mCDR Policy and Permitting
U.S. National Academies of Sciences, Engineering, and Medicine

State and Sub-State Perspectives from UK Stakeholders

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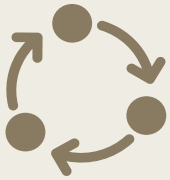
16 September 2025



Context

CO2RE

CDR Reg Review (all CDRs)

Published late Sept.

Two UK pilots:

- SeaCURE: Seawater Carbon
- Unlocking and Removal) Planetary Technologies (inactive)

Planning Law – Basic Structure

- *devolved to four jurisdictions (i.e. not UK but E, W, S, NI)*
- consenting applications ordinarily fall to local planning authorities
- large-scale infrastructure projects determined at government level. i.e. Nationally Significant Infrastructure Projects require a DCO from relevant Secretary of State.
- Planning Act 2008 (England); Planning Act (Northern Ireland) 2011; Town and Country Planning (Scotland) Act 1997 as amended by the Planning etc. (Scotland) Act 2006 (Scotland); Planning Act 2008, Planning (Wales) Act 2015 (Wales)
- controls activities which could impact the environment, including waste, water, air, industry and land

Planning Law – EIA

- EIAs form central pillar of assessing the impacts a project may have on the environment; obligatory in each UK jurisdiction
- *facilitate information to allow the decision-maker to consider the environmental impacts of a proposed project*
- must be taken into account by the decision-maker re final consenting decision
- EIA reqts vary according to type of project, size, proximity to env sensitive area etc (as defined in legislation)

Planning Law + GGR

- Planning and permitting apply to all GGR techniques, across all four UK nations
- *Many UK GGR projects are demonstrator, proof-of-concept, or research and development phase.*
- Only select projects have faced commercial-scale planning and permitting procedures (ie most rigorous)

Permitting – Pilots and Procedures

Permitting processes are designed for commercial not research or pilot scale projects.

- *Interviewees*:
  - *Standard permitting procedures/tick-box scenarios are difficult to navigate*
  - *Many GGR projects are pilots, unlikely to operate indefinitely or undertake continuous or constant operations*
  - *Often no option available for time-limited permits, or projects which operate intermittently on a research basis. Assessments are typically based on annual or lifetime impacts.*
  - *Permitting exemptions may not be clear, with some research and development projects often having to apply for a full permit in order to ensure compliance.*
  - *Need to consider the role of regulatory sandboxes, where time-limited permits can be granted, with specific monitoring requirements more tailored to a pilot study.*

Permitting – Expertise and Evidence

Novel technologies

- lack of previous practical experience; impacts (env. or human) of chemicals/processes yet be established
- *Evaluation challenge* for regulators; unable to dictate safety or risk levels in relation to emissions, water, land or air if GGR technique in absence of evidence/knowledge
- Developers *unable to generate evidence* in absence of permissions

  → *regulatory paradox*
- NB. *pre-application systems for permits facilitate early engagement* between proposed projects and regulators
  - *bridge evidence gaps and promote mutual understanding*
  - *Regulators face high demand from industry in the form of direct queries seeking clarity on regulatory requirements for novel technologies.*
  - *indicator of the legal uncertainty for GGR industry, create a burden for regulators*

Permitting – Expertise and Evidence

- Well known shortcomings of planning law
- General threat to Net Zero (CCC called for reform to spatial planning due to misalignment with net zero goals; planning as a bottleneck for net zero projects)

Interviewees:

- Delays to planning permission = costs
- lack of synergy between planning and permitting processes with one delaying the other
- planning consent administratively challenging for first-of-a-kind projects
- *co-located at existing facilities can facilitate planning decisions*

mCDR and International Law

LC/LP:

- Repeated regulatory uncertainty with both regulators and industry
- 2013 amend/t ('research-only') ratified, not incorporated, by UK
- *primary consideration for industry and regulators when contemplating marine GGR in the UK*
- LC/LP not apply to date as UK pilots utilise discharge infrastructure situated on land, i.e. not sea (LC Art III(1)(a) and (b)).
  - *Hence Planetary Technologies' pilot in Cornwall*
- Nonetheless, operators view as constraint on commercialisation

mCDR Permitting

- *Few projects = limited insights from industry into the compatibility and accessibility of existing regulation*
- Unlike other CDR, mCDR have not yet progressed beyond pilot stage, evidence gaps are profound
- Although permitting regimes are well-established, existing permits not are entirely suitable for novel technologies
- mCDR operators utilise water company's existing infrastructure and permits
- Industry suggests that a more specific permit for OAE would create more certainty for future operators, or carveouts to existing permits to accommodate OAE activities.
- lack of legal facilitation for the scaling of shore-based OAE projects
- *lack of evidence and mCDR industry means there is no demand for regulatory attention*

Other Regulatory Challenges:

Precaution:

- *policymakers to act to prevent environmental harm even when scientific certainty is lacking, provided there are reasonable grounds for concern*
- *mCDR not been contemplated in any detail at all by regulators*
- *PP likely to be reformed, post-Corry Review*

Public Perception

Liability (attribution) for environmental or other damage