Building Greener Access Roads for Energy Infrastructure

EIP154

ENA Basecamp 26

Scottish & Southern Electricity Networks

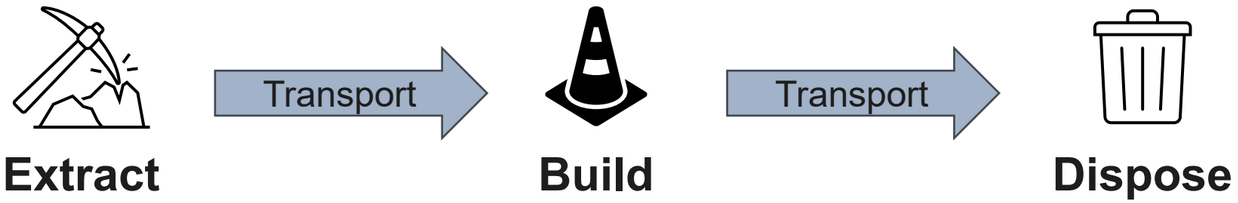
TRANSMISSION

The Challenge

New build transmission infrastructure frequently require extensive permanent and temporary stone roads to provide access during construction and beyond.

In remote locations the length of access roads required can be greater than the overall length of the infrastructure constructed.

Frequently these roads are built from virgin stone from local quarries or won from borrow pits.



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The Impacts

High Embedded Carbon:
Extraction, processing & Transport

Environmental Impact:
Damage to peatlands and other fragile environments

Limited Sustainability:
Largely unchanged practices not aligned with industry aims

Cost & Programme:
Access is becoming a key cost and programme constraint

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The Ambition

- Minimise stone usage
- Reduce reliance on virgin materials
- Viable on multiple different ground conditions including peat
- Maintains integrity/safe use under repeated loadings from heavy plant
- Suitable for use in sensitive environments
- Minimise waste to landfill, notably from temporary use cases
- Cost effective including long deployments

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The Solution

The solution would aim to achieve TRL in the range 5 to 7 (demonstrated in relevant environment) although earlier-stage ideas with strong potential are welcome.

The solution should:

- Be scalable for large capital projects including for new builds OHLs 10km and more,
- Demonstrate environmental benefits and cost effectiveness against agreed/established metrics,
- Be compatible with existing construction approaches,
- Comply with the necessary environmental and safety legalisation.