



Repurposing Disused Coal Mines for Geothermal Heat Networks

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Repurposing Disused Coal Mines for Geothermal Heat Networks - Towards an Environmental and Social Sustainable Solution

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I. Background

Calls for Action British Energy Security Strategy & Net-Zero by 2050

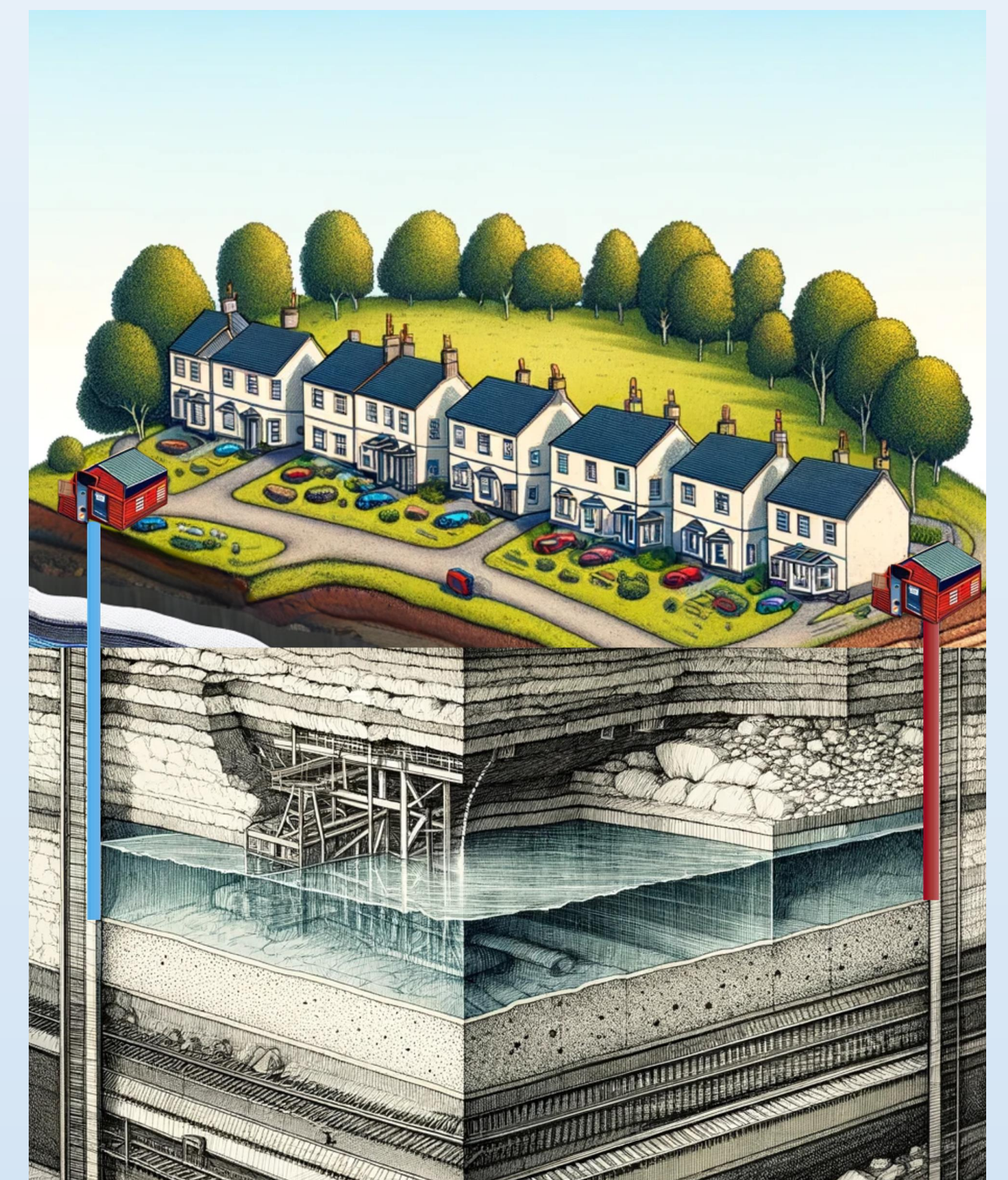
- Urgent shift to **sustainable** and **domestically-produced** energy.

Status Quo Geothermal Energy is Underutilised

- ONLY fulfils **0.3%** heating demand in the UK.

Opportunity Disused Coal Mines

- **7,920 PJ** Geothermal heat present in the mine water
- Over **25%** of the UK population resides in coalfield areas.

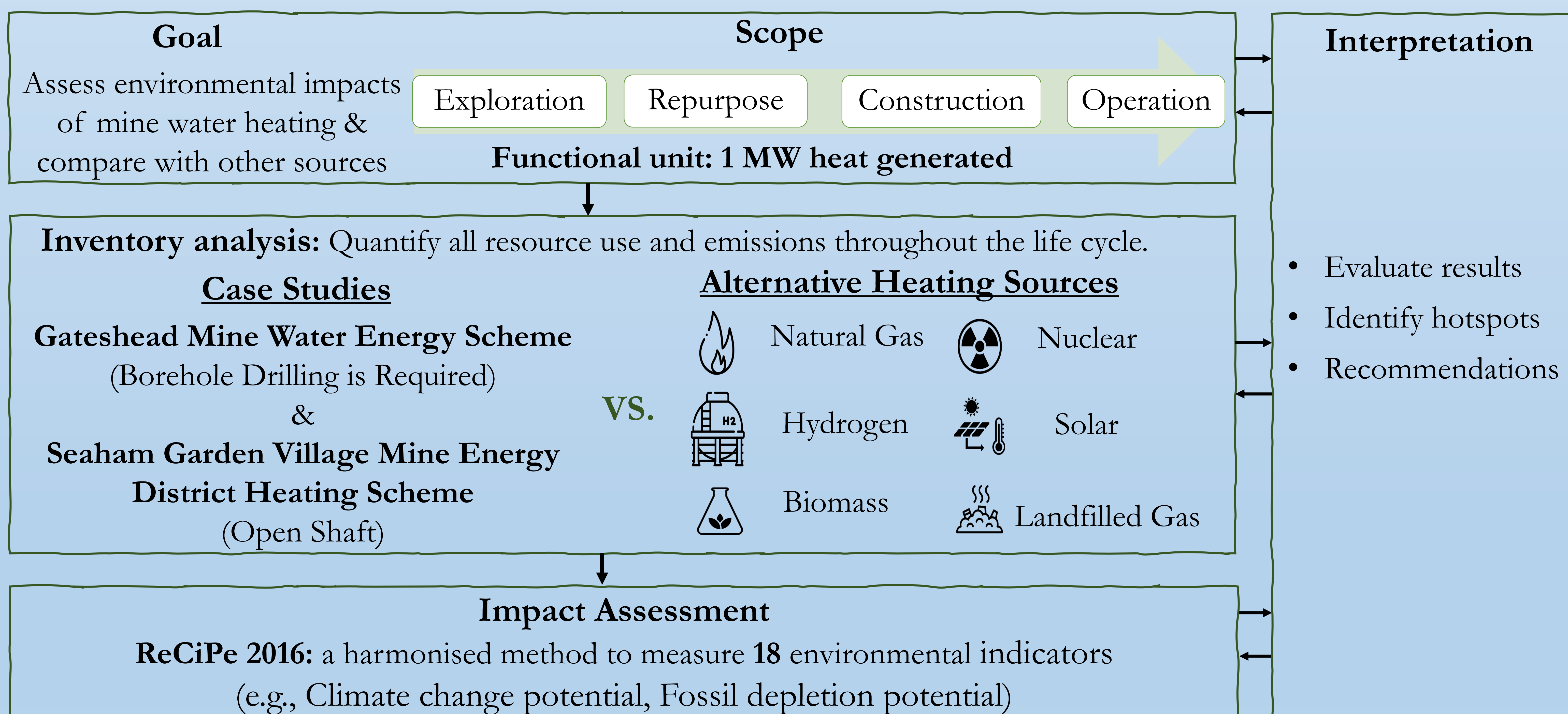


II. Research Objectives

1. Evaluate life cycle environmental impacts of mine water heating and compare with other heating sources.
2. Qualitatively explore perceptions from various stakeholders towards the deployment of mine water heating.

III. Methodology

[Part 1: Life Cycle Assessment]



[Part 2: Stakeholder Semi-Structured Interviews]

1. Coal Authority
2. Local Authorities: Gateshead Council, Durham County Council
3. Non-Government Organisations: East Durham Trust, Transition Network, Greenwork
4. Local Historical Preservations: BEAMISH, RED HILLS, Museums Northumberland Woodhorn Museum
5. Plant Operators: VITAL ENERGY
6. Academic Researchers
7. Former Coal Miners
8. Local Residents

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