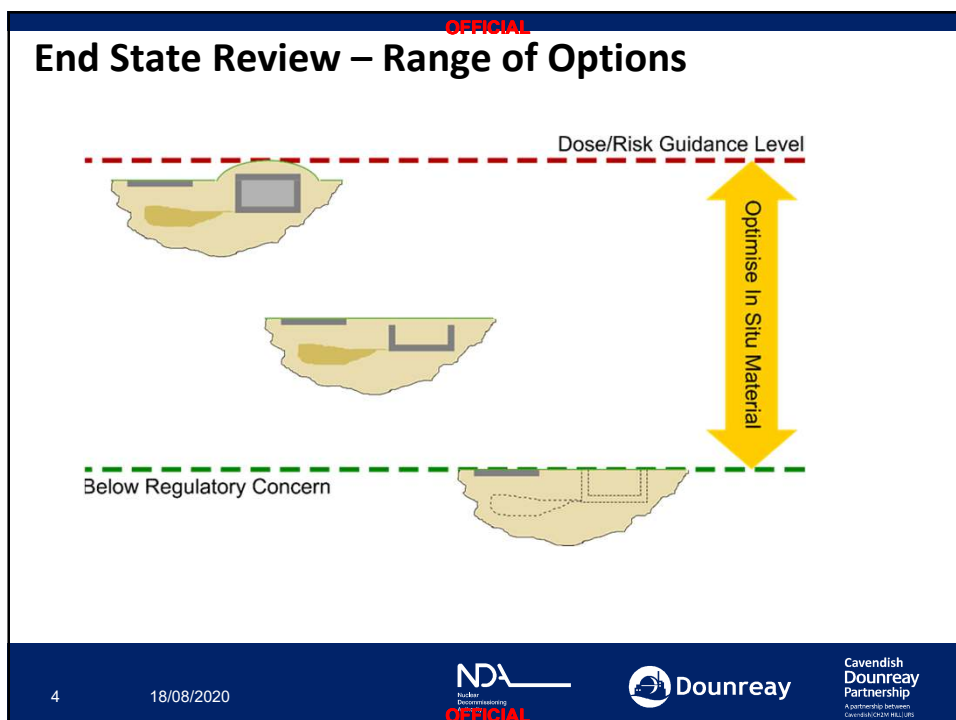
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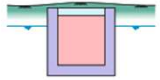


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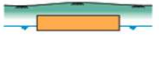
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End State Review – Options presented in GRR

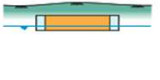
(a) **Dedicated radioactive waste disposal facilities** like LLWF. Due to having such a facility next to the site, this option will not be considered within Dounreay.



(b) The preferred solution for in scope radioactive waste is likely to be **disposal in-situ** (e.g. a floor slab), provided that it is safe to do so and is the optimised ALARA solution.




(c) **Radioactive waste disposed of in-situ with engineered closure**, like the shaft platform, should be considered even if some engineering work is required to make it ALARA.




If there are holes in the ground or sub-surface infrastructure that needs to be backfilled during decommissioning, in scope waste may be the ALARA choice of materials provided it can be shown to be the safe, optimised solution.

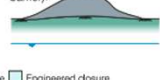
(d) **Radioactive waste disposal for filling in an existing structure** (eg: a backfilled pond).




(e) **Radioactive waste disposal for void filling** (eg: void following a floor slab removal).



(f) **Radioactive waste disposal for screening bund** (eg: a mound of land used to construct a barrier).



(g) **In-situ contaminated land (not waste unless dug up)** that doesn't pose an unacceptable risk to end users and the environment may be left behind.





Key:

- Containment structure
- Existing structure
- In-situ radioactive contamination
- Disposal of radioactive waste in dedicated facility
- Disposal of radioactive waste for a purpose
- Engineered closure
- In-situ disposal of radioactive waste

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End State Review – High level Programme

Key tasks underway (up to end Aug 2020)


1. Initial Stakeholder discussions – SEPA, ONR, NDA Site facing team, DSG, DSRL internal stakeholders and projects
2. Development of Site End State Review Process Document
3. Development of Assessment Criteria
4. Finalise list of Key Components
5. Finalise list of End State Options


Key future project tasks (Sep 2020 to Feb 2022)

1. Information gathering for Key Components and Balance of Site Areas
2. Component/Zone Assessment Trials (Zone 1B, Zone E and Zone G)
3. Assessment of Site Components and Zones
4. Site Wide Integration Process
5. End State Options Assessment Final Report
6. Gate B Paper

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