

Andrew Mead
Examining Authority
c/o Sarah Jones
3/18 Eagle Wing
Temple Quay House
Bristol
BS1 6PN

Email: richard.gwilliam@nationalgrid.com

Write to: Richard Gwilliam, National Grid
1100 Century Way, Thorpe Park, Leeds
LS15 8TU

By Email Only
2nd April 2015

Dear Sir,

Application for the Yorkshire and Humber Carbon Capture and Storage (CCS) Cross Country Pipeline Development Consent Order (Reference: EN070001)

Further to National Grid's Deadline 6 submission to the Planning Inspectorate (PINS) yesterday for the Examination into the above application I write as requested to provide further details on the nature of the Cathodic Protection (CP) apparatus described in document 15.1 *Submission on Cathodic Protection*.

In paragraph 1.0.2 document 15.1 explains that CP apparatus is required to protect every buried pipeline from corrosion and that Schedule 1 of the draft development consent order (DCO) (document reference 3.1) already accommodates the CP apparatus situated at the above ground installations (AGIs). It further explains that National Grid needs to make provision for the installations of four CP ground-beds and associated apparatus at four locations on land at: (a) Camblesforth Multi-Junction; (b) Tollingham block valve; (c) Dalton block valve and (d) Skerne block valve, and also a Transformer Rectifier (TR) with cabinet and guard rail within Work No. 6C as shown on sheets 8 and 9 of the Works Plan. It is important that the exact location of the TR is determined in detailed design, although it is currently anticipated to be located within the first passing bay of the access route to the Tollingham Block Valve.

Document 15.1 also confirms that the requested changes to the DCO will not give rise to any new or different environmental effects than those already reported in the Environmental Statement. The purpose of this letter is to further describe the apparatus required to facilitate an understanding of the proposed works.

Ground Bed

The ground beds would comprise several silicon iron bars (anodes). The exact dimensions of the ground beds would be determined on a site by site basis during detailed design although they are anticipated to be approximately 15 - 20m long by 0.3m wide. As stated in document 15.1 they would be buried at 1-2m and be connected to the pipeline and transformer rectifier by buried cable.

Transformer Rectifier

A TR kiosk comprises a transformer rectifier with circuit board and meter. The exact dimension and design of the TR kiosk would be determined through detailed design, although it is anticipated to be approximately 1.2m high x 1.2m wide x 0.6m deep. The kiosk would be coloured green and be plastic / composite. Where a guard rail is required to protect the TR from third party interference it would be no more 1.2m high. For illustrative purposes only, a photograph of a similar TR with protection barrier from the Natural Gas Transmission Network is provided below.

Securing our energy supply for future generations.





Sacrificial anode

A sacrificial anode comprises a hessian sack containing a magnesium bar surrounded by dry powdered clay (known as bentonite). Again, the exact design would be confirmed during detailed design but each sack is likely to be approximately 1m long by 0.2m wide. The sacks would be buried in pairs, at a similar depth to the pipeline and be connected to it and a test post by buried cable.

If you wish to discuss any of these items further, please do contact me.

Yours faithfully



Richard Gwilliam
Senior Consents Officer
National Grid

Richard.gwilliam@nationalgrid.com

0790 111 7401