



**Sellafield Ltd**

**Planning, Design and Access Statement:**

**Drilling of boreholes and small-scale injection trial works at Mid Tarn Farm**

Prepared by Sellafield Ltd

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**1.0 Introduction**

This combined Planning, Design and Access Statement has been produced to support a full planning application for the drilling of up to forty temporary boreholes followed by small-scale injection trial works at Mid Tarn Farm which is located to the west of the Sellafield site.

The document provides an overview of the proposal and how it complies with national and local planning policy. This document forms part of a full suite of documents and drawings submitted in support of a full planning application, including the following:

- Covering letter
- Completed application form, including certificates of ownership
- Planning fee
- Location Plan
- Block plan showing details of the layout
- Topographic Plan
- Ecological Impact Assessment and cover note
- Contaminated Land Risk Assessment and cover note

**1.1 Pre-application consultation**

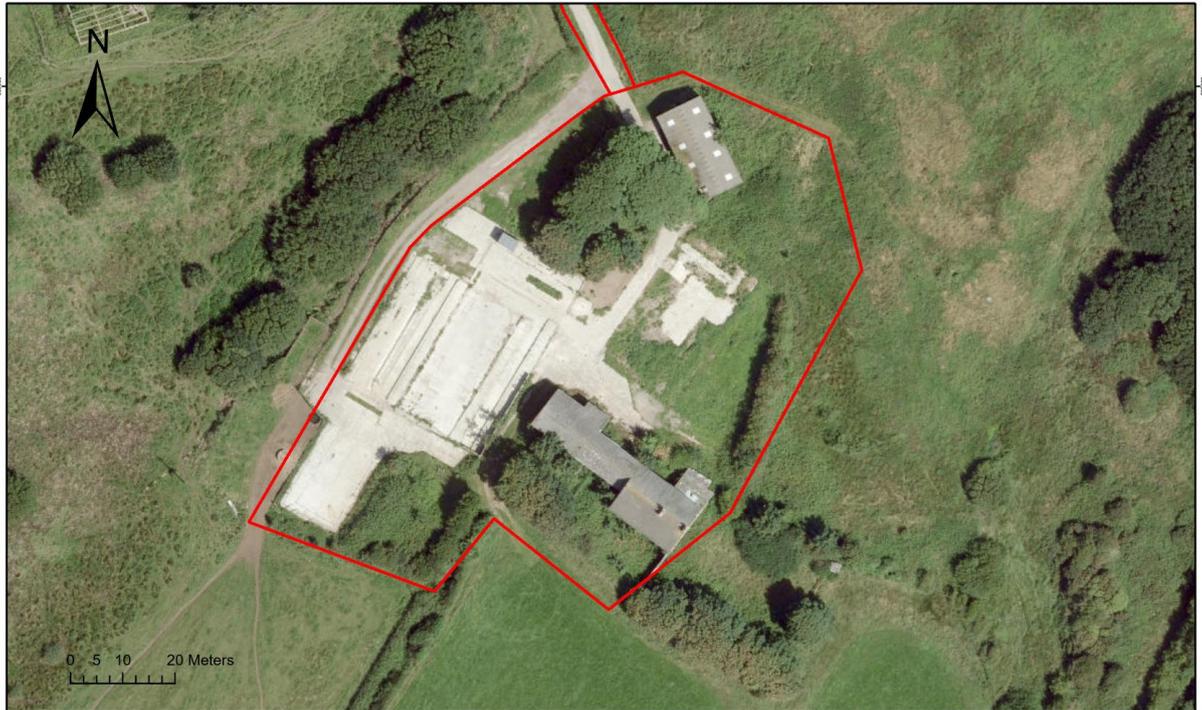
Sellafield Ltd has engaged with Cumberland Council through pre-application discussions, which have confirmed which documents would be required by Cumberland Council to validate the planning application. This has been reflected in this submission.

**1.2 Site description**

The Mid Tarn Farm site (NY 02141 04053) is located approximately 200m west of the Sellafield boundary.

The area of the site including the access road is 0.94 ha.

The recent aerial photo of the Mid Tarn Farm area (Image 1 below) shows the layout of the site. Most of the farm buildings have recently been demolished leaving a large area of concrete hardstanding, surrounding soft ground, mature trees and two remaining farm buildings.



*Image 1: Recent (2025) aerial imagery of the Mid Tarn Site*

## **2.0 Proposed Development (Incorporating Design and Access Considerations)**

### **2.1 Description of Development**

The proposed development is for borehole drilling and installation of up to 40 temporary wells (injection wells, groundwater monitoring wells and aquifer development wells) to provide below-ground infrastructure to enable an injection trial to be undertaken. The purpose of this work is to evaluate the practical and physical aspects of injecting treatment media into the ground which will help to inform potential ground remediation options currently being considered on the Sellafield Ltd operational site. This is not a trial to treat contamination at the Mid Tarn Farm site.

Within the red line boundary of the Mid Tarn Farm site, drilling will take place within two areas identified as Trial Array 1 and Trial Array 2, as shown on the Block Plan. The trial area is split into the two Trial Arrays so that separate trials can be undertaken; one to test a particulate treatment media (zeolite) and one to test a liquid treatment media (liquid hydroxy apatite). This small-scale remediation trial will be guided by Regulatory Position Statement 215: Treating small volumes of contaminated soil and groundwater.

During the drilling works, there will be a working area in use for the drilling rig, which will measure approximately 5x10m and will be surrounded by temporary Heras fencing. Up to 2 working areas will be used at any one time for the duration of the works (up to 8 weeks). A small mobile temporary welfare unit will also be in place near the working area.

Once drilling work is complete, the equipment for the injection trial will be delivered to site. This is likely to comprise a small shipping container or trailer which will be sited in a central location, likely on the hardstanding near to the injection wells. Each of the injection wells (approximately 12 locations) will be connected to pipework. A small hopper for mixing treatment media may also be required during the trial and this

would be placed near to the container/trailer. The trial is expected to take up to 8 weeks from the start of mobilisation to removal of all trial plant and equipment.

After the injection trial is complete, the groundwater monitoring boreholes will continue to be used for collecting groundwater samples

## 2.2 Scale and layout

The layout of the proposed development is outlined in the Block Plan.

Up to 40 boreholes will be drilled across the two trial array areas and each borehole will be installed either as an injection well, a groundwater monitoring well or an aquifer development well. Each borehole will be drilled using a sonic drilling method to a maximum diameter of 200mm and a maximum depth of 20m. Groundwater monitoring wells will be installed with a 50mm diameter pipe and both the injection and aquifer development wells will be installed with a 100-150mm pipe. At the surface the pipe will be protected by a metal cover which will be no more than 300mm in height and 200mm in diameter.

The approximate locations of welfare and trial equipment are also shown on the Block Plan. Some consumable materials for the trial may also be stored in the farm barn.

Once the trial is completed, the borehole covers will be protected by a small wooden fence no more than 0.5m in width and 1m in height.

The borehole locations have been placed to avoid sensitive habitats, sensitive receptors and to allow access to working areas for the drill rig and for future monitoring works.

## 2.3 Appearance and landscaping

The boreholes will be very small and discreet. They will have limited impact on the appearance of the site. An example photo of the likely appearance of the boreholes, including the borehole cover and protective fence can be seen below.



*Image 2: Indicative image of proposed boreholes*

During the drilling works, temporary track matting will be placed down to protect soft ground from damage. Heras fencing will be erected around the drilling area (~5x10m area). The protective matting, drill rig and working area will all be removed once the drilling works are completed. Drilling works are anticipated to take up to 1 day per borehole location.

The images below show an example of the working area that will be required and the drilling equipment that will be used.

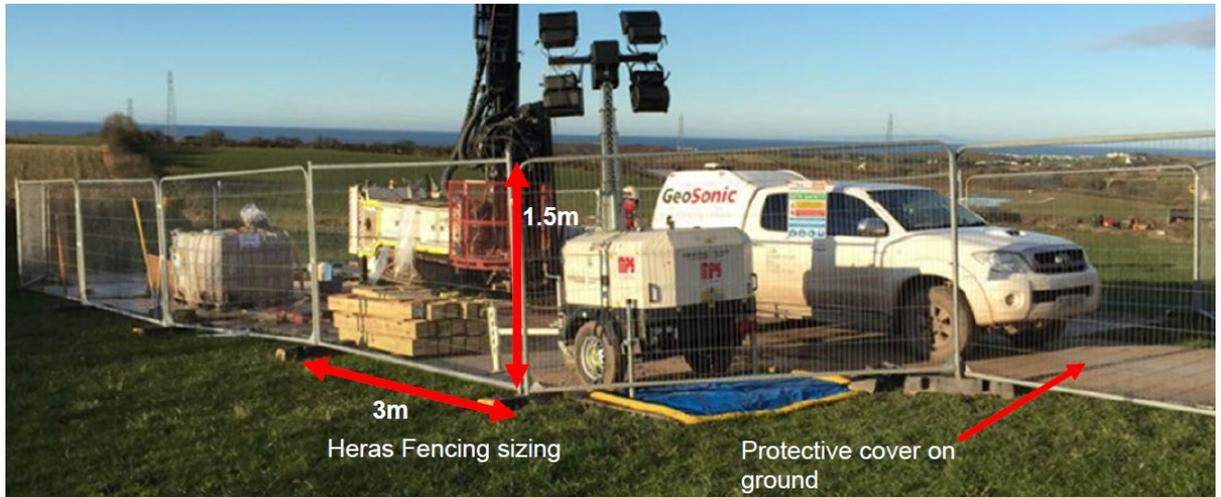


Image 3: Example working area

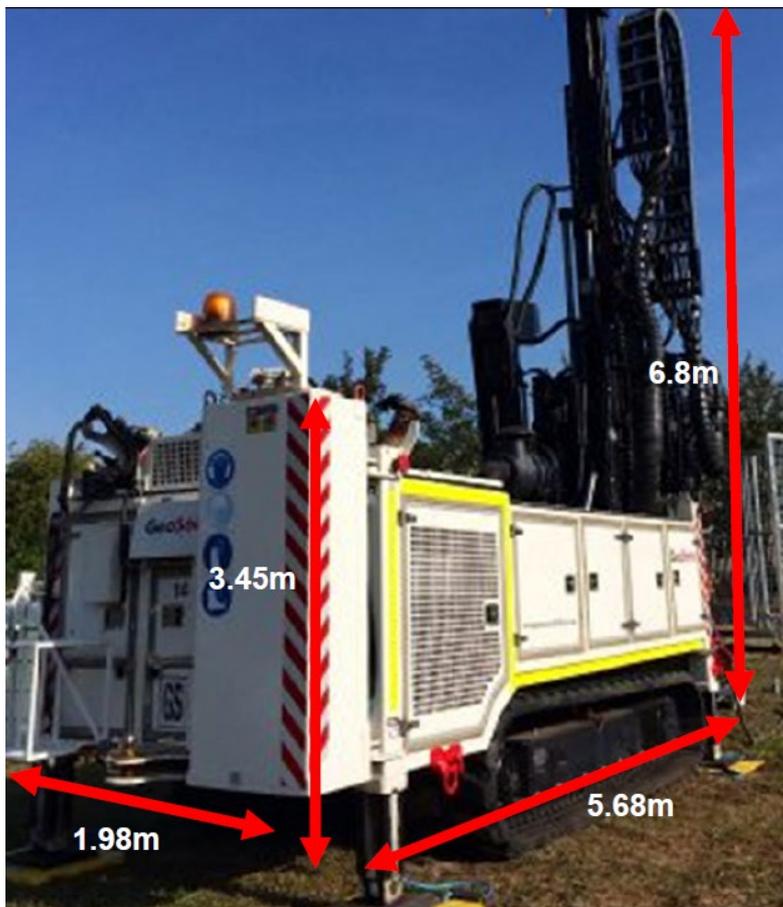


Image 4: Drill rig dimensions



*Image 5: Example showing similar temporary pipe arrangements that will be connected to each injection well (approximately 12 well locations) for up to 6 weeks*

There will be no permanent changes to the landscape or area around the boreholes as a consequence of the development. All pipework, equipment and waste will be removed from the area at the end of the trial.

#### **2.4 Transport and accessibility**

The site will be accessed by the existing farm road as shown on the site location plan. This road will be used to deliver the drilling rig and trial equipment by low loader (lorry). A telehandler will also be present on site to support deliveries and will use this road as access. The drill rig is a tracked machine which will be moved between borehole locations on each site by remote control. Most of the work will be undertaken on concrete hardstanding areas, however track matting will be placed down if the drill rig is moved across soft ground to prevent damage to the surface.

Additionally, it is likely that up to 5 site vehicles will regularly access the site during the drilling and trial works. These site vehicles will likely be small vans or Hilux type 4x4 vehicles. Vehicles will adhere to all local speed restrictions and rules when accessing the sites.

After injection trial works are completed, sampling works will be undertaken. The personnel who will take the samples will access the farm sites with a small van that will be parked at the farm sites on hard standing. The boreholes will then be accessed by foot.

#### **2.5 Flood risk and drainage details**

The site is in Flood Zone 1 according to the Environment Agency flood maps and is therefore at a low risk of flooding from rivers and the sea. The risk of groundwater flooding is also identified as low. The proposed works will not impact upon the existing drainage arrangements.

There will be no increase to flood risk outside of the site due to the small-scale nature of the works and the drainage systems associated with the proposed development.

## **2.6 Contaminated land assessment**

A Contaminated Land Risk Assessment was carried out for Mid Tarn Farm in 2024 to support a previous planning application for initial ground investigation works at the same site. This assessment concluded that there was no unacceptable risk of land contamination impacts and that the site is suitable for the proposed use in accordance with the National Planning Policy Framework (NPPF).

The Contaminated Land Risk Assessment is considered to remain valid for this application as the site red line boundary for this proposed development remains the same, the proposed works are similar in nature, and regular visits to the site since 2024 have been undertaken. There have been no further contaminated land impacts to the site during this time.

## **2.7 Ecology assessment**

An Ecological Impact Assessment (EclA) was carried out for Mid Tarn Farm (and Tarn Head Farm) in 2024 to support the previous planning application for initial ground investigation works at the site and was based on a comprehensive desk study and site survey in accordance with CIEEM guidelines. The EclA concluded that there would be no significant effects<sup>1</sup> on ecological features, taking account of the established best-practice avoidance and mitigation measures identified in the report.

The farm buildings outside the 2024 red-line boundary were demolished by the landowner in 2025; the footprint of these buildings is concrete hardstanding, which is within the current red-line boundary. Notwithstanding this, the 2024 EclA is considered to remain valid for this application for the following reasons:

- a) The proposed works are similar in nature (borehole drilling, sampling and testing work) to those assessed by the EclA.
- b) The areas of the site surveyed as part of the previous work at Mid Tarn Farm include areas proposed for drilling and injection trial work in this proposed scheme.
- c) The footprint of the demolished farm buildings which forms the remaining areas proposed for drilling and injection trial work in this proposed scheme is concrete hardstanding that does not introduce additional habitat that would require further assessment or mitigation beyond that identified in the 2024 report.
- d) Additional visits by ecologists have been made to Mid Tarn Farm since 2024 as part of other investigation works, covering most of the site area within the red-line boundary; no potentially notable changes to the ecological conditions were identified.

There will be no harm to existing trees in the area and therefore a Tree Survey is not required for this application.

## **2.8 Biodiversity Net Gain Exemption Statement**

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<sup>1</sup> Significant in EclA terms – i.e. ecological effects that should be given weight when authorising a project.

There is a statutory requirement under Schedule 7A of the *Town and Country Planning Act 1990* (as amended) for most developments requiring planning permission to deliver a minimum 10% 'Biodiversity Net Gain' (BNG), unless exempted.

This scheme is considered exempt under Regulation 4 of *The Biodiversity Gain Requirements (Exemptions) Regulations 2024* (the 'de minimis exemption'). This is because:

- a) The proposals do not impact<sup>2</sup> any 'priority habitats' listed under Section 41 of the *Natural Environment and Rural Communities Act 2006* (no such habitats are present on the site).
- b) The proposals impact less than 25 square metres of onsite habitat that has biodiversity value greater than zero:
  - i. Most boreholes will be on concrete hardstanding (biodiversity value of zero), including areas left in-situ following recent demolition of old farm buildings.
  - ii. Boreholes outside of concrete hardstanding areas will temporarily impact approximately 1m<sup>2</sup>. Once completed, each borehole will be ~200mm dia. so will impact ~ 0.03m<sup>2</sup>. No more than 10 borehole locations will fall outside of the concrete hardstanding areas.
  - iii. Note, the temporary welfare and equipment storage units are considered 'permitted development', and so exempt from mandatory BNG; notwithstanding this, these will be located on concrete hardstanding (biodiversity value of zero) or (if located on grassland) will occupy ~10m<sup>2</sup> only
  - iv. The proposals will have no impact on onsite linear habitat.

## 2.9 Noise Considerations

Works will take place only within the hours of 7am and 5pm, with no works to be carried out at the weekend. Drilling works will only be carried out for 1 day at each location and therefore noise pollution impacts outside of the development area are considered to be minimal.

A noise assessment has been carried out by the manufacturer of the drill equipment, who states that when operating in an outdoor environment, hearing protection is not required at a distance of 10m from the drill rig, based on the Health and Safety Executive (HSE) guidelines. Given this, it is not anticipated that any significant noise impacts will be experienced outside of the development sites.

## 2.10 Site decommissioning and restoration

On completion of the drilling work and injection trial, all containers, welfare cabin, equipment and waste will be removed, leaving only the boreholes for further groundwater monitoring if required.

We will aim to decommission the boreholes at the earliest opportunity. This may be up to 2 years (March 2028) to allow for the collection of groundwater samples.

The area around the boreholes will not be changed after the works are completed and therefore it is not anticipated that any restoration measures will be required.

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<sup>2</sup> Reg. 4(4)(b) states that "a habitat is impacted where the habitat is lost or degraded such that there is a decrease in the biodiversity value of that habitat".

### **3.0 Planning Statement**

This section highlights the extent to which the proposal conforms to national and local planning policy.

#### **National Planning Policy Framework**

The latest iteration of the National Planning Policy Framework (NPPF) was published in December 2024 and consolidates all national planning policy guidance. At the heart of the NPPF is a presumption in favour of sustainable development. The borehole size and locations have been designed to be as sympathetic as possible to the local environment and community whilst carrying out vital monitoring work. Drilling works will be carried out in a minimal timeframe and normal working hours will be adopted to ensure as little harm is caused as possible.

#### **Copeland Local Plan (2021-2039)**

Cumberland Council adopted the Copeland Local Plan (2021-2039) in November 2024. This incorporates all local planning policy for the former Copeland area. The proposed development conforms with policies within the Local Plan, in particular:

- Policy NU4, which allows for nuclear development to be carried out outside of the Sellafield site where this is monitoring or investigatory work which requires an offsite location.
- Policy NU4 also states that all proposals must include measures to adequately mitigate any adverse effects of the proposed development. The proposal has been designed to reduce adverse environmental and community impacts wherever possible, including keeping drilling works to normal working hours, and designing the borehole locations and protective equipment to be as sensitive to the local environment as possible. The ecological and contamination assessments make recommendations, wherever required, to further reduce the impact of development.

### **4.0 Conclusion**

In conclusion, this planning application is in line with relevant national and local planning policy.

Section 38 (6) of the *Planning and Compulsory Purchase Act 2004* sets out that planning applications should be determined in accordance with the development plan unless material considerations indicate otherwise. This is reiterated in paragraph 11 (c) of the NPPF which states proposals that accord with an up-to-date development plan should be approved without delay.

As highlighted throughout this document, the proposed development is deemed to comply with relevant national and local planning policies. The proposed development will not cause any undue harm to the environment and demonstrates a sustainable approach to ground investigation work to support the vital work carried out by Sellafield Ltd. Therefore, this planning application should be positively determined and approved without delay.