

# SILVERTOWN TUNNEL

Volume 8

## Development Consent Order Application

Response to ExA's First Written Questions:

8.12 Principal Issue: Construction (on land)

The Infrastructure Planning (Examination Procedure)

Rules 2010

November 2016

Silvertown Tunnel

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Construction (on land)

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# Silvertown Tunnel

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## Development Consent Order Application Response to ExA's First Written Questions: Construction (on land)

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Silvertown Tunnel

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## CL CONSTRUCTION (ON LAND)

### CL.1 Question

**Please provide site location, layout and elevations plans, drawn to a recognised scale, with a north point (where applicable) identifying the various structures, buildings, laboratories and storage areas that would be located in the two construction compounds.**

#### ***Clarification***

- CL.1.1 The design of the Works, including the temporary works methods and processes needed for construction, is at a preliminary design level of definition. This is suitable for identification of land requirements, for developing a construction programme and construction costs, and for the assessment and identification of the likely impacts arising.
- CL.1.2 Further design of the Works is expected to be undertaken by the Contractor appointed to undertake construction. The appointed Contractor's developed design would enable the more definitive plans requested to be developed in detail identifying structures, buildings, laboratories and storage areas.
- CL.1.3 The temporary works plans and detail requested have therefore not been prepared at this stage, prior to appointment of the Contractor.
- CL.1.4 The way in which the assessment of impacts of the construction processes for the envisaged processes on the Worksites has been undertaken is described in the response below.

#### **Response**

- CL.1.5 The use and layout of the Greenwich and Silvertown Worksites is for an envisaged form of construction, and the arrangement of worksite processes is illustrated on plan in drawings (Reference Nos.ST150030-ATK-ZZZ-ZZ-DR-CE-3131 and ST150030-ATK-ZZZ-ZZ-DR-CE-3141 to 3143) of the CMS (APP-046), Appendix B.
- CL.1.6 A description of the envisaged worksite processes is given in Section 4 of the CMS (APP-046).

- CL.1.7 The final arrangement of the worksites and the processes used will reflect the needs of the confirmed construction processes that the appointed Contractor selects as the most suitable to deliver the detailed design in a safe, efficient and effective manner.
- CL.1.8 The envisaged layout of the worksites, the construction equipment and the construction methods envisaged are based upon feasible and safe methods of construction that a competent contractor, using industry good practise, may adopt. These have been used as a basis for assessment of environmental effects.
- CL.1.9 The basis for establishing and assessing the environmental effects arising from construction works, as explained in the CMS, is reported in CH4 of the ES (APP-031) and in the response to question DC93.

## **CL.2 Question**

**The ES [APP-031] in paragraph 4.5.15 states that the indicative locations of the tunnel services buildings are shown on the General Arrangement Plans. No details of size, height or construction details appear to be shown on those plans. Furthermore, the dDCO, in Schedule 1, Authorised Development at Works No 12 and Works No 17 include “the construction of the tunnel services buildings”, referring to sheet 1 and sheet 3 of the works plans, respectively. However Sheet 1 and Sheet 3 provide only the outline of the work boundary and do not provide details of the works that would be proposed within works 12 or works 17.**

**Please can the Applicant provide location, layout and elevation plans drawn to a recognised scale, with a north point (where applicable) of these tunnel services buildings.**

## **Response**

- CL.2.1 An Illustrative design of the tunnel services buildings indicating how they could be delivered within the tunnel services compound envelope, established as described below, and meeting the defined Design Principles, is as presented in section 6 of the Design and Access Statement (APP-095).
- CL.2.2 The detailed design of these buildings will be required (by Requirement 3 of the dDCO) to take into account the Design Principles (APP-096), a number of which specifically refer to these buildings.
- CL.2.3 The illustrative locations of the tunnel services compounds are provided on the General Arrangement Plans (APP-005) and on the Works Plans (APP-008).
- CL.2.4 The envelope of the tunnel services buildings within the tunnel services compounds are presented on Sheet 21 of 23 of the Engineering Section Drawings and Plans (Tunnel Services Compound) (APP-011). This envelope defines the elevations of the tunnel services buildings within the compounds to which the limits of deviation apply.



## CL.3 Question

**(a) ES Figures 4.3 and 4.5 [APP-031] identify an “ancillary services building”. Please can the Applicant provide location, layout and elevation plans drawn to a recognised scale, with a north point (where applicable) indicating envisaged uses of this building.**

**(b) Where is this building secured in the dDCO?**

## Response

### Response Part (a)

- CL.3.1 To clarify, the ‘ancillary services building(s)’ referred to in the ES in figures 4.3 and 4.5 (APP-031) are the tunnel service buildings located in the ‘tunnel services compound’.
- CL.3.2 The nature and arrangement of the tunnel service buildings are the subject of the response to written question CL2.
- CL.3.3 To reiterate the response to CL2, the illustrative locations of the tunnel services compounds are provided on the General Arrangement Plans (APP-005) and on the Works Plans (APP-008).
- CL.3.4 The envelope of the tunnel services compounds are presented on Sheet 21 of 23 of the Engineering Section Drawings and Plans (Tunnel Services Compound) (APP-011). This envelope defines the elevations of the tunnel services buildings within the compounds to which the limits of deviation apply. .
- CL.3.5 The detailed design of these buildings will be required (by Requirement 3 of the dDCO) to take into account the Design Principles (APP-096), a number of which specifically refer to these buildings.
- CL.3.6 An Illustrative Design of the tunnel services buildings indicating how the tunnel services buildings could be delivered within the compound envelope and to meet the defined Design Principles is presented in section 6 of the Design and Access Statement (APP-095).

### Response Part (b)

- CL.3.7 The construction of these buildings is authorised within Work 12(a) and Work 17(a) of Schedule 1 to the dDCO (APP-013).

## **CL.4 Question**

**Please confirm whether the ventilation stacks have been removed from the works listed in Schedule 1 of the dDCO and the associated plans and drawings?**

### **Response**

CL.4.1 The Applicant confirms that ventilation stacks have been removed from the works listed in Schedule 1 of the dDCO and the associated plans and drawings.

## CL.5 Question

**What mitigation is the Applicant proposing in the event of needing to dewater peat deposits (if any are found), in order to minimise the risks of structural defects to nearby properties? How would this be secured in the dDCO?**

### *Clarification*

- CL.5.1 Naturally occurring organic materials, including peat, may be encountered during certain excavation activities undertaken from the ground surface, such as, for example, the excavation for tunnel approach retaining structures or for cut-and-cover tunnels.
- CL.5.2 A description of the envisaged construction processes which may be deployed is given in Section 4 of the Construction Method Statement (CMS) (APP-046). These have been used as a basis for assessment of environmental impacts. The CMS does not envisage the use of an area-wide dewatering scheme to facilitate construction, whereby the groundwater levels in peat deposits (if encountered) would be lowered.
- CL.5.3 In the envisaged methods of construction, where peat or other materials sensitive to dewatering are encountered, localised dewatering would be undertaken within the confines of cofferdams, as described in section 6.1.28 of the CMS (APP-046), effectively controlling groundwater lowering in these materials. Other appropriate methods may be selected by the Contractor according to his working methods. This reflects paragraph 12.5.4 of the ES (APP-031) which indicates that construction methods will minimise disturbance to groundwater and associated risks
- CL.5.4 Notwithstanding the working methods chosen, asset protection against damage risk (including damage risk to nearby properties) arising from any construction activities required for the Scheme, including the dewatering of peat deposits, would be assured via the processes referred to in the 'Response' section below.

### **Response**

- CL.5.5 A description of the way in which the proposed asset protection process is undertaken throughout construction is described in Section 3.9 of the CMS (APP-046), and the control of ground movement from dewatering in retained excavations in particular, based on the envisaged construction methods, is described in Section 4.4.121.

- CL.5.6 The asset protection process, which spans scoping, initial and detailed assessment, construction and completion closeout, is secured by Requirement 5 of the dDCO which requires compliance with the CoCP, Section 10 (APP-092) . This requires the Contactor to follow the industry standard Settlement Assessment and Mitigation Process set out in Appendix A of the CoCP (APP-092).

## **CL.6 Question not for the Applicant**

## **CL.7 Question**

**The Construction Method Statement (CMS) (Document 6.3 Appendix 4.A) [APP-046] paragraph 6.1.11 refers to a “site clearance plan”.**

**(a) Has this plan been prepared and submitted to the Examination? If not, when is it going to be prepared?**

**(b) How is it to be approved?**

**(c) How is it secured in the dDCO?**

## **Response**

### **Response Part (a)**

CL.7.1 The site clearance plan referred to in Sections 4 and 6 of the CMS (APP-046) has not yet been prepared or submitted to the Examination.

CL.7.2 The site clearance plan would be prepared by the Contractor prior to site occupation. It would form part of the Ecology Management Plan and would reflect the construction methods, processes, programme and phasing developed by the Contractor subsequent to the completion of the construction design.

### **Response Part (b)**

CL.7.3 At the time of application the CoCP (APP-092) established that the Ecology Management Plan, including the site clearance plan, would be prepared by the Contractor in consultation with Natural England.

CL.7.4 Subsequent to submission of the application, and reflecting recent discussions between the Applicant, LBN and RBG, the updated draft of the CoCP (APP-092) which is submitted for Examination at Deadline 1, establishes that the Ecology Management Plan will be prepared by the Contractor in consultation with Natural England and submitted for approval to the relevant local planning authorities before the commencement of construction..

CL.7.5 Subject to acceptance of this revised CoCP drafting, it is the Applicant's intention to seek approval of this updated document.

**Response Part (c)**

CL.7.6 Compliance with the CoCP (APP-092) including the preparation of a site clearance plan is secured by Requirement 5 of Schedule 2 to the dDCO.

## **CL.8 Question**

**Where in the dDCO, in Schedule 1 (authorised development) are the following aspects of the proposed construction phase authorised?**

**(a) Waste management treatment plant;**

**(b) Bentonite separation plant;**

**(c) Lime dosing plant;**

**(d) Batching plant for concrete;**

**(e) Crane; and**

**(f) Pre-cast tunnel lining manufacturing plant?**

## **Response**

- CL.8.1 The aspects of the construction phase listed in the question are not specifically identified in Schedule 1 but fall within the scope of ancillary and related development listed in Schedule 1 to the dDCO (APP-013) under the heading 'other works and development'
- CL.8.2 These construction structures are authorised by paragraph (v) and (y) of the list of works following Work 20 in Schedule 1 to the dDCO (APP-013) under the heading 'other works and development'.
- CL.8.3 The development permitted within these paragraphs is introduced as ancillary or related development "for the purposes of or in connection with the construction of any of the works and other development mentioned above".
- CL.8.4 Paragraph (v) authorises 'temporary structures', 'storage areas', 'construction-related buildings', and 'other buildings, machinery, apparatus, works and conveniences' within the definition of authorised development.
- CL.8.5 Furthermore, paragraph (y) authorises works of 'whatever nature, as may be necessary or expedient for the purposes of, or for purposes associated with or ancillary to, the construction, operation or maintenance of the authorised development'.
- CL.8.6 All of the plants mentioned in this question would take the form of construction related buildings and machinery or apparatus. Furthermore,



the crane would be a piece of construction apparatus. All of the items are also necessary or expedient for the purposes of the construction of the tunnel, as they are set out in the envisaged construction methodology in the Construction Method Statement (APP-046).

CL.8.7 Each element of the construction identified in the question is therefore authorised by the dDCO.