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Climate Change

# Strategy for NORM waste

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Part 1: Introducing NORM and associated challenges

Part 2: A strategy for NORM waste management



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PART 1

# INTRODUCING NORM



# Brief introduction to NORM waste



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- Naturally Occurring Radioactive Materials are ubiquitous in the earth's crust.
- NORM can become concentrated during mineral extraction and processing activities
- International RP framework provides the basis for NORM waste regulation in UK (ICRP/IAEA/Euratom BSS etc.)
- In UK - NORM is either (i) out of scope of RS regulation, (ii) exempt from RS permitting or (iii) permitted to control its radioactive properties

# Data collection exercise

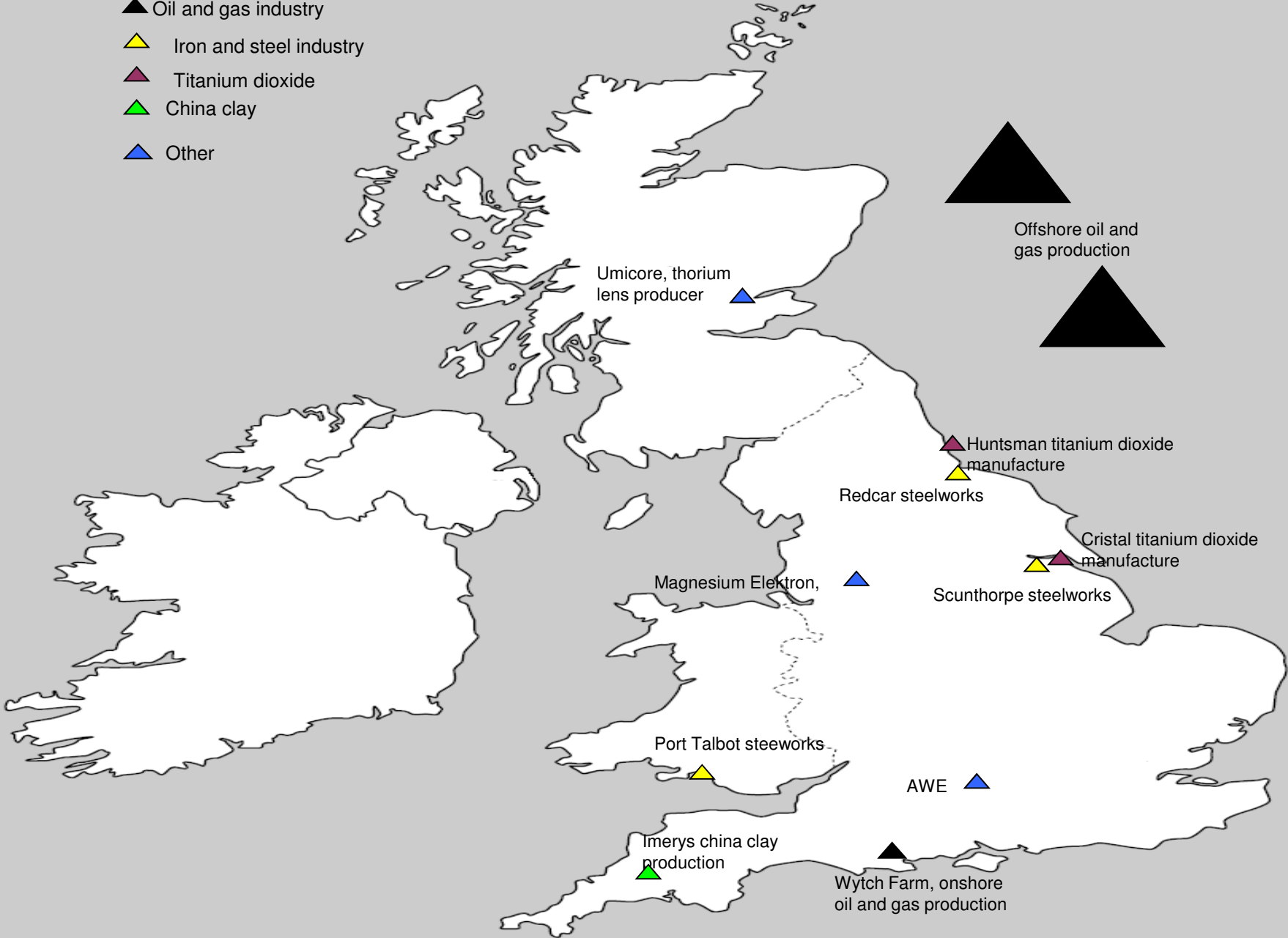


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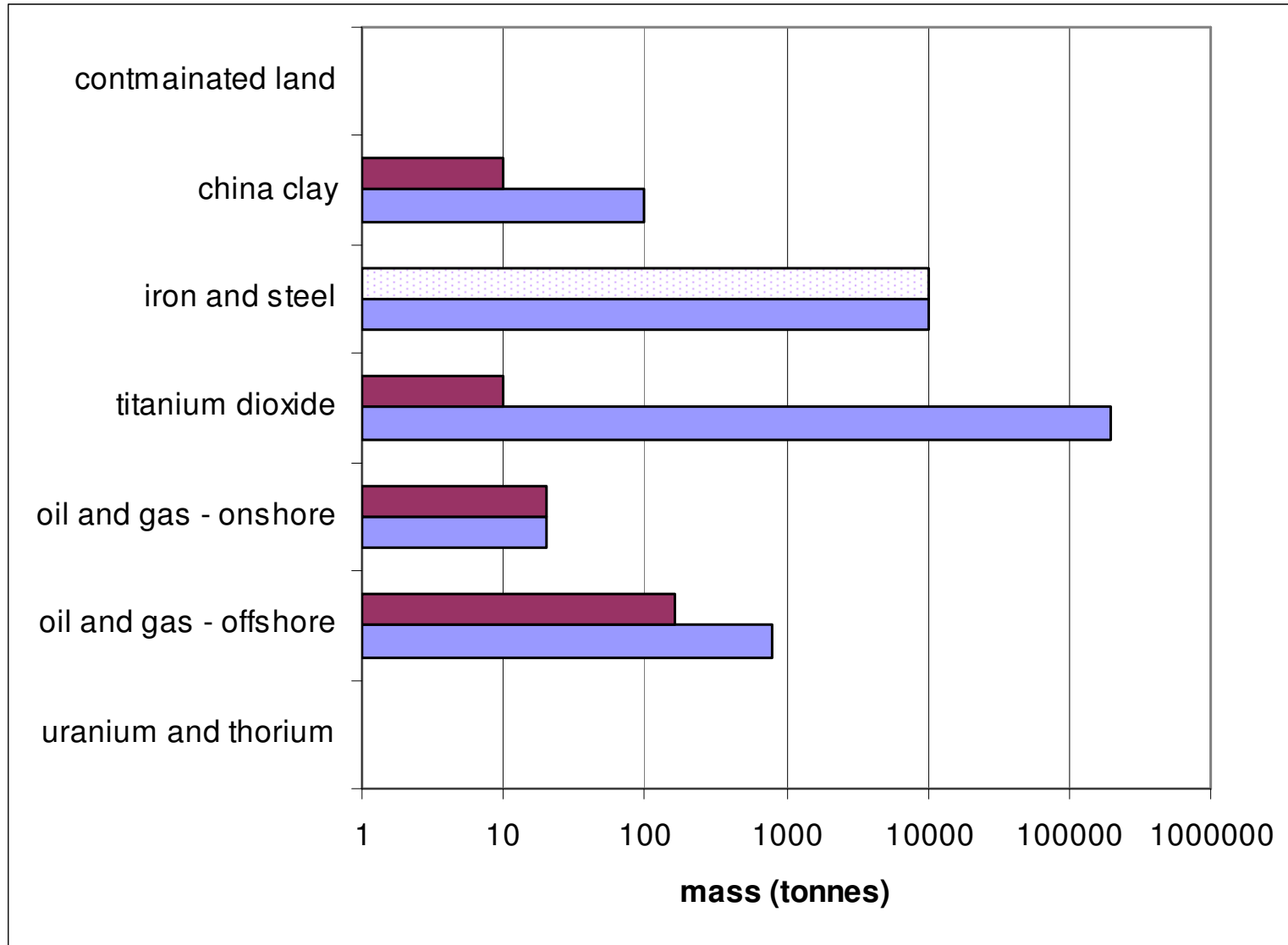
- Major UK-wide information exercise gather data on the volumes, activities and management of NORM waste produced by each industry sector
- Compared producer 5 year forecasts against treatment and disposal provider expectations
- Explored “issues” impacting on NORM waste management
- To summarise how NORM waste is produced and managed by each NORM industrial sector present in a “pen portrait”

# Current main producers

- ▲ Oil and gas industry
- ▲ Iron and steel industry
- ▲ Titanium dioxide
- ▲ China clay
- ▲ Other



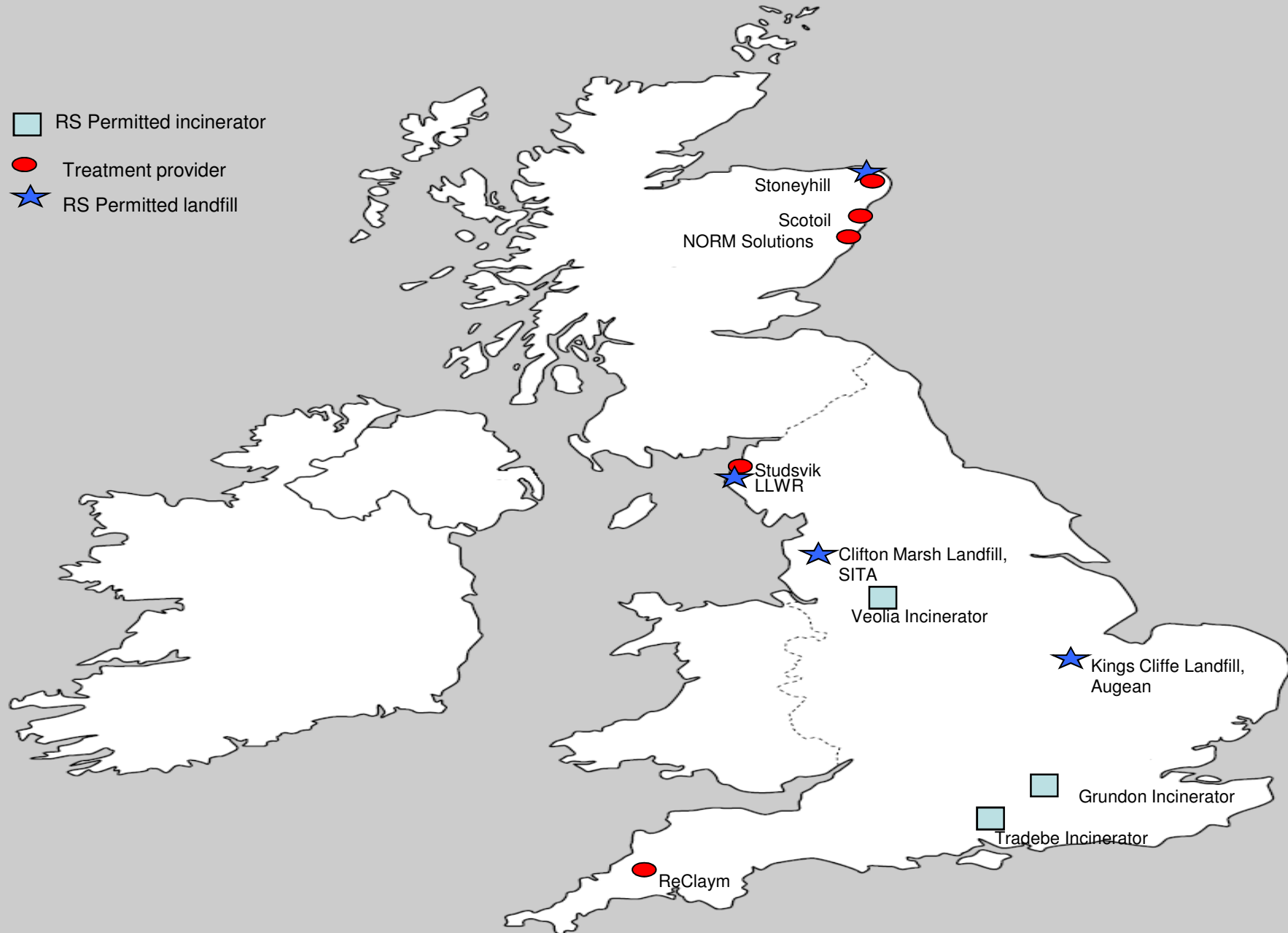
# Current NORM waste volumes (total vs proportion not exempt from regulation)





# Current treatment and disposal sites

- RS Permitted incinerator
- Treatment provider
- ★ RS Permitted landfill



# Implications from the data collection



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- No “immediate” capacity gap BUT only 1 hazwaste/NORM landfill (operated by Augean in East Northants)
- “Fragility” of waste treatment & disposal facilities
- Data is best estimate but is not robust - uncertainties in some arisings - recognition of need for better data



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PART 2

# STRATEGY

# Strategic issues



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- Regulatory standards
  - Evolving international and EU legislations
  - Data availability
  - Import/export rules
  - Risk of 'shocks' to existing NORM facilities
  - Risk of sudden/unexpected growth in NORM arisings

# Our objectives



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We think NORM waste management needs to be

- **Secure** –management options available at least over a 5 year horizon, sufficient to cope with all predicted arisings
- **Sustainable** – options safe for current or future generations; deliver the waste management hierarchy and economic growth.
- **Resilient** – plurality of management options available

# Moving forward



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## ***Improving the data***

- This project has delivered the most robust picture of NORM arisings and disposal yet – but gaps remain
- Work now required to improve the systems for monitoring

## ***Clarifying uncertainty***

- The strategy identifies key areas of regulatory uncertainty relevant to ensuring that all appropriate treatment and disposal options are available.

## ***Supporting adequate infrastructure***

- UK treatment and disposal infrastructure is currently sufficient, but may not be robust to future shocks.
- Government expects the market to provide capacity, but will continue to support to remove barriers to market development



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Thank you for your interest!

**THE ~~END~~ BEGINNING**