# THE INFRASTRUCTURE PLANNING (EXAMINATIONS PROCEDURE) RULES 2010 THE TILBURY 2 PROJECT

WRITTEN REPRESENTATION ON BEHALF OF NATIONAL GRID ELECTRICITY TRANSMISSION PLC



1 Meridian South

**Meridian Business Park** 

Leicester

**LE19 1WY** 

Telephone: 0116 289 2200

Facsimile: 0116 289 3733

**Objector Registration No.**: 20010085

Ref: AW/1051879-6

# WRITTEN REPRESENTATION ON BEHALF OF NATIONAL GRID ELECTRICITY TRANSMISSION PLC

#### 1. **INTRODUCTION**

- 1.1 National Grid Electricity Transmission Plc have made a relevant representation in this matter on 8<sup>th</sup> January 2018 in order to protect apparatus owned by National Grid Electricity Transmission PLC ("NGET"). NGET hopes to avoid objecting in principle to the development proposed by the Promoter, subject to resolving the outstanding issues summarised in paragraphs 1.2 to 1.10 below.
- 1.2 NGET does, however have two key concerns which are currently unresolved at this stage. The primary concern is that that the Project proposes the amendment of the road layout into Tilbury Substation from Tilbury Port and the surrounding areas. NGET require access to their substations and other Apparatus including access for Abnormal Indivisible Loads (AIL). These Abnormal Indivisible Loads will be required to access both Tilbury 275kV and 400kV substations to deliver transformers to maintain and upgrade the substation as necessary. These transformers will have maximum nett weights of 220te (which on a Girded Frame Trailer would in total weigh 347te). There are concerns that Work No. 9A, 9B, 9C and 10 which provide for the construction of a new road and amendments to the existing road network in conjunction with the routing of the new infrastructure corridor under the existing Fort Road will have the impact of:
  - (i) limiting the height access to 5.3 m potentially limiting NGET's access options for Abnormal Indivisible Loads, and
  - (ii) introduce turning radii which would potentially be inaccessible by Abnormal Indivisible Load vehicles required to access NGET's substation.
- 1.3 NGET require access for Abnormal Indivisible Loads to transport transformers to their substations as well as general access for a wide range of vehicle types. The transporters would normally travel from Tilbury Docks then utilise a route shown on the plan in Appendix 1 to access NGET's substations. The location of the NGET assets is shown on the plan in Appendix 2. The transformers would be transported on either Flat Top Trailers or Girder Frame Trailers. A clearance of 6m, rather than the 5.3m currently proposed for the new Infrastructure route passing under Fort Road is required. Existing access arrangements are not impacted by such height restrictions. If access is limited to 5.3m access by Abnormal Indivisible Load vehicles will be restricted to Girder Frame Trailers, which are onerous in terms of negotiability.
- 1.4 Turning radii for a 20 axel Girder Frame Trailers (used to transport 220te Nett transformers) would need to be included in the road design. Designs are not yet worked up sufficiently to undertake swept path analysis but typical transport arrangements for a 20 axle Girder Frame Trailer is provided as Appendix 3, along with details for Flat Top Trailers, which require height access of 6m. Trailer oversail may be required and if this is the case any street furniture on the inside of turns for example is either made to be demountable or set back from the path of the proposed loads.
- 1.5 The new public highway proposed to be constructed under Work 9A could provide access, likely to be preferable to routing via Fort Road. However in order for this to be an option firstly, the overall road would need to be constructed to be considerate of National Grid heavy load requirements in terms of both physical negotiability and also structural capacity if any new bridges, culverts etc are proposed on the new road. Secondly at the point at which the new road becomes a private means of access NGET would need new property rights granting to allow access to NGET. We will need to understand if this is the intention of the Promoter and obtain sufficient assurances to this effect from the Promoter

- 1.6 It should also be noted that Abnormal Indivisible Load access will be required both during and post construction and as such retaining existing access and not stopping up the private means of access from the adopted public highway, at least until the alternative is provided, need to be considered to ensure continuity of access for NGET.
- 1.7 In summary NGET would like an explanation from the Promoter as to how Abnormal Indivisible Loads will be able to access their substations and other Apparatus. Without such reassurances being forthcoming this is unacceptable to NGET as it would prevent them accessing their Sub Stations and Apparatus in the manner necessary to maintain and improve their Sub Stations and Apparatus in line with their property rights and in order to enable them to fulfill their statutory obligations. As such NGET wish to understand from the Promoter how the new road layout will accommodate NGET abnormal loads both during and post construction.
- 1.8 Furthermore NGET can currently access their Sub Stations and other Apparatus 24 hours a day. Access is required for staff access, day to day maintenance and operation, security and emergency access. Access is via Fort Road than then east across the Order Land on the route of Works No. 4, 8C and in close proximity to Work 8B. Access will need to be maintained both during and after construction in accordance with NGET's property rights, which will need to subsist irrespective of compulsory acquisition powers in the Order. The promoter has not yet explained to NGET how access can be secured both during the construction and operational stages of the Project. NGET wish to understand from the Promoter how they will work to construct Works 4 and 8C in a way that will allow NGET maintain 24-hour access during construction? They will also wish to understand access during the operational phases of the project given the interactions with the Authorised Development being constructed adjoining the existing access route.
- 1.9 NGET are also concerned about proposals for dredging in close proximity to the Tilbury 400kV Tunnel Cable from Kingsnorth to Tilbury Substation which supplies the surrounding area and it's infrastructure needs. We note that ExA have asked question 1.9.11 about restrictions on the location of proposed dredging activity. It will be helpful to understand the Promoters response to this question. Limitations on the location and depth of dredging in combination with approval by NGET of a suitable method statement prior to dredging in the vicinity of NGET's cable tunnel along with appropriate indemnity and insurance provisions being contained in the Protective Provisions may mean that NGET's concerns about this work can be alleviated. At this stage these concerns remain to be satisfactorily resolved.
- 1.10 NGET also objects to the Authorised Works, being carried out in close proximity to their apparatus in the area unless and until suitable protective provisions and related agreements have been secured to their satisfaction, to which see further at paragraph 5. They also object to any compulsory acquisition powers for land or new rights or other related powers to acquire land temporarily, override easements or rights or stop up public or private rights of access being invoked which would affect their apparatus, or right to access and maintain their apparatus. This is unless and until suitable protective provisions and any necessary related amendments to the wording of the DCO have been agreed and included in the Order.

## 2. **NGET ASSETS**

2.1 NGET assets which have been identified as being within or within close proximity to the proposed Order limits are:

#### 275kV Assets

- Tilbury 275kV Substation
- ZB 275kV Over Head Line

### 400kV Assets

- Tilbury 400kV GIS Substation
- YYJ 400kV Over Head Line (Tower YYJ136 in the Order boundary)
- 4VG 400kV Over Head Line
- XJ 400kV Over Head Line
- Tilbury 400kV Tunnel Cable (Partially in Order boundary where dredging is expected)
- 2.2 All Assets including the substations are accessed across the Order Land, along the route of Work 4.
- 2.3 The overhead lines, underground cables in the Cable Tunnel and substations form an essential part of the electricity transmission network in England and Wales.
- 2.4 As explained in paragraph 1.2 to 1.8 above access into NGET's substation and other Apparatus both during and after construction is a key concern and needs to be resolved. As is the proximity of the dredging NGET's cable tunnel, see paragraph 1.9.
- 2.5 In respect of all NGET infrastructure located within the DCO boundary, or in close proximity to the proposed project and associated works, NGET will require protective provisions to be put in place to ensure (i) that all NGET interests and rights of access are unaffected by the powers of compulsory acquisition, grant and extinguishment of rights, survey and temporary use powers and stopping up powers; and (ii) to ensure that appropriate protection for the retained apparatus is maintained during and after construction of the project. This includes compliance with all relevant standards on safety clearances EN 43 -8, Development near overhead lines and HSE Guidance Note GS6 Avoiding Danger from Overhead Electric Lines.

# 3. NGET - ROLES AND RESPONSIBILITIES AND REGULATORY PROTECTION FRAMEWORK

- 3.1 NGET own and operate the electricity transmission network in England and Wales, with day-to-day responsibility for balancing supply and demand. NGET operate but do not own the Scottish networks. NGET is required to comply with the terms of its Electricity Transmission Licence in the delivery of its statutory responsibility. Under Section 9 of the Electricity Act 1989, NGET have a statutory duty to maintain 'an efficient, co-ordinated and economical' system of electricity transmission.
- 3.2 NGET have issued guidance in respect of standards and protocols for working near to Electricity Transmission equipment in the form of:
  - Third Party Working near National Grid Electricity Transmission equipment Technical Guidance Note 287. This document gives guidance and information to third parties working close to National Grid Electricity Transmission assets. This cross refers to statutory electrical safety clearances which are used as the basis for ENA (TA) 43-8, which must be observed to ensure safe distance is kept between exposed conductors and those working in the vicinity of electrical assets, and
  - Energy Network Associations Development near Overhead Lines ENA (TS) 43-8. This sets out
    the derivation and applicability of safe clearance distances in various circumstances including
    crossings of OHL and working in close proximity.
  - Additionally HSE's guidance note 6 "Avoidance of Danger of Overhead Lines". Summarises
    advice to minimise risk to life/personal injury and provide guidance to those planning and
    engaging in construction activity in close proximity to Overhead Lines.

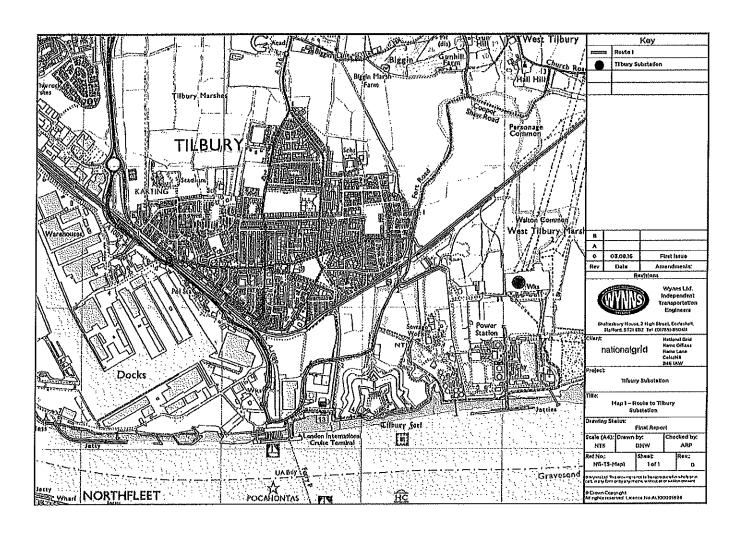
3..3 National Grid requires specific protective provisions in place to provide for an appropriate level of control and assurance that industry standards will be complied with in connection with works to and in the vicinity of their electricity assets.

#### 4 PROTECTIVE PROVISIONS

- 4.1 National Grid seeks to protect its statutory undertaking, and insists that in respect of connections and work in close proximity to their Apparatus as part of the authorised development the following procedures are complied with by the Applicant:
  - (a) National Grid is in control of the plans, methodology and specification for works within 15 metres of any Apparatus or that would otherwise adversely affect any Apparatus or work that comes within specified distances in respect of relevant types of work as outlined in key guidance to which see paragraph 4 above,
  - (b) DCO works in the vicinity of NGET's apparatus are not authorised or commenced unless protective provisions are in place preventing compulsory acquisition of National Grid's land or rights and including appropriate insurance and indemnity provisions to protect National Grid.
- 4.2 National Grid maintain that without an agreement or qualification on the exercise of unfettered compulsory powers or connection to its apparatus the following consequences will arise:
  - Failure to comply with industry safety standards, legal requirements and Health and Safety Executive standards create a health and safety risk;
  - Any damage to apparatus has potentially serious hazardous consequences for individuals located in the vicinity of the pipeline/apparatus if it were to fail.
  - Potential impacts on continuity of supply
- 4.3 Insufficient property rights have the following safety implications:
- Inability for qualified personnel to access apparatus for its maintenance, repair and inspection.
- Risk of strike to Apparatus/pipeline if development occurs within the easement zone which seeks to protect the pipeline from development.
- Risk of inappropriate development within the vicinity of the pipeline increasing the risk of the above.
- The proposed Order does not yet contain fully agreed protective provisions expressed to be for the protection of National Grid to National Grids satisfaction, making it currently deficient from National Grid's perspective. National Grid contend that it is essential that these provisions are addressed to their satisfaction to ensure adequate protection for their Apparatus and that protective provisions on their standard terms are provided. These are attached as Appendix 4. Furthermore National Grid requires confirmation that appropriate access to their sub station and apparatus including for Abnormal Indivisible Loads can be made available and that access can be maintained at all times as explained in paragraph 1.
- 4.5 The Parties are in discussions and are continuing negotiations to seek to reach agreement on the terms of protective provisions and the access issues.
- 4.6 Should this not be possible and attendance at a Compulsory Acquisition Hearing or Issue Specific Hearing is necessary then National Grid reserve the right to provide further written information in advance in support of any detailed issues remaining in dispute between the parties at that stage.

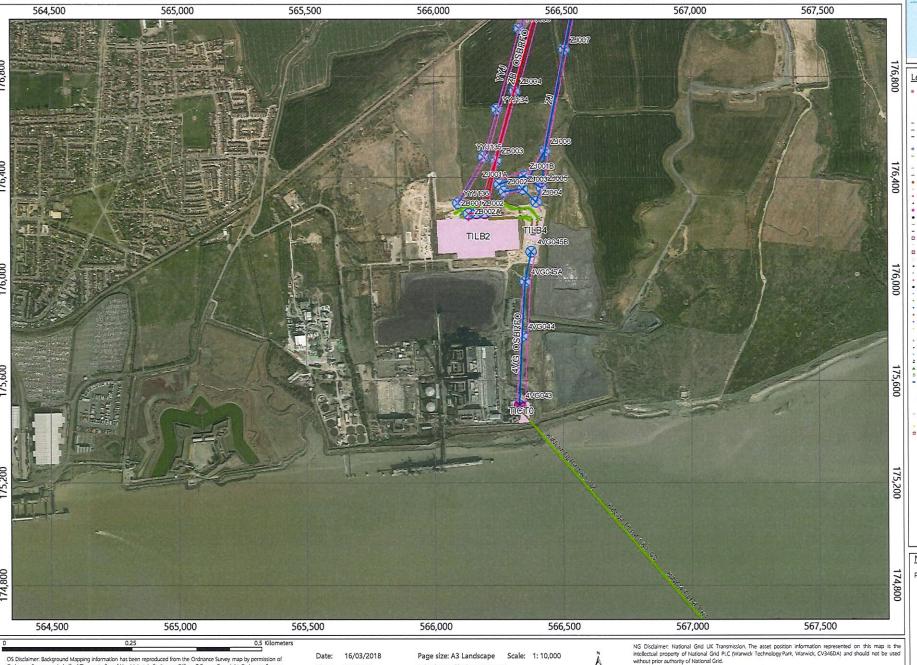
#### 4.7 List of Appendices:

Appendix 1 – Access Route from Port of Tilbury Docks Appendix 2 – Location Plan showing location of NGET's Assets, Appendix 3 – Typical Transport Arrangements for a 20 Axle Girded Frame Trailer Appendix 4 - National Grid's Standard Protective Provisions



# nationalgrid location

Ordnance Survey on behalf of The controller of Her Majesty's Stationery Office. ©Crown Copyright Ordnance Survey NationalGrid Electricity-100024241 NationalGrid Gas-100024886



Print by: Jefferies, Spencer

Time: 13:54:04



#### Legend:

- OHL 400Kv Comr
- OHL 132Kv & Below Commissioned

- Burled Cable Commissioned Fibre Cable Con
- Pilot Cable
- PillarOil Tank
- Gauge
   Joint Bay
- Oil Pipe Cooling Pipe
- □ Cooling Station
  RAMM
- Gas Operational Bour Gas Site Boundary
- Trial Hole
- Vantage Point Block Valve
- Compressor
   LNG Site
- Multijunction Minimum Offtake
- Future Minimum Offtake

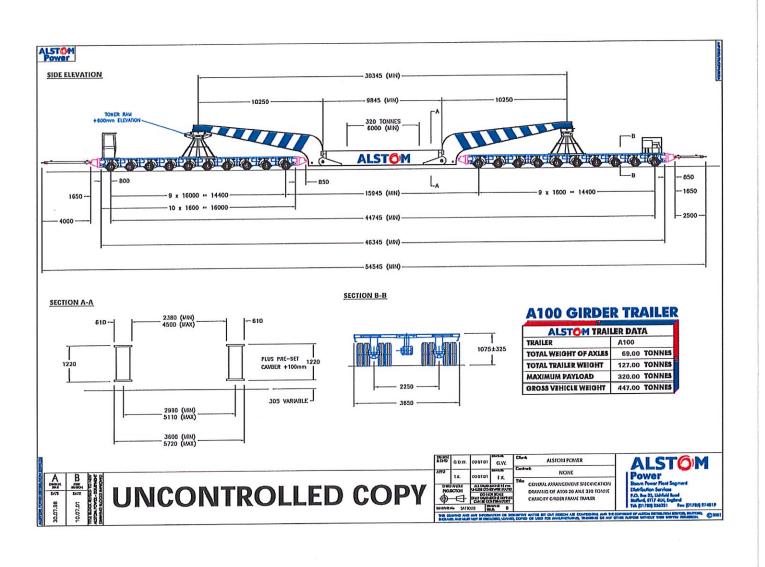
- Pig Trap Terminal
- Transferred Offtake Aerial Marker Post
- CP Test Post

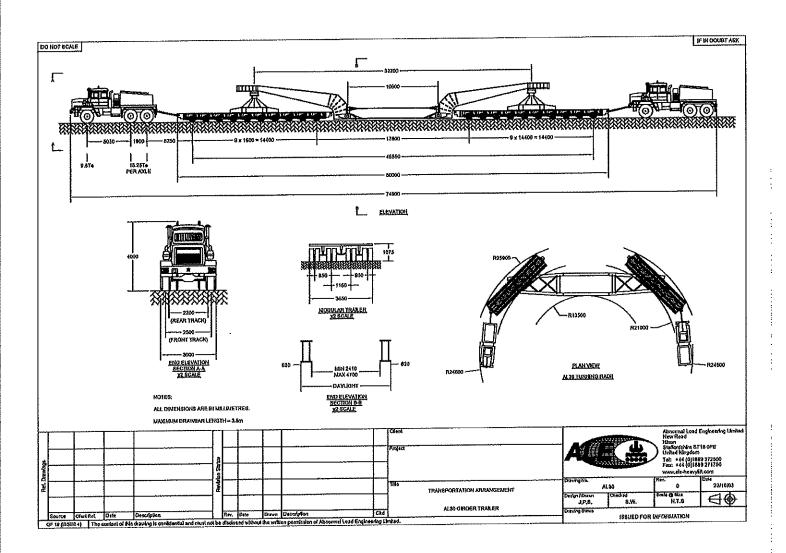
- CP Protected Section Range SRP Sightings Open
- Eagles Enquiries Open

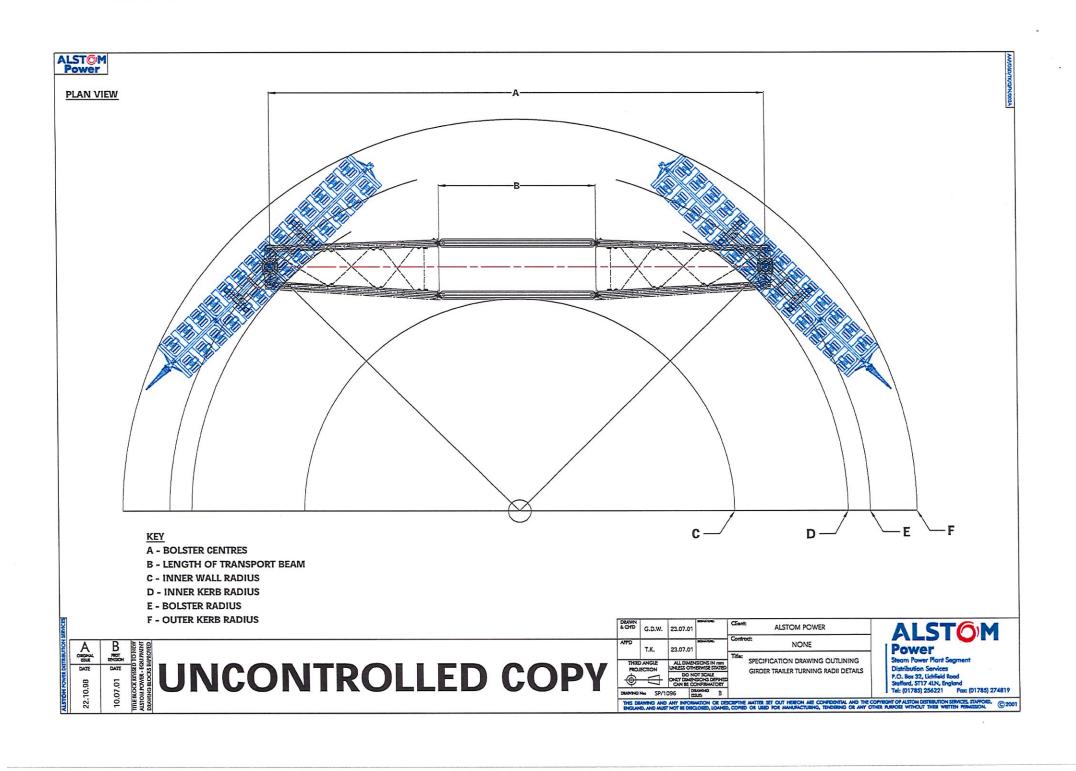
Notes:

plan

Note: Any sketches on the map are approximate and not captured to any particular level of precision.









Steam Power Plant Segment
Plant Business

# **DETAILS OF TURNING RADII FOR GIRDER TRAILERS**

GIRDER	BOLSTER CENTRES	TRANSPORT BEAM	INNER WALL	INNER KERB	BOLSTER RADIUS	OUTER KERB
TRAILER	(A)	LENGTH (B)	RADIUS (C)	RADIUS (D)	(E)	RADIUS (F)
A50	24800	9000	9900	15700	17550	20400 -
A50	25800	10000	10400	16400	18250	21100
A50	26800	11000	10900	17150	18950	21750
A50	27800	12000	11400	17850	19650	22400
A100	30500	10000	12750	19750	24600	25050
A100	31500	11000	13250	20450	22300	25700
A100	32500	12000	13750	21200	23000	26350
A200	26400	9000	10700	16550	18700	22150
A200	27400	10000	11200	17250	19400	22850
A200	28400	11000	11700	17950	20100	23500
A200	29400	12000	12200	18650	20800	24150
A300	30500	10000	12750	19450	21600	25550
A300	31500	11000	13250	20150	22300	26200
A300	32500	12000	13750	20850	23000	26900



# **POWER**

Steam Power Plant Segment
Plant Business

# **DETAILS OF TURNING RADII FOR GIRDER TRAILERS**

GIRDER	BOLSTER CENTRES (A)	TRANSPORT BEAM	INNER WALL	INNER KERB	BOLSTER RADIUS	OUTER KERB
TRAILER		LENGTH (B)	RADIUS (C)	RADIUS (D)	(E)	RADIUS (F)
A400	27400	10000	11200	17250	19400	22900
A400	28400	11000	11700	17950	20100	23500
A400	29400	12000	12200	18650	20800	24150
A500 (24)	38000	10000	16300	25050	26900	30900
A500 (24)	39000	11000	16800	25800	27600	31000
A500 (24)	40000	12000	17300	26500	28300	31700
A500 (24)	41000	13000	17800	27200	29000	32350
A500 (28)	38000	10000	16300	25050	26900	30900
A500 (28)	39000	11000	16800	25800	27600	31550
A500 (28)	40000	12000	17300	26500	28300	32200
A500 (28)	41000	13000	17800	27100	29000	32900
A600	27400	10000	11200	17550	19400	22400
A600	28400	11000	11700	18300	20100	23100
A600	29400	12000	12200	19000	20800	23750

#### GIRDER FRAME TRAILERS CONFIGERATION BASED ON UNIT WEIGHT OF 220te nett

TRAILER NUMBER	AL100	Allely 350 & 20	Collett 20
No. OF AXLES	20	20	20
TRAVELLING HEIGHT m #	5.175	5.175	5.175
REDUCIBLE HEIGHT m #	4.925	4.925	4.925
WIDTH m#	5M	5M	5M
NET WEIGHT (te)	220	220	220
GROSS WEIGHT (te)	347	383	409.44
OVERALL LENGTH m #	74.7	64.827	48.53
RIGID LENGTH m# (EXCLUDING DRAWBAR)	48.2	48.626	31.708
AXLE WEIGHTS	17.35	1 <del>9</del> .15	20.472
AXLE SPACINGS	9 x 1.6	9×1.5	9x1.5
	1 x 16.1	1 x 18.726	18.208
	9 x 1.6	9 x 1.5	9 x 1.5
OUTSIDE TRACK III	3.65	3,00	3.00
LATERAL SPACINGS	0.95	0.75	0.75
	1.16	1.05	1.03
	0.95	0.75	0.75
BLOCK LOADING GROUND PRESS T/M2	3.30	4.73	5,05

<sup>#</sup> Please note trailer details can be changed by hauliers for specific movements and configurations and are based on information available to us at this time.

EACH TRAILER WILL BE ACCOMPANIED BY TWO TRACTORS, ONE PULLING, ONE PUSHING, EACH BETWEEN 40 AND 48TONNES GROSS.

## FLATTOP TRAILER CONFIGERATIONS BASED ON UNIT WEIGHT OF 220te nett

TRAILER NUMBER	13 Row	14 Row
No. OF AXLES	13	14
TRAVELLING HEIGHT (M) #	5.92	5.92
REDUCIBLE HEIGHT (M) #	5,67	5,67
WIDTH (M)	5	5
NETT WEIGHT (te)	220	220
GROSS WEIGHT (te)	264.5	267.5
OVERALL LENGTH (M) #	49.61	51.8
RIGID LENGTH (M) (EXCLUDING DRAWBAR)	21.91	24.1
AXLE WEIGHTS (te)	20.35	19.12
AXLE SPACINGS	12 x 1.55	13 x 1.6
OUTSIDE TRACK m	2.99	3.65
LATERAL SPACINGS	0.735	0.95
	1.085	1.16
	0.735	0.95
BLOCK LOADING GROUND PRESS T/M2	4.76	3.52

<sup>#</sup> Please note trailer details can be changed by hauliers for specific movements and configurations and are based on information available to us at this time.

EACH TRAILER WILL BE ACCOMPANIED BY TWO TRACTORS, ONE PULLING, ONE PUSHING, EACH BETWEEN 40 AND 48TONNES GROSS.

# **SCHEDULES**

# SCHEDULE 1 PROTECTIVE PROVISIONS

# PART 1

# FOR THE PROTECTION OF NATIONAL GRID AS ELECTRICITY AND GAS UNDERTAKER

# Application

1. For the protection of the undertaker referred to in this Part of this Schedule the following provisions will, unless otherwise agreed in writing between the promoter and the undertaker, have effect.

# Interpretation

- 2. In this Part of this Schedule-
- "1991 Act" means the New Roads and Street Works Act 1991;
- "acceptable credit provider" means a bank or financial institution with a credit rating that is not lower than: (i) "A-" if the rating is assigned by Standard & Poor's Ratings Group or Fitch Ratings; and "A3" if the rating is assigned by Moody's Investors Services Inc.;
- "acceptable insurance" means a third party liability insurance effected and maintained by the promoter with a limit of indemnity of not less than £25,000,000.00 (twenty five million mounds) per occurrence or series of occurrences arising out of one event. Such insurance shall be maintained for the construction period of the authorised works which constitute specified works and arranged with an internationally recognised insurer of repute operating in the London and worldwide insurance market underwriters whose security/credit rating meets the same requirements as an "acceptable credit provider", such policy shall include (but without limitation):
- (a) National Grid Electricity Transmission Plc and National Grid Gas Plc as a Co-Insured;
- (b) a cross liabilities clause; and
- (c) contractors' pollution liability for third party property damage and third party bodily damage arising from a pollution/contamination event with cover of £10,000,000.00 (ten million pounds) per event or £20,000,000.00 (twenty million pounds) in aggregate;
- "acceptable security" means either:
- (a) a parent company guarantee from a parent company in favour of National Grid Electricity Transmission Plc and National Grid Gas Plc to cover the promoter's liability to National Grid Electricity Transmission Plc and National Grid Gas Plc to a cap of not less than £10,000,000.00 (ten million pounds) per asset per event up to a total liability cap of £25,000,000.00 (twenty five million pounds) (in a form reasonably satisfactory to the undertaker and where required by the undertaker, accompanied with a legal opinion confirming the due capacity and authorisation of the parent company to enter into and be bound by the terms of such guarantee); or
- (b) a bank bond or letter of credit from an acceptable credit provider in favour of National Grid Electricity Transmission Plc and National Grid Gas Plc to cover the promoter's liability to National Grid Electricity Transmission Plc and National Grid Gas Plc for an amount of not less than £10,000,000.00 (ten million pounds) per asset per event up to a total liability cap of

£25,000,000.00 (twenty five million pounds) (in a form reasonably satisfactory to the undertaker);

"alternative apparatus" means appropriate alternative apparatus to the satisfaction of the undertaker to enable the undertaker to fulfil its statutory functions in a manner no less efficient than previously;

"apparatus" means-

- (a) in the case of an electricity undertaker, electric lines or electrical plant as defined in the Electricity Act 1989, belonging to or maintained by that undertaker;
- (b) in the case of a gas undertaker, any mains, pipes or other apparatus belonging to or maintained by a gas transporter for the purposes of gas supply;

together with any replacement apparatus and such other apparatus constructed pursuant to the Order that becomes operational apparatus of the undertaker for the purposes of transmission, distribution and/or supply and includes any structure in which apparatus is or will be lodged or which gives or will give access to apparatus;

"authorised works" has the same meaning as is given to the term "authorised development" in article [●] of this Order and includes any associated development authorised by the Order and for the purposes of this Part of this Schedule includes the use and maintenance of the authorised works and construction of any works authorised by this Schedule;

"commence" has the same meaning as in paragraph [●] of Schedule [●] (requirements) and commencement shall be construed to have the same meaning;

"deed of consent" means a deed of consent, crossing agreement, deed of variation or new deed of grant agreed between the parties acting reasonably in order to vary and/or replace existing easements, agreements, enactments and other such interests so as to secure land rights and interests as are necessary to carry out, maintain, operate and use the apparatus in a manner consistent with the terms of this Part of this Schedule;

"functions" includes powers and duties;

"ground mitigation scheme" means a scheme approved by the undertaker (such approval not to be unreasonably withheld or delayed) setting out the necessary measures (if any) for a ground subsidence event;

"ground monitoring scheme" means a scheme for monitoring ground subsidence which sets out the apparatus which is to be subject to such monitoring, the extent of land to be monitored, the manner in which ground levels are to be monitored, the timescales of any monitoring activities and the extent of ground subsidence which, if exceeded, shall require the promoter to submit for the undertaker's approval a ground mitigation scheme;

"ground subsidence event" means any ground subsidence identified by the monitoring activities set out in the ground monitoring scheme that has exceeded the level described in the ground monitoring scheme as requiring a ground mitigation scheme;

"in" in a context referring to apparatus or alternative apparatus in land includes a reference to apparatus or alternative apparatus under, over, across, along or upon such land;

"maintain" and "maintenance" shall include the ability and right to do any of the following in relation to any apparatus or alternative apparatus of the undertaker including construct, use, repair, alter, inspect, renew or remove the apparatus

"plan" or "plans" include all designs, drawings, specifications, method statements, soil reports, programmes, calculations, risk assessments and other documents that are reasonably necessary properly and sufficiently to describe and assess the works to be executed;

"parent company" means a parent company of the promoter acceptable to and which shall have been approved by the Undertaker acting reasonably

"promoter" means the undertaker as defined in article [•] of this Order;

"undertaker" means, as appropriate—

(c) an electricity undertaker being a licence holder within the meaning of Part 1 of the Electricity Act 1989; and

- (d) a gas transporter within the meaning of Part 1 of the Gas Act 1986.
- "specified works" means any of the authorised works or activities undertaken in association with the authorised works which:
- (a) will or may be situated over, or within 15 metres measured in any direction of any apparatus the removal of which has not been required by the promoter under paragraph 7(2) or otherwise;
- (b) may in any way adversely affect any apparatus the removal of which has not been required by the promoter under paragraph 7(2) or otherwise; and/or
- (c) include any of the activities that are referred to in paragraph 8 of T/SP/SSW/22 (the undertaker's policies for safe working in proximity to gas apparatus "Specification for safe working in the vicinity of National Grid, High pressure Gas pipelines and associated installation requirements for third parties T/SP/SSW/22";
- 3. Except for paragraphs 4 (apparatus in stopped up streets), 9 (retained apparatus: protection), 10 (expenses) and 11 (indemnity) of this Schedule which will apply in respect of the exercise of all or any powers under the Order affecting the rights and apparatus of the undertaker, the other provisions of this Schedule do not apply to apparatus in respect of which the relations between the promoter and the undertaker are regulated by the provisions of Part 3 of the 1991 Act.

# Apparatus of Undertakers in stopped up streets

- **4.**—(1) Without prejudice to the generality of any other protection afforded to the undertaker elsewhere in the Order, where any street is stopped up under article [•] (stopping up of streets and extinguishment of rights), if the undertaker has any apparatus is in the street or accessed via that street the undertaker will be entitled to the same rights in respect of such apparatus as it enjoyed immediately before the stopping up and the promoter will grant to the undertaker, or will procure the granting to the statutory undertaker of, legal easements reasonably satisfactory to the specified undertaker in respect of such apparatus and access to it prior to the stopping up of any such street or highway.
- (2) Notwithstanding the temporary stopping up or diversion of any highway under the powers of article [●] (temporary stopping up of streets and rights of way), an undertaker will be at liberty at all times to take all necessary access across any such stopped up highway and/or to execute and do all such works and things in, upon or under any such highway as may be reasonably necessary or desirable to enable it to maintain any apparatus which at the time of the stopping up or diversion was in that highway.

#### Protective works to buildings

- 5.—(1) The promoter, in the case of the powers conferred by article [•] (protective work to buildings), must exercise those powers so as not to obstruct or render less convenient the access to any apparatus without the written consent of the undertaker and, if by reason of the exercise of those powers any damage to any apparatus (other than apparatus the repair of which is not reasonably necessary in view of its intended removal or abandonment) or property of the undertaker or any interruption in the supply of electricity and/or gas, as the case may be, by the undertaker is caused, the promoter must bear and pay on demand the cost reasonably incurred by the undertaker in making good such damage or restoring the supply; and, subject to subparagraph (2), shall—
  - (a) pay compensation to the undertaker for any loss sustained by it; and
  - (b) indemnify the undertaker against all claims, demands, proceedings, costs, damages and expenses which may be made or taken against or recovered from or incurred by that undertaker, by reason of any such damage or interruption.
- (2) Nothing in this paragraph imposes any liability on the promoter with respect to any damage or interruption to the extent that such damage or interruption is attributable to the act, neglect or default of an undertaker or its contractors or workmen; and the undertaker will give to the promoter

reasonable notice of any claim or demand as aforesaid and no settlement or compromise thereof shall be made by the undertaker, save in respect of any payment required under a statutory compensation scheme, without first consulting the promoter and giving the promoter an opportunity to make representations as to the claim or demand.

## Acquisition of land

- 6. (1) Regardless of any provision in this Order or anything shown on the land plans or contained in the book of reference to the Order, the promoter may not acquire any land interest or apparatus or override any easement and/or other interest of the undertaker otherwise than by agreement.
  - (2) As a condition of agreement between the parties in paragraph 6(1), prior to the carrying out of any part of the authorised works (or in such other timeframe as may be agreed between the undertaker and the promoter) that are subject to the requirements of this Part of this Schedule that will cause any conflict with or breach the terms of any easement and/or other legal or land interest of the undertaker and/or affects the provisions of any enactment or agreement regulating the relations between the undertaker and the promoter in respect of any apparatus laid or erected in land belonging to or secured by the promoter, the promoter must as the undertaker reasonably requires enter into such deeds of consent upon such terms and conditions as may be agreed between the undertaker and the promoter acting reasonably and which must be no less favourable on the whole to the undertaker unless otherwise agreed by the undertaker, and it will be the responsibility of the promoter to procure and/or secure the consent and entering into of such deeds and variations by all other third parties with an interest in the land at that time who are affected by such authorised works.
  - (3) The promoter and the undertaker agree that where there is any inconsistency or duplication between the provisions set out in this Part of this Schedule relating to the relocation and/or removal of apparatus/including but not limited to the payment of costs and expenses relating to such relocation and/or removal of apparatus) and the provisions of any existing easement, rights, agreements and licences granted, used, enjoyed or exercised by the undertaker and/or other enactments relied upon by the undertaker as of right or other use in relation to the apparatus, then the provisions in this Schedule shall prevail.
  - (4) Any agreement or consent granted by the undertaker under paragraph [9] or any other paragraph of this Part of this Schedule, shall not be taken to constitute agreement under subparagraph 6(1).

## Removal of apparatus

- 7.—(1) If, in the exercise of the agreement reached in accordance with paragraph 6 or in any other authorised manner, the promoter acquires any interest in any land in which any apparatus is placed, that apparatus must not be removed under this Part of this Schedule and any right of an undertaker to maintain that apparatus in that land must not be extinguished until alternative apparatus has been constructed, and is in operation to the reasonable satisfaction of the undertaker in question in accordance with sub-paragraph (2) to (5) inclusive.
- (2) If, for the purpose of executing any works in, on, under or over any land purchased, held, appropriated or used under this Order, the promoter requires the removal of any apparatus placed in that land, it must give to the undertaker 56 days' advance written notice of that requirement, together with a plan of the work proposed, and of the proposed position of the alternative apparatus to be provided or constructed and in that case (or if in consequence of the exercise of any of the powers conferred by this Order the undertaker reasonably needs to remove any of its apparatus) the promoter must, subject to sub-paragraph (3), afford to the undertaker to its satisfaction (taking into account paragraph 8(1) below) the necessary facilities and rights
  - (a) for the construction of alternative apparatus in other land of or land secured by the promoter; and
  - (b) subsequently for the maintenance of that apparatus.

- (3) If alternative apparatus or any part of such apparatus is to be constructed elsewhere than in other land of or land secured by the promoter, or the promoter is unable to afford such facilities and rights as are mentioned in sub-paragraph (2), in the land in which the alternative apparatus or part of such apparatus is to be constructed, the undertaker must, on receipt of a written notice to that effect from the promoter, take such steps as are reasonable in the circumstances in an endeavour to obtain the necessary facilities and rights in the land in which the alternative apparatus is to be constructed save that this obligation shall not extend to the requirement for the undertaker to use its compulsory purchase powers to this end unless it elects to so do.
- (4) Any alternative apparatus to be constructed in land of or land secured by the promoter under this Part of this Schedule must be constructed in such manner and in such line or situation as may be agreed between the undertaker and the promoter.
- (5) The undertaker must, after the alternative apparatus to be provided or constructed has been agreed, and subject to the grant to the undertaker of any such facilities and rights as are referred to in sub-paragraph (2) or (3), proceed without unnecessary delay to construct and bring into operation the alternative apparatus and subsequently to remove any apparatus required by the promoter to be removed under the provisions of this Part of this Schedule.

# Facilities and rights for alternative apparatus

- 8.—(1) Where, in accordance with the provisions of this Part of this Schedule, the promoter affords to or secures for the undertaker facilities and rights in land for the construction, use, maintenance and protection of alternative apparatus in substitution for apparatus to be removed, those facilities and rights must be granted upon such terms and conditions as may be agreed between the promoter and the undertaker and must be no less favourable on the whole to the undertaker than the facilities and rights enjoyed by it in respect of the apparatus to be removed unless otherwise agreed by the undertaker.
- (2) If the facilities and rights to be afforded by the promoter and agreed with the undertaker under paragraph 8(1) above in respect of any alternative apparatus, and the terms and conditions subject to which those facilities and rights are to be granted, are less favourable on the whole to the undertaker than the facilities and rights enjoyed by it in respect of the apparatus to be removed and the terms and conditions to which those facilities and rights are subject in the matter will be referred to arbitration in accordance with paragraph [16] (Arbitration) of this Part of this Schedule and the arbitrator shall make such provision for the payment of compensation by the promoter to the undertaker as appears to the arbitrator to be reasonable having regard to all the circumstances of the particular case.

## [Retained apparatus: protection Gas Undertakers]

- 9.—(1) Not less than 56 days before the commencement of any specified works the promoter must submit to the undertaker a plan and, if reasonably required by the undertaker, a ground monitoring scheme in respect of those works.
- (2) The plan to be submitted to the undertaker under sub-paragraph (1) must include a method statement and describe—
  - (a) the exact position of the works;
  - (b) the level at which these are proposed to be constructed or renewed;
  - (c) the manner of their construction or renewal including details of excavation, positioning of plant etc;
  - (d) the position of all apparatus;
  - (e) by way of detailed drawings, every alteration proposed to be made to or close to any such apparatus; and
  - (f) any intended maintenance regimes.
- (3) The promoter must not commence any works to which sub-paragraphs 1 and (2) apply until the undertaker has given written approval of the plan so submitted.

- (4) Any approval of the undertaker required under sub-paragraph (2)—
  - (a) may be given subject to reasonable conditions for any purpose mentioned in subparagraphs (5) or (7); and,
  - (b) must not be unreasonably withheld.
- (5) In relation to any work to which sub-paragraphs (1) and/or (2) apply, the undertaker may require such modifications to be made to the plans as may be reasonably necessary for the purpose of securing its apparatus against interference or risk of damage or for the purpose of providing or securing proper and convenient means of access to any apparatus.
- (6) Works to which this paragraph applies must only be executed in accordance with the plan, submitted under sub-paragraph (1) or as relevant sub paragraph (4), as approved or as amended from time to time by agreement between the promoter and the undertaker and in accordance with such reasonable requirements as may be made in accordance with sub-paragraphs (5) or (7) by the undertaker for the alteration or otherwise for the protection of the apparatus, or for securing access to it, and the undertaker will be entitled to watch and inspect the execution of those works.
- (7) Where the undertaker requires any protective works to be carried out by itself or by the promoter (whether of a temporary or permanent nature) such protective works, inclusive of any measures or schemes required and approved as part of the plan approved pursuant to this paragraph, must be carried out to the undertakers' satisfaction prior to the commencement of any authorised works (or any relevant part thereof) for which protective works are required and the undertaker must give 56 days' notice of such works from the date of submission of a plan pursuant to this paragraph (except in an emergency).
- (8) If the undertaker in accordance with sub-paragraphs (5) or (7) and in consequence of the works proposed by the promoter, reasonably requires the removal of any apparatus and gives written notice to the promoter of that requirement, paragraphs 1 to 3 and 6 to 8 apply as if the removal of the apparatus had been required by the promoter under paragraph 7(2).
- (9) Nothing in this paragraph precludes the promoter from submitting at any time or from time to time, but in no case less than 56 days before commencing the execution of the authorised works, a new plan, instead of the plan previously submitted, and having done so the provisions of this paragraph will apply to and in respect of the new plan.
- (10) The promoter will not be required to comply with sub-paragraph (1) where it needs to carry out emergency works as defined in the 1991 Act but in that case it must give to the undertaker notice as soon as is reasonably practicable and a plan of those works and must—
  - (a) comply with sub-paragraphs (5), (6) and (7) insofar as is reasonably practicable in the circumstances; and
  - (b) comply with sub-paragraph (11) at all times.
- (11) At all times when carrying out any works authorised under the Order the undertaker must comply with the undertaker's policies for safe working in proximity to gas apparatus "Specification for safe working in the vicinity of National Grid, High pressure Gas pipelines and associated installation requirements for third parties T/SP/SSW22" and HSE's "HS(~G)47 Avoiding Danger from underground services".
- (12) As soon as reasonably practicable after any ground subsidence event attributable to the authorised development the promoter shall implement an appropriate ground mitigation scheme save that the undertaker retains the right to carry out any further necessary protective works for the safeguarding of its apparatus and can recover any such costs in line with paragraph 10.

# [Retained apparatus: Protection: Electricity Undertakers]

# [Alternative Paragraph 9]

9.—(1) Not less than 56 days before the commencement of any authorised works that are near to, or will or may affect, any apparatus the removal of which has not been required by the promoter under paragraph 7(2) or otherwise, the promoter must submit to the undertaker a plan of the works to be executed and seek from National Grid details of the underground extent of their electricity tower foundations.

- (2) In relation to works which will or may be situated on, over, under or within (i) [15] metres measured in any direction of any apparatus, or (ii) involve embankment works within [15] metres of any apparatus, the plan to be submitted to the undertaker under sub-paragraph (1) must include a method statement and describe—
  - (a) the exact position of the works;
  - (b) the level at which these are proposed to be constructed or renewed;
  - (c) the manner of their construction or renewal including details of excavation, positioning of plant;
  - (d) the position of all apparatus;
  - (e) by way of detailed drawings, every alteration proposed to be made to or close to any such apparatus;
  - (f) any intended maintenance regimes; and
  - (g) an assessment of risks of rise of earth issues.
  - (3) In relation to any works which will or may be situated on, over, under or within [10] metres of any part of the foundations of an electricity tower or between any two or more electricity towers, the plan to be submitted under sub-paragraph (1) must, in addition to the matters set out in sub-paragraph (2), include a method statement describing;
    - (a) details of any cable trench design including route, dimensions, clearance to pylon foundations;
    - (b) demonstration that pylon foundations will not be affected prior to, during and post construction;
    - (c) details of load bearing capacities of trenches;
    - (d) details of cable installation methodology including access arrangements, jointing bays and backfill methodology;
    - (e) a written management plan for high voltage hazard during construction and ongoing maintenance of the cable route;
    - (f) written details of the operations and maintenance regime for the cable, including frequency and method of access;
    - (g) assessment of earth rise potential if reasonably required by the undertaker's engineers.
    - (h) evidence that trench bearing capacity is to be designed to 26 tonnes to take the weight of overhead line construction traffic
- (4) The promoter must not commence any works to which sub-paragraphs (2) or (3) apply until the undertaker has given written approval of the plan so submitted.
  - (5) Any approval of the undertaker required under sub-paragraphs (2) or (3)—
    - (a) may be given subject to reasonable conditions for any purpose mentioned in subparagraphs (6) or 8); and,
    - (b) must not be unreasonably withheld.
- (6) In relation to any work to which sub-paragraphs (2) or (3) apply, the undertaker may require such modifications to be made to the plans as may be reasonably necessary for the purpose of securing its apparatus against interference or risk of damage or for the purpose of providing or securing proper and convenient means of access to any apparatus.
- (7) Works to which this paragraph applies must only be executed in accordance with the plan, submitted under sub-paragraph (1) or as relevant sub-paragraph (5), as approved or as amended from time to time by agreement between the promoter and the undertaker and in accordance with such reasonable requirements as may be made in accordance with sub-paragraphs (6) or (8) by the undertaker for the alteration or otherwise for the protection of the apparatus, or for securing access to it, and the undertaker will be entitled to watch and inspect the execution of those works.
- (8) Where the undertaker requires any protective works to be carried out by itself or by the promoter (whether of a temporary or permanent nature) such protective works, inclusive of any measures or schemes required and approved as part of the plan approved pursuant to this paragraph, must be carried out to the undertakers' satisfaction prior to the commencement of any authorised

works (or any relevant part thereof) for which protective works are required and the undertaker shall give 56 days' notice of such works from the date of submission of a plan pursuant to this paragraph (except in an emergency).

- (9) If the undertaker in accordance with sub-paragraphs (6) or (8) and in consequence of the works proposed by the promoter, reasonably requires the removal of any apparatus and gives written notice to the promoter of that requirement, paragraphs 1 to 3 and 6 to 8 apply as if the removal of the apparatus had been required by the promoter under paragraph 7(2).
- (10) Nothing in this paragraph precludes the promoter from submitting at any time or from time to time, but in no case less than 56 days before commencing the execution of the authorised works, a new plan, instead of the plan previously submitted, and having done so the provisions of this paragraph shall apply to and in respect of the new plan.
- (11) The promoter will not be required to comply with sub-paragraph (1) where it needs to carry out emergency works as defined in the 1991 Act but in that case it must give to the undertaker notice as soon as is reasonably practicable and a plan of those works and must—
  - (a) comply with sub-paragraphs (6), (7) and (8) insofar as is reasonably practicable in the circumstances; and
  - (b) comply with sub-paragraph (12) at all times.
- (12) At all times when carrying out any works authorised under the Order, the promoter must comply with the undertaker's policies for development near overhead lines EN43-8 and HSE's guidance note 6 "Avoidance of Danger from Overhead Lines".

#### **Expenses**

- 10.—(1) Subject to the following provisions of this paragraph, the promoter must pay to the undertaker on demand all charges, costs and expenses reasonably anticipated or incurred by the undertaker in, or in connection with, the inspection, removal, relaying or replacing, alteration or protection of any apparatus or the construction of any new or alternative apparatus which may be required in consequence of the execution of any authorised works as are referred to in this Part of this Schedule including without limitation—
  - (a) any costs reasonably incurred by or compensation properly paid by the undertaker in connection with the acquisition of rights or the exercise of statutory powers for such apparatus including without limitation all costs incurred by the undertaker as a consequence of the undertaker;
    - (i) using its own compulsory purchase powers to acquire any necessary rights under paragraph 7(3); and/or
    - (ii) exercising any compulsory purchase powers in the Order transferred to or benefitting the undertaker;
  - (b) in connection with the cost of the carrying out of any diversion work or the provision of any alternative apparatus;
  - (c) the cutting off of any apparatus from any other apparatus or the making safe of redundant apparatus;
  - (d) the approval of plans;
  - (e) the carrying out of protective works, plus a capitalised sum to cover the cost of maintaining and renewing permanent protective works;
  - (f) the survey of any land, apparatus or works, the inspection and monitoring of works or the installation or removal of any temporary works reasonably necessary in consequence of the execution of any such works referred to in this Part of this Schedule.
- (2) There will be deducted from any sum payable under sub-paragraph (1) the value of any apparatus removed under the provisions of this Part of this Schedule and which is not re-used as part of the alternative apparatus, that value being calculated after removal.
  - (3) If in accordance with the provisions of this Part of this Schedule—

- (a) apparatus of better type, of greater capacity or of greater dimensions is placed in substitution for existing apparatus of worse type, of smaller capacity or of smaller dimensions; or
- (b) apparatus (whether existing apparatus or apparatus substituted for existing apparatus) is placed at a depth greater than the depth at which the existing apparatus was situated,

and the placing of apparatus of that type or capacity or of those dimensions or the placing of apparatus at that depth, as the case may be, is not agreed by the promoter or, in default of agreement, is not determined by arbitration in accordance with article [16] (arbitration) to be necessary, then, if such placing involves cost in the construction of works under this Part of this Schedule exceeding that which would have been involved if the apparatus placed had been of the existing type, capacity or dimensions, or at the existing depth, as the case may be, the amount which apart from this sub-paragraph would be payable to the undertaker by virtue of sub-paragraph (1) will be reduced by the amount of that excess save where it is not possible in the circumstances to obtain the existing type of apparatus at the same capacity and dimensions or place at the existing depth in which case full costs will be borne by the promoter.

- (4) For the purposes of sub-paragraph (3)—
  - (a) an extension of apparatus to a length greater than the length of existing apparatus will not be treated as a placing of apparatus of greater dimensions than those of the existing apparatus; and
  - (b) where the provision of a joint in a pipe or cable is agreed, or is determined to be necessary, the consequential provision of a jointing chamber or of a manhole will be treated as if it also had been agreed or had been so determined.
- (5) An amount which apart from this sub-paragraph would be payable to an undertaker in respect of works by virtue of sub-paragraph (1) will, if the works include the placing of apparatus provided in substitution for apparatus placed more than 7 years and 6 months earlier so as to confer on the undertaker any financial benefit by deferment of the time for renewal of the apparatus in the ordinary course, be reduced by the amount which represents that benefit.

## Indemnity

- 11.—(1) Subject to sub-paragraphs (2) and (3), if by reason or in consequence of the construction of any such works authorised by this Part of this Schedule or in consequence of the construction, use, maintenance or failure of any of the authorised works by or on behalf of the promoter or in consequence of any act or default of the promoter (or any person employed or authorised by him) in the course of carrying out such works, including without limitation works carried out by the promoter under this Part of this Schedule or any subsidence resulting from any of these works, any damage is caused to any apparatus or alternative apparatus (other than apparatus the repair of which is not reasonably necessary in view of its intended removal for the purposes of the authorised works) or property of the undertaker, or there is any interruption in any service provided, or in the supply of any goods, by the undertaker, or the undertaker becomes liable to pay any amount to any third party, the promoter will—
  - (a) bear and pay on demand the cost reasonably incurred by the undertaker in making good such damage or restoring the supply; and
  - (b) indemnify the undertaker for any other expenses, loss, demands, proceedings, damages, claims, penalty or costs incurred by or recovered from the undertaker, by reason or in consequence of any such damage or interruption or the undertaker becoming liable to any third party as aforesaid other than arising from any default of the undertaker.
- (2) The fact that any act or thing may have been done by the undertaker on behalf of the promoter or in accordance with a plan approved by the undertaker or in accordance with any requirement of the undertaker or under its supervision will not (unless sub-paragraph (3) applies), excuse the promoter from liability under the provisions of this sub-paragraph (1) unless the undertaker fails to carry out and execute the works properly with due care and attention and in a skilful and workman like manner or in a manner that does not accord with the approved plan.
  - (3) Nothing in sub-paragraph (1) shall impose any liability on the promoter in respect of-

- (a) any damage or interruption to the extent that it is attributable to the neglect or default of the undertaker, its officers, servants, contractors or agents; and
- (b) any authorised works and/or any other works authorised by this Part of this Schedule carried out by the undertaker as an assignee, transferee or lessee of the undertaker with the benefit of the Order pursuant to section 156 of the Planning Act 2008 [or article [•] (consent to transfer benefit of order)] subject to the proviso that once such works become apparatus ("new apparatus"), any authorised works yet to be executed and not falling within this sub-section 3(b) will be subject to the full terms of this Part of this Schedule including this paragraph 11.
- (4) The undertaker must give the promoter reasonable notice of any such third party claim or demand and no settlement or compromise must, unless payment is required in connection with a statutory compensation scheme, be made without first consulting the promoter and considering their representations.
- (5) Not to commence construction (and not to permit the commencement of such construction) of the authorised works on any land owned by the undertaker or in respect of which the undertaker has an easement or wayleave for its apparatus or any other interest or to carry out any works within [15] metres of the undertaker's apparatus until the following conditions are satisfied:
  - (a) unless and until the undertaker is satisfied acting reasonably (but subject to all necessary regulatory constraints) that the promoter has first provided the acceptable security (and provided evidence that it shall maintain such acceptable security for the construction period of the authorised works from the proposed date of commencement of construction of the authorised works) and the undertaker has confirmed the same to the promoter in writing; and
  - (b) unless and until the undertaker is satisfied acting reasonably (but subject to all necessary regulatory constraints) that the promoter has procured acceptable insurance (and provided evidence to the undertaker that it shall maintain such acceptable insurance for the construction period of the authorised works from the proposed date of commencement of construction of the authorised works) and undertaker has confirmed the same in writing to the promoter.
- (6) In the event that the promoter fails to comply with 11(5) of this Part of this Schedule, nothing in this Part of this Schedule shall prevent the undertaker from seeking injunctive relief (or any other equitable remedy) in any court of competent jurisdiction.

### **Enactments and agreements**

12. Save to the extent provided for to the contrary elsewhere in this Part of this Schedule or by agreement in writing between the undertaker and the promoter, nothing in this Part of this Schedule shall affect the provisions of any enactment or agreement regulating the relations between the promoter and the undertaker in respect of any apparatus laid or erected in land belonging to the promoter on the date on which this Order is made.

#### Co-operation

- 13.(1) Where in consequence of the proposed construction of any of the authorised works, the promoter or an undertaker requires the removal of apparatus under paragraph 7(2) or an undertaker makes requirements for the protection or alteration of apparatus under paragraph (9), the promoter shall use its best endeavours to co-ordinate the execution of the works in the interests of safety and the efficient and economic execution of the authorised development and taking into account the need to ensure the safe and efficient operation of the undertaker's undertaking and each undertaker shall use its best endeavours to co-operate with the promoter for that purpose.
- (2) For the avoidance of doubt whenever the statutory undertaker's consent, agreement or approval to is required in relation to plans, documents or other information submitted by the undertaker or the taking of action by the undertaker, it must not be unreasonably withheld or delayed.

#### Access

14. If in consequence of the agreement reached in accordance with paragraph 6(1) or the powers granted under this Order the access to any apparatus is materially obstructed, the promoter must provide such alternative means of access to such apparatus as will enable the undertaker to maintain or use the apparatus no less effectively than was possible before such obstruction.

#### Arbitration

15. Save for differences or disputes arising under paragraph 7(2), 7(4), 8(1), 9 and 11(5) any difference or dispute arising between the promoter and the undertaker under this Part of this Schedule must, unless otherwise agreed in writing between the promoter and the undertaker, be determined by arbitration in accordance with article [•] (arbitration).

#### **Notices**

16. The plans submitted to the undertaker by the promoter pursuant to paragraph [9(1)] must be sent to National Grid Plant Protection at plantprotection@nationalgrid.com or such other address as the undertaker may from time to time appoint instead for that purpose and notify to the promoter [in writing].

# INFRASTRUCTURE PLANNING

# TEMPLATE SCHEDULE FOR INCLUSION IN DEVELOPMENT CONSENT ORDERS FOR PROTECTION OF NATIONAL GRID