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nationalgrid

# Submission on Cathodic Protection

## The Yorkshire and Humber (CCS Cross Country Pipeline) Development Consent Order

**Application Reference: EN070001**

**April 2015**

**Deadline 6**

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# 1 Background

1.0.1 National Grid Carbon Limited (**National Grid**) requires that some changes are made to the application for development consent in order to make provision for certain of the cathodic protection (**CP**) apparatus needed for the operation of the Onshore Scheme.

1.0.2 CP apparatus is required to protect every buried pipeline from corrosion. 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**)[1]. However, National Grid requires the location of four CP ground-beds and associated apparatus (including transformer rectifier kiosks) at four locations on land at: (a) Camblesforth Multi-Junction; (b) Tollingham block valve; (c) Dalton block valve and (d) Skerne block valve.

1.0.3 It is important to note that the location for all four CP ground-beds and associated apparatus are **within the Order limits** of the application as they stood prior to this paper being submitted. Accordingly, **the Order limits need not be extended nor new land included in the application to accommodate the required changes to the CP provision**. The locations for the CP ground-beds and transformer rectifier kiosk will be in land already identified on the land plans for compulsory acquisition. The CP ground-beds themselves are buried 1-2m below the surface and a cable runs from the CP ground-beds to the pipeline.

1.0.4 This paper sets out a description of the changes sought, the implications for the application materials currently before the Examining Authority (**ExA**), and other relevant issues, including any environmental impact assessment (**EIA**).

[1] See Work Nos. 1B, 4B, 6B, 9B, 11B, 14A(e) and 14B

# 2 Land at Camblesforth multi-junction

## 2.1 DESCRIPTION

2.1.1 The land is shown on the land plans[2] (document reference 2.1) within the Order limits as plot number 75. This plot forms part of the access road to be created from Wade House Lane to the multi-junction. The plot is included in the book of reference for **Permanent type 1,** as well as **Temporary-general** and **Temporary-drainage.** This means that the freehold title is sought through the compulsory acquisition powers in the DCO. **No further or different compulsory acquisition powers are sought as a result of the CP apparatus.**

2.1.2 The CP ground-bed would be located directly adjacent to, or beneath, the access road. The transformer rectifier kiosk would be located within the multi-junction as has always been the case. **All of the CP apparatus now proposed to be placed in this location outside the AGI compound will be within the current order limits and the current plot 75.**

## 2.2 CHANGES TO THE APPLICATION MATERIALS

2.2.1 The only amendment to the application, is in the description of the authorised development, at Schedule 1 of the draft DCO. **No new work number or change to the works plan is required**. A change to Work No. 4C is required as follows (in red and ~~strikeout~~):

**"Work No. 4C** – A road from A645 / Wade House Lane junction up to and including the carbon dioxide facility at Camblesforth Multi-junction (Work No. 4A) including any splays, gates, fencing, drainage, drainage attenuation and interceptors, piped culverts, utilities, associated ducting, ~~and~~ landscape works and cathodic protection apparatus including buried cathodic protection groundbeds and anodes, buried electrical wiring and ducts and test posts."

## 2.3 EIA

2.3.1 For the Onshore Scheme EIA, an exercise was undertaken to compartmentalise the scheme into various constituent elements where works were considered to present a similar source of potential effects (similar in terms of duration, physical effects, construction methodology etc).

[2] See sheet number 2

This was done to reflect any tolerances applied for in the DCO and to ensure that a robust assessment was undertaken of each element, while also being tailored to the specific construction work involved and/or the nature of the physical infrastructure required.

2.3.2 One such aspect was the 'Above Ground Installations' where works include new above ground infrastructure (which comprised inter alia instrument buildings, PIG traps, pipework, access roads, fencing, landscape planting etc). A full description of the basis of assessment for the AGIs is included in Section 5.9 of Chapter 5 Environmental Impact Assessment Process (Document 6.5). The AGI sites have two main components; areas for permanent works and temporary construction areas. **All land, in both areas was assumed to be entirely disrupted by intrusive construction work,** leading to a permanent or temporary loss of features such as archaeology and habitat. It was assumed that construction plant would be working up to the order limits.

2.3.3 For the areas where cathodic protection beds are required, the assessment accounted for intrusive construction work to take place, and for there to be permanent works, in the form of the new access roads. There is therefore little distinction needed in the EIA between an area where cathodic protection is installed, as compared to the AGI itself, including any access roads. Even with cathodic system test posts, it was assumed that there would be intermittent posts where required, as highlighted in the following paragraph from Chapter 3 Onshore Scheme Description (Document 6.3):

"*3.1.2 Marker posts will be located at all boundaries and other strategic locations for example main rivers, road and rail crossings. Cathodic protection system test posts will also be installed, and located so as to minimise interference with agricultural activities. (Cathodic protection is a method of protecting the Pipeline from corrosion using an impressed current and / or sacrificial anode system).*"

**2.3.4 The Onshore Scheme ES therefore included consideration of any effects associated with the installation of a cathodic protection system wherever necessary within the AGI sites.**

## 2.4 CONSULTATION

2.4.1 All those with an interest in the relevant land were consulted at pre-application stage pursuant to the statutory requirements of section 42 of the Planning Act 2008, and were notified following the submission and acceptance of the application pursuant to the statutory requirements of section 56 of the Planning Act 2008. **No one new is affected by this proposal, who has not had the opportunity to participate in the**

**consultation or examination processes**. There is no change to the order limits as a result of this proposed change.

## 2.5 COMPULSORY ACQUISITION

2.5.1 **There are no compulsory acquisition implications for the change**. There is no new land proposed, nor is there any extension to the areas within the order limits that are identified for the execution of compulsory acquisition powers (coloured dark grey on the land plans).

# 3 Land adjacent to Tollingham block valve

## 3.1 DESCRIPTION

3.1.1 The land is shown on the land plans[3] (document reference 2.1) within the Order limits as plot number 581. This plot forms part of the access road to be created from Skiff Lane to the block valve. The plot is included in the book of reference for **Permanent type 1,** as well as **Temporary-general** and **Temporary-drainage.** This means that the freehold title is sought through the compulsory acquisition powers in the DCO. **No further or different compulsory acquisition powers are sought as a result of the CP apparatus.**

3.1.2 The CP ground-bed and the transformer rectifier kiosk would be located directly adjacent to, or beneath, the access road. **All of the CP apparatus now proposed to be placed in this location outside the AGI compound will be within the current order limits and the current plot 581.**

## 3.2 CHANGES TO APPLICATION MATERIALS

3.2.1 The only amendment to the application, is in the description of the authorised development, at Schedule 1 of the draft DCO. **No new work number or change to the works plan is required**. A change to Work No. 6C is required as follows (in red and ~~strikeout~~):

**"Work No. 6C** - A road from Skiff Lane up to and including the carbon dioxide facility at Tollingham Block Valve (Work No. 6A) including any splays, gates, fencing, drainage, drainage attenuation and interceptors, piped culverts, electricity kiosk, utilities, associated ducting, ~~and~~ landscape works and cathodic protection apparatus including buried cathodic protection groundbeds and anodes, buried electrical wiring and ducts, test posts and above ground transformer rectifier with cabinet and guard rail."

3.2.2 Fencing or barriers are required only in this location as here the transformer rectifier and cabinet may be outside of the AGI, albeit on land which National Grid will own.

## 3.3 EIA

3.3.1 For the reasons explained in paragraph 2.3 above, all land was assumed to be entirely disrupted by intrusive construction work. **The Onshore Scheme**

[3] See sheet number 9

**ES therefore included consideration of any effects associated with the installation of a cathodic protection system wherever necessary within the AGI sites.**

## 3.4 CONSULTATION

3.4.1 For the reasons explained in paragraph 2.4 above, no one new is affected by this proposal, who has not had the opportunity to participate in the consultation or examination processes. There is no change to the order limits as a result of this proposed change.

## 3.5 COMPULSORY ACQUISITION

3.5.1 **There are no compulsory acquisition implications for the change**. There is no new land proposed, nor is there any extension to the areas within the order limits that are identified for the execution of compulsory acquisition powers (coloured dark grey on the land plans).

# 4 Land adjacent to Dalton block valve

## 4.1 DESCRIPTION

4.1.1 The land is shown on the land plans[4] (document reference 2.1) within the Order limits as plot number 845. This plot forms part of the access road to be created from Lund Wold Road to the block valve. The plot is included in the book of reference for **Permanent type 1,** as well as **Temporary-general** and **Temporary - drainage.** This means that the freehold title is sought through the compulsory acquisition powers in the DCO. **No further or different compulsory acquisition powers are sought as a result of the CP apparatus.**

4.1.2 The CP ground-bed would be located directly adjacent to, or beneath, the access road. The transformer rectifier kiosk would be located within the block valve site as has always been the case. **All of the CP apparatus now proposed to be placed in this location outside the AGI compound will be within the current order limits and the current plot 845.**

## 4.2 CHANGES TO APPLICATION MATERIALS

4.2.1 The only amendment to the application, is in the description of the authorised development, at Schedule 1 of the draft DCO. **No new work number or change to the works plan is required**. A change to Work No. 9C is required as follows (in red and ~~strikeout~~):

**"Work No. 9C** – A road from Lund Wold Road up to and including the carbon dioxide facility at Dalton Block Valve (Work No. 9A) including any splays, gates, fencing, drainage, drainage attenuation and interceptors, piped culverts, electricity kiosk, utilities, associated ducting ~~and~~ landscape works and cathodic protection apparatus including buried cathodic protection groundbeds and anodes, buried electrical wiring and ducts and test posts."

## 4.3 EIA

4.3.1 For the reasons explained in paragraph 2.3 above, all land was assumed to be entirely disrupted by intrusive construction work. **The Onshore Scheme ES therefore included consideration of any effects associated with the installation of a cathodic protection system wherever necessary within the AGI Sites.**

[4] See sheet number 15

## 4.4 CONSULTATION

4.4.1 For the reasons explained in paragraph 2.4 above, no one new is affected by this proposal, who has not had the opportunity to participate in the consultation or examination processes. There is no change to the order limits as a result of this proposed change.

## 4.5 COMPULSORY ACQUISITION

4.5.1 **There are no compulsory acquisition implications for the change**. There is no new land proposed, nor is there any extension to the areas within the order limits that are identified for the execution of compulsory acquisition powers (coloured dark grey on the land plans).

# 5 Land adjacent to Skerne block valve

## 5.1 DESCRIPTION

5.1.1 The land is shown on the land plans[5] (document reference 2.1) within the Order limits as plot number 1072. This plot forms part of the access road to be created from Main Street to the block valve. The plot is included in the book of reference for **Permanent type 1,** as well as **Temporary-general** and **Temporary-drainage.** This means that the freehold title is sought through the compulsory acquisition powers in the DCO. **No further or different compulsory acquisition powers are sought as a result of the CP apparatus.**

5.1.2 The CP ground-bed would be located directly adjacent to, or beneath, the access road. The transformer rectifier kiosk would be located within the block valve site as has always been the case. **All of the CP apparatus now proposed to be placed in this location outside the AGI compound will be within the current order limits and the current plot 1072.**

## 5.2 CHANGES TO APPLICATION MATERIALS

5.2.1 The only amendment to the application, is in the description of the authorised development, at Schedule 1 of the draft DCO. **No new work number or change to the works plan is required**. A change to Work No. 11C is required as follows (in red and ~~strikeout~~):

**"Work No. 11C** – A road from Main Street up to and including the carbon dioxide facility at Skerne Block Valve (Work No. 11A) including any splays, gates, fencing, drainage, drainage attenuation and interceptors, piped culverts, electricity kiosk, utilities, associated ducting ~~and~~ landscaping works and cathodic protection apparatus including buried cathodic protection groundbeds and anodes, buried electrical wiring and ducts and test posts."

## 5.3 EIA

5.3.1 For the reasons explained in paragraph 2.3 above, all land was assumed to be entirely disrupted by intrusive construction work. **The Onshore Scheme ES therefore included consideration of any effects associated with the installation of a cathodic protection system wherever necessary within the AGI Sites.**

[5] See sheet number 20

## 5.4 CONSULTATION

5.4.1 For the reasons explained in paragraph 2.4 above, no one new is affected by this proposal, who has not had the opportunity to participate in the consultation or examination processes. There is no change to the order limits as a result of this proposed change.

## 5.5 COMPULSORY ACQUISITION

5.5.1 **There are no compulsory acquisition implications for the change**. There is no new land proposed, nor is there any extension to the areas within the order limits that are identified for the execution of compulsory acquisition powers (coloured dark grey on the land plans).

# 6 General wording

6.0.1 In addition, it is proposed to add some wording to item (f) in the list of Further Associated Development at Schedule 1 of the draft DCO. The proposed wording is set out below, and will allow National Grid to use sacrificial anodes in local areas, as necessary. This is an alternative form of cathodic protection typically used before the CP ground-beds described above are commissioned. As with the CP ground-beds above, there are no EIA, consultation or compulsory acquisition implications. The works are within the order limits, and can be easily accommodated adjacent to the pipeline within the rights strip in areas where **Permanent – type 2** rights are already being sought. There is therefore no extension of the areas over which compulsory acquisition powers are sought.

6.0.2 The following wording is proposed at item (f) of Schedule 1 to the draft DCO (in red):

"in relation to Work Nos. 1A, 3A, 3B, 3C, 3D, 3E, 3F, 3G, 4A, 5A, 5B, 5C, 5D, 5E, 5F, 5G, 5H, 5I, 5J, 6A, 8A, 8B, 8C, 8D, 8E, 8F, 8G, 8H, 8I, 8J, 8K, 8L, 9A, 10A, 10B, 10C, 10D, 10E, 10F, 10G, 10H, 10I, 10J, 10K, 11A, 13A, 13B, 13C, 13D, 13E, 14A, 15A, 15B the location of aerial markers, ~~cathodic protection test posts and~~ field boundary markers and cathodic protection apparatus including cathodic protection test posts and sacrificial anodes"

6.0.3 Finally, a minor consequential amendment is required to Article 6(3) (*limits of deviation*) of the draft DCO to account for the fact that a cabinet is to be used at the location of Work No., 6C, (in red):

"(3) Aerial markers, cathodic protection test posts, field boundary markers, transformer rectifier kiosks or cabinets and electricity cabinets comprised in the authorised development may deviate vertically from ground surface levels to any extent not exceeding 3 metres upwards."

# 7 Summary

7.0.1 National Grid summarises the position as follows:

- the Onshore Scheme requires four locations for the provision of CP ground-beds and associated apparatus in order to protect the pipeline from corrosion, together with works along the pipeline as may be required to lay sacrificial anodes;
- four locations have been identified within the existing Order limits, all of which are within land currently identified for compulsory acquisition;
- some changes are required to the description of the authorised development in Schedule 1 of the draft DCO to ensure that it reflects what is required in the four locations, specifically, changes to work numbers 4C, 6C, 9C and 11C;
- some changes are required to the description of the authorised development in Schedule 1 of the draft DCO at item (f) to accommodate the laying of sacrificial anodes;
- there is no EIA implication because the environmental statement as submitted is not affected by and does not need to change as a result of the proposals in order to continue to assess the development; and
- there is no consultation/notification implication because all those with an interest in the relevant land have been provided with every statutory opportunity for involvement in the application to date, prior to and during the examination.