
Nemo Link Interconnector

Environmental Statement - Transport Chapter Addendum

For TEP on behalf of National Grid Nemo Link Limited

By Curtins Consulting Ltd
July 2013

Curtins Consulting
40 Compton Street
London
EC1V 0AP
T. 020 7324 2240
www.curtins.com

Contents

Client: TEP
Project: Nemo Link Interconnector
Report Type: ES Transport Chapter Addendum
Report Reference: TPLO1034
Revision: F1
Report Status: FINAL
Date: July 2013

Report Author(s)	Signature	Date
Ben Dawson Engineer		17/07/2013

Checked	Signature	Date
Steven Farthing Associate		17/07/2013

Authorised	Signature	Date
Steven Farthing Associate		17/07/2013

For and on behalf of **Curtins Consulting Ltd**

Contents

-
- 1.0 Introduction
 - 2.0 Development Proposals Summary
 - 3.0 Vehicle Trip Generation & Routing
 - 4.0 Environmental Impact Assessment
 - 5.0 Summary

Introduction

- 1.1 This Traffic and Transport Addendum has been produced by Curtins Consulting to address changes in transport assessment resulting from National Grid Nemo Link Limited's (Nemo Link's) proposal in response to a representation from the Environment Agency (EA) in relation to the unknown depth of capping of the former landfill site within the Pegwell Bay Country Park. The EA representation identified that the depth of capping is unknown and it would prefer alternative methods of cables installation in this area rather than intrusive ground investigation prior to the commencement of works. This addendum should be read in conjunction with Chapter 11.0 of the original Environmental Statement (ES) that was submitted to Thanet District Council and Dover District Council in February 2013 for the Nemo Link.
- 1.2 The previously proposed cables installation technique included laying the two onshore high voltage direct current (HVDC) cables in troughs on the surface of part of the former landfill comprising Pegwell Bay Country Park and using a chalk overburden to bury the cables and troughs. It is now proposed to use an overburden for the cables route throughout Pegwell Bay Country Park to the boundary with Stonelees Nature Reserve and to use a lower cables trough, reducing the amount of overburden required per metre for safe burial of the cables. Some minor additional works will be undertaken in relation to the overburdening where works to existing paths are required so that these are within the falls and slopes recommended for wheeled access.
- 1.3 This addendum sets out changes to the construction method and anticipated effects on traffic generation from the development and associated environmental impacts from road traffic.

2.0 Development Proposals Summary

Development Proposals Summary

- 2.1 A detailed description of the project is included within Chapter 2 of the ES.
- 2.2 There will be two distinct phases to the construction of the Proposed Development which include:
- The construction of the converter station and substation; and
 - The installation of the onshore cables.
- 2.3 This addendum identifies the anticipated effects on traffic generation from the development and associated environmental impacts from road traffic in relation to the revised cables installation method through the Pegwell Bay Country Park to Stonelees Nature Reserve.

Onshore Cables Installation

- 2.4 Previously it was proposed that the cables would be installed using standard trench methods following the clearing of surface vegetation in part of the Pegwell Bay Country Park which had previously been overburdened with chalk on top of the landfill cap.
- 2.5 The EA representation identified that the depth of capping is unknown and it would prefer alternative methods of cables installation in this area rather than intrusive ground investigation prior to the commencement of works. It is now proposed that clean spoil and chalk will be brought to the site and used as an overburden material for the cable troughs which will be laid on the existing surface of the Country Park. The chalk will comprise the upper layer of the overburden and will be used as the substrate onto which wildflowers will be sown as has taken place already in parts of the Country Park. This is the primary change in the construction method following the previous ES submission.
- 2.6 This method, which has already been proposed for the larger part of the Country Park which has not had an overburden on top of the original landfill cap, will enhance the vegetation and biodiversity of the interest of the Pegwell Bay Country Park and Nature Reserve and prevent the need to disturb contaminated ground and risk opening up potential contamination pathways during cable installation.

3.0 Vehicle Trip Generation & Routing

Construction Trip Generation

- 3.1 The anticipated vehicle trip generation during construction has been detailed within the Traffic and Transport Chapter of the ES (Chapter 11).

Revised Vehicle Trip Generation

- 3.2 It is anticipated that the cable laying phase of the development will now generate in the region of 380 two-way HGV movements during the construction process. This is an increase of 315 two-way movements from the number referenced within the original ES.
- 3.3 The number of two-way HGV trips associated with the cable laying includes a number of vehicles associated with bringing in plant and materials and those vehicles associated with bringing in the chalk overburden.
- 3.4 This has been calculated assuming that the vehicles with a 20 tonne payload will be bringing in the volume of fill required which has been calculated to be in the region of 2,217m³. This calculation has assumed that all of the imported material will be chalk.
- 3.5 The construction programme for the laying of the onshore cables is one to two months. For this assessment a worst case scenario has been assessed which has assumed that construction will take place over the course of one month and there will be 20 working days a month.
- 3.6 If spread evenly throughout the 20 day construction period this would result in 19 two-way HGV trips per day. If broken down further this would result in approximately two HGV movements an hour accessing and egressing the Pegwell Bay County Park throughout the construction process.

Table 3.1 – Anticipated Two-Way HGV Trips

	Total Two-Way HGV Trips	Peak Two-Way HGV Trips per Month	Peak Two-way HGV Trips per Day
Original Proposal	65	65	6
Revised Proposal	380	380	19

- 3.7 In addition to the HGV deliveries anticipated during construction, it is envisaged that 30 two-way car trips and two bus or coach trips will be generated per day throughout construction associated with staff accessing and egressing the main converter station and substation site at the former Richborough Power Station.

3.0 Vehicle Trip Generation & Routing

-
- 3.8 Workers accessing the Country Park will do so from a minibus running from the converter station and substation site.

Construction Traffic Routeing

- 3.9 As part of the alterations to the cable laying construction process it is not anticipated that any of the routes to access the development areas will change.
- 3.10 It is anticipated that all vehicles will access the site via the primary highway routes in the region. These include the A256, the A299 the A2 and the M2.
- 3.11 To access the Country Park vehicles are anticipated to leave the primary highway network and utilise the former A256 towards Cliffsend. It is anticipated that all access to this site will be via the Ebbsfleet Roundabout to avoid the residential areas of Cliffsend.

4.0 Environmental Impact Assessment

Assessment Methodology

4.1 As highlighted previously this addendum should be read in conjunction with the main ES assessment that sets out the overarching environmental methodology by which the traffic effects of the proposed development have been assessed. A brief description of this has been included below.

Assessment of Significance

4.2 Quantifying the environmental impact of traffic from a Proposed Development depends on several key factors. In this instance the main factors influencing the significance of the impact relate to the magnitude of change, (taking into account the time frame of change) and the number, and sensitivity of any receptors in the area of interest. Once the significance of the impact is understood then the correct level of assessment can be undertaken and mitigation can be considered where necessary.

4.3 The Design Manual for Roads and Bridges (DMRB) Volume 11, Section 2, Part 5 (2008) sets out a table for helping to define the significance of change. This has been included below.

Table 11.1 Determining the Significance of Effects

		Magnitude of Impact (Degree of Change)				
		No Change	Negligible	Minor	Moderate	Major
Environmental Value (Sensitivity)	Very High	Neutral	Slight	Moderate or Large	Large or Very Large	Very Large
	High	Neutral	Slight	Slight or Moderate	Moderate or Large	Large or Very Large
	Medium	Neutral	Neutral or Slight	Slight	Moderate	Moderate or Large
	Low	Neutral	Neutral or Slight	Neutral or Slight	Slight	Slight or Moderate
	Negligible	Neutral	Neutral	Neutral or Slight	Neutral or Slight	Slight

4.0 Environmental Impact Assessment

Percentage Increases in Traffic

- 4.4 The Institute of Environmental Assessment (IEA) document “Guidelines for the Environmental Assessment of Road Traffic” states that the following criteria should be adopted to determine the need for environmental assessment of traffic impacts associated with a development:
- “Include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%); and
 - Include any other specifically sensitive areas where traffic flows have increased by 10%, or more.”
- 4.5 Increases in traffic flows of less than 10% have a negligible impact as daily variance in traffic flows can be of equal magnitude. This is again stated within the IEA document.
- 4.6 The 30% threshold relates to the level at which humans may perceive change and there may therefore be an effect. Impacts above this level therefore do not suggest that there is a significant impact, only that further consideration is required.
- 4.7 In this instance the site is located off key primary routes with direct links to the wider highway and motorway network.
- 4.8 This addendum is concerned primarily with the effects associated with the increase in traffic as a result in the change of construction methodology for the cable laying part of the development.

Existing Highway Description

- 4.9 A detailed description of the existing highways in the vicinity of the development is included within the ES chapter produced for the development.
- 4.10 In summary the Country Park will be accessed off the A256 Sandwich Road. This road was previously the primary north-south route through Cliffsend prior to the completion of Phase 2 of the East Kent Link. Sandwich Road is a single carriageway, with one lane in each direction. The road extends from the Lord of the Manor Roundabout to the north, passing through the Cliffsend residential area and forming one arm of the new Ebbsfleet Roundabout to the south.
- 4.11 From the Ebbsfleet Roundabout to the entrance to the Country Park the A256 is fronted by Stonelees Golf Centre on the north-western side, and by Pegwell Bay Country Park and Stonelees Nature Reserve on the southeastern side. There are also a small number of residential properties located close to the Sandwich

4.0 Environmental Impact Assessment

Road. Stonelees Bungalow has direct access onto the A256 whilst the others are accessed off Ebbsfleet Lane.

4.12 In all instances the residential properties are set back some distance from the carriageway, approximately 10-20m, with thick mature vegetation screening in place.

4.13 Existing traffic flows for Sandwich Road were obtained for the initial assessment which identified that average annual daily traffic flows were 6,779 with 4% being HGVs.

Vehicle Impacts

4.14 The greatest volume of traffic associated with the construction of the development is anticipated to occur during the construction of the converter station and substation site internal access roads. This assesses a worst case scenario for the level of traffic on the highway links surrounding the site, excluding the A256 Sandwich Road.

4.15 The results from this assessment have been discussed within the ES Transport chapter in terms of their environmental impact which assessed potential impacts in relation to the following:

- Noise;
- Severance;
- Driver Delay;
- Pedestrian and Cyclist Delay;
- Fear and Intimidation;
- Accident and Safety;
- Air Pollution; and
- Dust and Dirt.

4.16 The ES Chapter concluded that given the number of vehicles that will use the identified delivery routes to access the main converter station and substation works and the temporary nature of the traffic increase, although there is the potential for some temporary minor adverse impacts associated with the development, (driver delay, fear and intimidation and dust and dirt on the highway) the majority of impacts associated with the development will be negligible.

4.17 The same impacts were identified along the old A256 Sandwich Road due to the construction impacts of laying of the onshore cables where the anticipated construction traffic was anticipated to have a 0.3% increase in daily total traffic and a 1.1% increase in daily HGV traffic.

4.0 Environmental Impact Assessment

-
- 4.18 Following the revision of the volume of traffic associated with the construction of the onshore cables it is anticipated that the daily percentage increase in HGV traffic will rise from 1.1% to 7%.
- 4.19 This is under the 10% threshold for negligible impacts as discussed above as daily variance can see a similar percentage change.
- 4.20 Despite the percentage increase in daily HGV traffic being under 10% a number of potential adverse environmental impacts have been identified associated with the revised construction traffic volumes accessing Sandwich Road.
- 4.21 These again relate to driver delay, fear and intimidation and dust and dirt on the highway. The remaining items assessed such as noise, severance, pedestrian and cyclist delay, highway safety and air pollution are all anticipated to have negligible environmental impacts as per the conclusions of the initial assessment.

Driver Delay

- 4.22 During the laying of the cables, some driver delay may occur as vehicles turn right into the Country Park.

Fear and Intimidation

- 4.23 There are a number of identified receptors along Sandwich Road leading to the Country Park. These include a small number of residential dwellings as well as the Stonelees Golf Centre and the Country Park itself.
- 4.24 In respect to the residential developments, these are set back from the highway with large amounts of mature screening in place between the properties and the highway.
- 4.25 There is also some significant screening between the Country Park and Sandwich Road, however, some traffic will be required to enter the Country Park during construction. This could result in impacts associated with fear and intimidation by pedestrians and cyclists within the park.
- 4.26 There is some vegetation screening between Sandwich Road and the golf course; however, for some small sections there is none.
- 4.27 Given the volume of construction vehicles utilising this route and the short time frame over which access to the Country Park is required, minor impacts are anticipated during construction.

4.0 Environmental Impact Assessment

Dust and Dirt on the Highway

- 4.28 It is possible that some dust and dirt may collect on the wheels and chassis of the vehicles making deliveries to the site.
- 4.29 Without appropriate management, this could lead to some minor environmental impacts on the surrounding local highway network.

Mitigation

- 4.30 Construction traffic is temporary and it is not appropriate to provide permanent infrastructure as mitigation. A number of mitigation measures will be introduced to minimise any potential environmental effects of road traffic. These are as follows:
- During construction, wheel washing facilities will be provided both at the main site entrance and also the vehicular entrance to the construction compound located at the Country Park. This will ensure mud or debris is not deposited on the surrounding carriageway. In addition, all HGVs will be covered and sheeted as appropriate;
 - Delivery management strategies will be used to ensure that HGVs travel outside of peak periods where possible, avoid sensitive residential areas and stick to agreed routeing plans; and
 - Appropriate road signage will be provided as required; suitable signage will be placed within the Country Park to inform local users; and
 - A banksman will be deployed at the entrance to the Country Park to guide vehicles and control traffic whilst they are entering and leaving to give comfort to other road users.

Summary of Residual Environmental Impacts

- 4.31 Table 4.2 below sets out a summary of the anticipated potential residual environmental impacts following mitigation, identified as a result of the increase in road traffic associated with the change of method for laying the onshore cables through part of the Pegwell Bay Country Park.

4.0 Environmental Impact Assessment

Table 4.2 – Summary of Residual Construction Traffic Impacts

Potential Impact	Significance of Impact	Mitigation Measure	Residual Impact After Mitigation
Noise	Negligible	Delivery Agreements - Timing and Routeing	Negligible
Severance	Negligible	-	Negligible
Driver Delay	Minor	Signage and Delivery Agreements - Timing and Routeing	Negligible
Pedestrian and Cyclist Delay	Minor	Signage and Delivery Agreements - Timing and Routeing	Minor
Fear and Intimidation	Minor	Banksman and Suitable signage	Minor
Accidents and Safety	Negligible	Signage and Delivery Agreements - Timing and Routeing	Negligible
Air Pollution	Negligible	-	Negligible
Dust and Dirt	Minor	Wheel Washing and Vehicle Sheeting.	Negligible

4.32 There will be no overall difference to the significance of transport effects described in the ES arising from the change to the cables installation method for part of the Pegwell Bay Country Park in response to the EA's representation.

4.33 There are not anticipated to be any cumulative environmental impacts associated with the development as discussed within the main ES chapter.

4.34 As discussed within the ES chapter all potential operational environment impacts associated with construction traffic are anticipated to be negligible.

- 5.1 In summary there are not anticipated to be any changes to the conclusions to the initial ES assessment following the proposed changes to the proposed method of laying of the onshore cables in part of the Pegwell Bay Country Park.
- 5.2 It is anticipated that the change in construction method will result in 19 two-way HGV movements per day accessing the Pegwell Bay Country Park. This increase is related to additional overburden material being used in the construction process.
- 5.3 As part of the alterations to the cable laying construction process it is not anticipated that any of the routes to access the development areas will change.
- 5.4 Following the revision of the volume of traffic associated with the construction of the on shore cables it is anticipated that the daily percentage increase in HGV traffic will increase from 1.1% to 7%.
- 5.5 This is under the 10% threshold for negligible impacts as discussed above as daily variance can see a similar percentage change.
- 5.6 Despite the percentage increase in daily HGV traffic being under 10% a number of potential adverse environmental impacts have been identified associated with the revised construction traffic volumes accessing Sandwich Road.
- 5.7 These again relate to driver delay, fear and intimidation and dust and dirt on the highway. The remaining items assessed such as noise, severance, pedestrian and cyclist delay, highway safety and air pollution are all anticipated to have negligible environmental impacts as per the conclusions of the initial assessment.
- 5.8 There are not anticipated to be any cumulative environmental impacts associated with the development as discussed within the main ES chapter.
- 5.9 As discussed within the ES chapter all potential operational environment impacts associated with construction traffic are anticipated to be negligible.