

**THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (LONDON POWER
TUNNELS 2) (CIRCUIT 3 – HURST TO CRAYFORD) COMPULSORY PURCHASE
ORDER 2019**

THE ELECTRICITY ACT 1989 AND THE ACQUISITION OF LAND ACT 1981

**STATEMENT OF REASONS OF THE ACQUIRING AUTHORITY FOR THE MAKING OF
COMPULSORY PURCHASE ORDER FOR THE ACQUISITION OF LAND AND NEW
RIGHTS FOR CIRCUIT 3 OF LONDON POWER TUNNELS 2**



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THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (LONDON POWER TUNNELS) (CIRCUIT 3 – HURST TO CRAYFORD) COMPULSORY PURCHASE ORDER 2019

STATEMENT OF REASONS OF THE ACQUIRING AUTHORITY FOR MAKING OF THE ORDER

1 INTRODUCTION

- 1.1 National Grid Electricity Transmission PLC (company registration number 02366977) ("**NGET**") has made The National Grid Electricity Transmission PLC (London Power Tunnels 2) (Circuit 3 – Hurst to Crayford) Compulsory Purchase Order 2019 (the "**Order**") under Section 10 of the Electricity Act 1989 and Schedule 3 of the Electricity Act 1989 (the "**1989 Act**") and the Acquisition of Land Act 1981 (the "**1981 Act**").
- 1.2 This Statement of Reasons is a non-statutory statement provided in compliance with Section 11 of the Guidance on Compulsory Purchase Process and the Crichel Down Rules (2019) (the "**Guidance**") and is not intended to constitute the Statement of Case that NGET will be required to prepare in accordance with the Compulsory Purchase (Inquiries Procedure) Rules 2007, in the event of an inquiry into the Order.
- 1.3 NGET successfully undertook the London Power Tunnels 1 project ("**LPT1**") which was energised in early 2018 after a seven year construction programme. LPT1 comprised the construction of around 32 kilometres of high voltage electricity cable tunnel between Hackney and Willesden (via Kensal Green), Kensal Green and Wimbledon. LPT1 replaced existing aged assets, providing a more resilient transmission network in North London to meet current and future energy demands.
- 1.4 Following the successful implementation of LPT1, NGET turned its attention to the continuation of London Power Tunnels through and beneath South London. "London Power Tunnels 2" ("**LPT2**") is the collective term for three projects, each relating to a specific "Circuit". The Circuit 3 Project is described further in Section 2 of this Statement of Reasons.
- 1.5 As with LPT1, the objective of LPT2 is to replace aged and degrading oil-filled cables before they reach the end of their operational life and to ensure a stable electricity transmission system.
- 1.6 This Statement, and the justification for the Order, relates to the Circuit 3 Project only. For information, the Circuit 1 Project (Wimbledon to New Cross) and the Circuit 2 Project (New Cross to Hurst) are the subject of separate compulsory purchase orders. Each Circuit is separate and independently operable from the others. The compulsory purchase orders for Circuits 1 and 2 were both made by NGET on 13 June 2019 and submitted for confirmation on 29 July 2019.
- 1.7 This Statement sets out NGET's justification for promoting the Order and explains why, in NGET's opinion, there is a compelling case in the public interest for compulsory purchase powers to be confirmed.
- 1.8 If confirmed by the Secretary of State for Business, Energy and Industrial Strategy, the Order will enable NGET to acquire compulsorily the land and new rights included in the Order for the tunnel (the "**Order Rights**") in order to facilitate the

delivery of the Circuit 3 Project. In addition, while most of the above ground sites are now owned by NGET, there is a need to take some above ground land and rights/interests under the Order.

- 1.9 NGET's approach to the Order is to seek Order Rights only for those parts of the tunnel that are in land not beneath the public highway. NGET will rely on its statutory street works powers under the Electricity Act 1989, Schedule 4, and the New Roads and Street Works Act 1991 for those parts beneath the highway. This has the advantage of reducing the number of interests that are included in the Order, and is a sign of the urgent need for the Circuit 3 Project.
- 1.10 This Statement is made having regard to the Guidance generally, and in particular Section 11.
- 1.11 On 1 April 2019 the Electricity System Operator became a legally separate company within the National Grid Group. NGET remains the transmission owner and operator and remains responsible for the delivery of the Circuit 3 Project.

2 THE SCHEME

2.1 Description of the Scheme

- 2.1.1 NGET is proposing to build underground tunnels over 2.52km to carry 275kV cables between a substation at Hurst to a sealing end compound (where the existing circuit transitions from direct laid to overhead lines) at Crayford. These start and finish points are fixed as direct replacement points for the existing circuit cables. Planned construction for Circuit 3 is programmed to enable Circuit 3 to be commissioned and operational in 2024.
- 2.1.2 The tunnels are constructed from vertical deep shafts that will send and receive (as appropriate) the tunnel boring machines ("**TBM**s") which will tunnel the cable route at depth, connecting these shaft access points. This means that during the construction phase of the Circuit 3 Project, the above ground activity which is perceptible to the general public will be in and around these shaft sites and once operational, the activity will diminish significantly. During construction and then in operation, the deep shafts provide access to the tunnels and allow for ventilation.

Above Ground Works/Sites

- 2.1.3 There will be above ground sites operating as drive sites and/or reception sites for the TBM's during construction phase and as headhouse/ventilation/access sites during operation. Travelling west to east these are:
- 2.1.4 **Hurst** – an existing substation on operational land and land required for access during the construction phase. This is a drive site for the TBM for the Circuit 2 Project and will have a headhouse building. It is also the drive site for the TBM for the Circuit 3 Project. During the construction phase this site will be accessed along a haul road that will be established across an agricultural field, and there is also existing highway access to the current Hurst substation. The entirety of the Hurst site will be contained in the order for both Circuits 2 and 3 because each circuit is separate and independently operable.
- 2.1.5 **Crayford** – an area of open land that is designated as Metropolitan Green Belt, ("Metropolitan Open Land"), a Site of Metropolitan Importance for Nature Conservation ("SMINC") and "Heritage Land" on which there is currently a NGET sealing end compound with an overhead line connection. Adjacent to the existing sealing end compound will be a shaft (during construction) and then a headhouse

(during operation). The headhouse will be built up given the location is in a flood zone and accordingly mitigation work is required to create compensatory flood storage capacity so that there is no net loss of capacity. Access to the Crayford site will be through Stadium Way during construction and through Station Road once the site is operational.

Underground/Tunnelling Works

- 2.1.6 The route of the tunnel has been selected as the best available, taking into account engineering, economic and environmental considerations. The route of the tunnel has therefore been selected, as far as possible, to lie beneath the public highway. NGET will use its statutory street works powers (contained in Schedule 4 of the 1989 Act and in the New Roads and Street Works Act 1991) to carry out the necessary tunnelling works (and thereafter to operate and maintain) in land which lies under the public highway. This is consistent with the approach that was taken in relation to LPT1.
- 2.1.7 The Order therefore excludes those areas of the tunnel beneath or within the highway. This is consistent with the way NGET used its street works powers in relation to LPT1 and allows NGET to take a proportionate approach to its consultation in association with those affected by the Order.
- 2.1.8 In respect of the land comprised in the Order along the tunnel alignment, no surface access is required in order to construct, use and maintain the tunnel. Access to the land comprised in the Order will be via adjacent sections of the tunnel.
- 2.1.9 The depths of the tunnels (measured to the crown of the tunnel) range between 12 metres and 58 metres and most of the tunnel will be located at a depth of between 30 and 40 metres. The Order will seek an ability for the tunnel to deviate vertically, but will set a "not less than" depth for the rights.
- 2.1.10 The Order will contain the rights for the construction, maintenance etc of the tunnel together with a zone surrounding the tunnel which will safeguard that area from third party interference to protect the structural integrity of the tunnel. The protection zone will be 6 metres above and below the tunnel and 3 metres either side of the tunnel. Therefore, the rights corridor will mostly be at a depth of at least 14 metres below the ground to allow for a cable tunnel with a minimum depth of 20 metres to the crown of the tunnel, except in those locations mentioned at 2.1.11 below.
- 2.1.11 For design reasons as well as due to the profile of the surface level of the land, there are some plots where the crown of the tunnel is shallower than 20 metres and these plots are numbered 08-04, 08-05, 08-06, 08-07, 08-08, 09-01, 09-02, 09-03, 09-04, 09-05, 09-06, 09-07, 09-08 and 09-09. In these instances the rights corridor will be at a depth of at least 6 metres below the ground to allow for a minimum depth of 12 metres to the crown of the tunnel.
- 2.1.12 In some locations, on a case by case basis, the overall rights corridor will reduce from 10.5 metres (i.e. 3m either side of a 4.5 metre external diameter tunnel). In these cases, excluding a very small extent of a new interest from the Order is judged appropriate on balance without affecting the deliverability or integrity of the tunnel.
- 2.1.13 The tunnel route passes through a groundwater source protection zone (SPZ1). This is a designation for the identification of groundwater sources of drinking water such as wells, boreholes and springs used for public drinking water supply.

Accordingly, extensive discussion has, and continues to, take place within the Environment Agency and Thames Water to ensure that the project is carried out with appropriate safeguards to protect the groundwater. The options for replacing the existing circuit with another direct laid route and the impact that this route could potentially have on both existing flood protection zones and groundwater quality were considered in discussions with the Environment Agency and Thames Water. A tunnelled route was accepted as the preferred option for this route.

2.2 **Need**

- 2.2.1 It is NGET's statutory duty to ensure that there is sufficient electricity transmission infrastructure available to support future energy demand in London. NGET owns and maintain the high-voltage electricity transmission network in England and Wales. The network carries electricity from the generators to substations where the voltage is lowered ready for distribution.
- 2.2.2 The current Hurst to Crayford cables were commissioned in 1967 and the anticipated asset life for these cables was determined to be 45 years. These cables are largely laid in the street at shallow depth, together with apparatus from numerous and various other undertakers. These cables are 275kV BICC oil filled paper insulated with a lead sheath design. They are approaching the end of their asset life and are beginning to corrode.
- 2.2.3 The Circuit 3 Project is a "non-load" related project because the investment required is triggered by asset condition rather than load related demand at this time.
- 2.2.4 The replacement of these cables is urgent and necessary. As stated above, the cables are now beyond their originally anticipated design-life. This places into acute doubt their ability to be used for the efficient transmission of electricity. Over time, the existing cables will become progressively less efficient until they pass beyond their repairable life. At that point, there will be a risk of system failure that will lead to power failures. In addition, the risk of environmental harm caused by oil leakage from corroded cables increases.
- 2.2.5 National Grid's most recent asset health score for the current Hurst to Crayford cables within Circuit 3 concludes that the current cables are in the highest category (category 1) in terms of asset health and are the worst in the network. Under the current "Monetised Risk" approach, NGET also considers the cost of repair and maintenance of the existing asset against the replacement of that asset. Under this basis of assessment the existing cables are still an urgent priority for replacement. In both cases, NGET is prioritising their replacement.
- 2.2.6 In accordance with Schedule 9 of the 1989 Act, NGET, in formulating the proposals for the installation below ground of an electric line, or the execution of any other works for or in connection with the transmission of electricity, must have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest.

3 **ENABLING POWER**

- 3.1 By section 9(2) of the 1989 Act, the holder of a licence authorising him to participate in the transmission of electricity is charged with the duty "*to develop and maintain an efficient, co-ordinated and economical system of electricity transmission*".

3.2 NGET is a holder of an electricity transmission licence granted or treated as granted under section 6(1)(b) of the 1989 Act. NGET owns the high voltage electricity transmission network in England and Wales and operates the transmission system across Great Britain.

3.3 Section 10 and Schedule 3 of the 1989 Act empower NGET “to purchase compulsorily any land [including rights in land] required for any purpose connected with the carrying on of the activities which [NGET] is authorised by [its] licence to carry on.”

3.4 Schedule 4 of the 1989 Act and the New Roads and Street Works Act 1991 enable NGET to use street works powers for those parts of the Circuit 3 Project in and beneath the “street”, hence not all of the tunnel route is the subject of this Order.

4 LAND AND RIGHTS REQUIRED

4.1 Permanent Land Acquisition

4.1.1 The sites coloured pink on the Order Map are those where permanent land acquisition is sought.

4.1.2 For the Circuit 3 Project this is the above ground site at Crayford. Negotiations are ongoing with the London Borough of Bexley. Positive discussions have been held with the London Borough of Bexley over a number of months. An agreement in principle has been reached for all the required rights and is being recommended for internal approval by the London Borough of Bexley.

4.2 Acquisition of New Rights

4.2.1 The new rights to be purchased compulsorily over the land under this Order are described in Table 1 of the Order Schedule in accordance with the definitions set out in paragraph 4.2.3 below. The land over which the new rights are to be purchased compulsorily is shown coloured blue on the Order Map.

4.2.2 The land shown edged red and with no colour wash and to which no plot number has been assigned is comprised within the Circuit 3 Project but does not form part of this Order.

4.2.3 The Rights to be acquired are defined in the table below:

<p>“Construction Access Rights”</p>	<p>All rights necessary to:</p> <ul style="list-style-type: none"> • access the land and adjoining Order land for the purposes of constructing and installing the electricity cables and tunnel infrastructure, carrying out de-watering and drainage works and installing, altering or reinstating land drainage systems and commissioning the electricity cables with or without vehicles, plant, machinery, apparatus, equipment, materials and personnel; and • carry out works to facilitate such access including to construct, lay down, use and remove access roads including any necessary temporary bridging, culverting or diversion of watercourses
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	and drains, erecting fencing/gates, carrying out security operations, carrying out earth works, modifying road verges and junctions and installing, using, altering, diverting, and removing services and utilities.
"Operational Access Rights"	All rights necessary to access the land and adjoining Order land for the purposes of operating, inspecting, maintaining, repairing and altering the electricity cables and tunnel infrastructure with or without vehicles, plant, machinery, apparatus, equipment, materials and personnel.
"Tunnel and Cable Rights"	<p>All rights necessary for the purposes of or incidental to the construction of the hereinafter mentioned Cable Tunnel and operation of the electricity infrastructure, including:</p> <ul style="list-style-type: none"> • the right to construct and install a concrete cable tunnel with an overall external diameter not exceeding 4.5 metres at a depth of not less than 20 metres below the surface of the land (save for plots 08-04, 08-05, 08-06, 08-07, 08-08, 09-01, 09-02, 09-03, 09-04, 09-05, 09-06, 09-07, 09-08 and 09-09 where the depth is not less than 12 metres below the surface of the land) at the date of the Order together with any necessary or auxiliary apparatus (in the Order referred to as the "Cable Tunnel"); • the right to retain and make use of and from time to time inspect, cleanse, maintain, repair, alter and decommission and make safe the Cable Tunnel; • the right to place, attach and install electricity cables for the transmission and distribution of electricity together with all necessary ancillary cables, pipes, equipment, apparatus and fibre optic cables required in connection with the use and operation of the aforementioned electricity cables; • to test and commission the electricity infrastructure installed within the Cable Tunnel and to remedy initial faults and defects in it at any time prior to the date on which it is energised and ready for commercial operation; • to retain, commission, operate, inspect, maintain, repair, alter, renew, replace and remove or decommission the electricity infrastructure; • the right to enter the hereinafter mentioned Protective Strip and the Cable Tunnel from any adjoining cable tunnels and adits as often as may be required with or without vehicles and at all times with all necessary materials apparatus plant and equipment for the purposes set out

	<p>above and/or for the purpose of access to and egress from other parts of the NGET's Cable Tunnel and adits;</p> <ul style="list-style-type: none"> • the right to all necessary rights of support for the Cable Tunnel; and • The right to all necessary rights of protection for the Cable Tunnel from any excavation, mining foundation or piling works within such part of the subsoil and under the surface of the land as comprises a strip (in the Order referred to as the "Protective Strip") thereof the upper limit of which shall not be greater than 6 metres from the top of the Cable Tunnel at the date of the Order and the lower limit of which shall not be greater than 6 metres below the bottom of the Cable Tunnel and the lateral limits shall not be greater than 3 metres on each side of the Cable Tunnel.
<p>"Construction Compound Rights"</p>	<p>All rights necessary for the purposes of or incidental to the construction, installation and commissioning of the electricity cables and tunnel infrastructure, including:</p> <ul style="list-style-type: none"> • to erect, create, use and remove a works compound which may include portable cabins and offices, and welfare facilities including portable toilets and electricity generators; • to store, stockpile and where necessary use, manage and process plant, machinery, apparatus, materials (including excavated material) and/or equipment; • to access the land with or without vehicles, plant, machinery, apparatus, equipment, materials and personnel; • to fence, erect hoardings or signage or otherwise secure the compound; • to carry out de-watering and drainage works and install, alter or reinstate land drainage systems; • to discharge water into existing drains and watercourses; • to install, use and remove artificial lighting; • to install, use, alter, divert and remove services and utilities; and • to reinstate the land.
<p>"Mitigation Works Rights"</p>	<p>The right to access the land for the purposes of excavating and constructing flood compensation storage areas and to</p>

	<p>carry out those excavation and construction works and thereafter the right to access the flood compensation storage areas for the purposes of carrying out periodic inspection and maintenance and to carry out the inspection and maintenance; in all cases with or without vehicles, plant, machinery, apparatus, equipment, materials and personnel.</p>
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4.2.4 The rights to be acquired under Circuit 3 are:

- (a) Tunnel and Cable Rights in the subsoil at a depth of no less than 14 metres (save for plots 08-04, 08-05, 08-06, 08-07, 08-08, 09-01, 09-02, 09-03, 09-04, 09-05, 09-06, 09-07, 09-08 and 09-09 where the depth of the Tunnel and Cable Rights is not less than 6 metres below the surface of the land) along the route of the tunnel as described in the Schedule to the Order and shown on the Order plans;
- (b) Construction Compound Rights over land comprising grassland and hardstanding (Hurst Grid Substation) (south of Vicarage Road, Bexley); and
- (c) Construction Access Rights over field and agricultural land (south east of North Cray Road, A223, Bexley).
- (d) Operational Access Rights over land to the east of the Crayford headhouse site and south of the Greyhound Stadium, Bexley.
- (e) Construction Access Rights over Stadium Way and through hardstanding at Crayside Leisure Centre (south east of Stadium Way) Bexley.
- (f) Mitigation Works Rights over grassland and shrubbery to the south west of the Greyhound Stadium, Bexley.

4.2.5 The above new rights are for the benefit of the undertaking of NGET for the transmission of electricity including without limitation such land and hereditaments forming part of that undertaking as are accommodated by the rights set out in the Order and this notice.

5 ACQUISITION STRATEGY AND PROGRESS TO DATE

5.1 NGET's Acquisition Strategy

5.1.1 NGET seeks to acquire land and all rights by voluntary agreement. A rigorous process has been undertaken firstly to identify and thereafter to engage with landowners and occupiers to acquire the necessary interests by agreement.

5.1.2 Negotiations with landowners and occupiers to secure voluntary easements, wayleaves or licences for the tunnels within the Circuit 3 Project have been ongoing since July 2018. Positive discussions have been held with the London Borough of Bexley over a number of months. An agreement in principle has been reached for all the required rights and is being recommended for internal approval by the London Borough of Bexley.

5.1.3 Initially, heads of terms ("HoTs") are entered into, agreeing the principal terms which are translated into legal agreements.

5.1.4 Given that this is a linear, deep tunnel scheme passing through and beneath London it will inevitably cross existing assets held by statutory undertakers, including transport/highway authorities, in respect of which asset protection and crossing agreements will be required.

5.1.5 Whilst particular effort is being made to secure the necessary rights voluntarily, in order to ensure the timely delivery of this critical linear infrastructure project, it is now necessary to use compulsory purchase powers. Voluntary negotiations for the remainder of the necessary rights will continue in parallel to the CPO process.

5.2 **Progress**

5.3 As at 13 November 2019, we have secured 8 of the required 21 easements for the tunnels (38%). There are a further 6 where HoTs have been agreed, leaving 7 yet to be agreed.

6 **PLANNING POSITION**

6.1 **Permitted Development Rights**

6.1.1 The majority of the Circuit 3 Project is to be consented pursuant to permitted development rights under Part 15 of the Town and Country Planning (General Permitted Development) (England) Order 2015. This comprises: the tunnel and related activities, the drive shafts, reception shaft, intermediate shaft, headhouses (those sited on operational land) and upgrades to existing substations on operational land.

6.1.2 For those elements of the Circuit 3 Project that are consented pursuant to permitted development rights, it is necessary for the relevant local planning authorities to confirm through the environmental impact assessment (“**EIA**”) screening process that the development is not “EIA development”. The Circuit 3 Project passes through and is within the London Borough of Bexley, and Dartford Borough Council. Both local planning authorities have screened the Circuit 3 Project as not being EIA development. This includes the London Borough of Bexley on 10 August 2018 (ref: 18/01616/SCREEN) and Dartford Borough Council on 5 July 2018 (ref: DA/18/00763/SCREEN). Therefore, permitted development rights are available.

6.1.3 Where NGET proposes the erection of headhouses on operational land under permitted development rights, an application for prior approval will be made to the relevant local planning authority for approval of details of the design and external appearance of the headhouse. In respect of the Circuit 3 Project, an application for prior approval was made to the London Borough of Bexley on 22 May 2019 for a proposed headhouse on operational land at NGET’s Hurst site. Details of the design and external appearance of the headhouse were agreed by the local authority on 20 June 2019 (ref: 19/01240/GPDOPD).

6.1.4 All activities beneath ground associated with the tunnel, including its ultimate fit-out and cable installation are also carried out pursuant to permitted development rights under Part 15.

6.2 **Express Planning Permission**

6.2.1 Express planning permission is required in two instances for Circuit 3. The first relates to the provision of a temporary haul road to provide access to the Hurst site during the construction phase of the development and as such, planning permission is required from the London Borough of Bexley. An application for full

planning permission was submitted to Bexley on 27 June 2019 (application number 19/01579/FUL) and sought permission for the "*Formation of a temporary access haul road from A223 North Cray Road to Stable Lane to provide temporary access for construction vehicles to the National Grid Hurst Substation site for the duration of the London Power Tunnels II project.*" Planning permission was secured from the London Borough of Bexley on 14 October 2019.

- 6.2.2 The second relates to the provision of a headhouse, flood compensation storage areas and temporary construction access from Stadium Way on land at Crayford Rough, owned by the London Borough of Bexley. An application for full planning permission was submitted to Bexley on 6 August 2019 (application number 19/01932/FULM) and sought permission for the "*Erection of a head house with associated landscaping including the provision of flood compensation areas, and the formation of a temporary construction access from Stadium Way.*" Planning permission has not yet been granted for the development, but it is expected that the local planning authority will approve the planning application following its planning committee meeting in December 2019.

7 **SPECIAL CATEGORY LAND**

- 7.1 Sections of the Circuit 3 Project will pass beneath "open space" as the term is defined in the 1981 Act.
- 7.2 The Order seeks the authorisation of the purchase of the following land forming part of a common, open space or fuel or field garden allotment for the purposes of the 1981 Act. The Crayford headhouse land and associated land for mitigation works and some office access is open space. NGET will make an application pursuant to s.28 and Schedule 3 of the 1981 Act for a certificate as it will be no less advantageous to the public when burdened with the right than it was before.
- 7.3 There are interests held by local authorities and statutory undertakers in the Circuit 3 Project. NGET's negotiation with these parties continues.

8 **FUNDING AND DELIVERY**

8.1 **Timetable for delivery**

NGET is proposing to award the contract for tunnelling works in December 2019 with contractors going on site and commencing construction in January 2020 on NGET operational land. Site set-up and construction of the Circuit 3 Project is programmed to enable Circuit 3 to be commissioned and operational in 2024.

8.2 **Funding**

- 8.2.1 Circuit 3 forms part of the Non-load related Underground Cables and Tunnels portfolio. LPT2 is an efficient and well justified asset intervention in critical electricity transmission infrastructure. Funding is provided through the regulatory price control mechanism for investments of this nature.

9 **ALTERNATIVES TO THE ORDER**

9.1 **No Action**

- 9.1.1 This is not an alternative option given the urgent and compelling need to replace the cables as described elsewhere in this Statement of Reasons.

9.2 Options appraisal

Cut and Cover

- 9.2.1 In London, electricity has traditionally been transmitted through cables located just beneath the road surface, within the "street". For the Circuit 3 Project, using a "cut and cover" technique to run cables in the street would cause very significant traffic disruption across South London. This is aside from other effects from construction, including the noise associated with the process. This technique would be to simply dig a trench (in sections), lay the cable and back-fill the trench.
- 9.2.2 Maintenance and replacement of the assets would also be difficult, time consuming and costly because roads would need to be cut up again when maintenance or renewal is required.
- 9.2.3 In addition, there are technical constraints in using this process because of the inability to use forced-air ventilation to cool the cables – and so there is a limit on cable ratings (i.e. the kV level that can be achieved).
- 9.2.4 The Cut and Cover technique also increases the risks of impacts and damage to apparatus of other Statutory Undertakers as the roads in South London are densely populated with varying apparatus.
- 9.2.5 This technique takes materially longer than other options because of the time required to cut up small sections of road and then move along the road.
- 9.2.6 In particular, with regard to Circuit 3, much of the areas through which the cables will run are flood zones and so any construction works at surface level would remove significant areas of available land from the area functioning as a flood storage area.

Overhead Lines

- 9.2.7 The density of London's built environment means that an overhead line corridor does not exist and therefore this option is not feasible. Circuit 3 crosses the A2, a railway and a flood protection zone within a short distance (approx. 2.5km), therefore, any Overhead Line route would impact these third-party assets greater than a tunnelled solution.
- 9.2.8 An overhead line option would not be a viable option from a programming perspective as it would take a long time to construct and energise the system. Overhead lines can be perceived by some to have a visual impact that they consider harmful. In addition there can be challenges with tower siting.
- 9.2.9 Overall this option would fail to meet NGET's project outcomes for LPT2 in terms of cost, programming and stakeholder requirements and so this option was discounted.

Tunnelling

- 9.2.10 The clear and compelling advantages of tunnelling over cut and cover are:
- (a) a more direct route can be followed below the ground with the need for fewer joints, making for a more efficient design;
 - (b) the impact on local traffic is much less in both the construction phase and any subsequent maintenance and renewal;

- (c) protection, maintenance and renewal of the assets is easier in a tunnel;
- (d) the construction of the tunnel does not carry as much risk of damaging the apparatus of other statutory undertakers as a cut and cover method;
- (e) noise and vibration arising from the tunnelling operation is imperceptible at the proposed depth; and
- (f) a higher cable rating can be achieved because of the ventilation techniques deployed for a tunnel solution.

9.2.11 The clear and compelling advantages of tunnelling over overhead lines are:

- (a) tunnelling avoids a visual impact that some may perceive as being harmful;
- (b) the limitations of routeing overhead lines in a dense urban environment where there are likely to be many taller buildings;
- (c) the impact on local traffic is much less in both the construction phase and any subsequent maintenance and renewal; and
- (d) protection, maintenance and renewal of the assets is easier in a tunnel.

10 HUMAN RIGHTS AND EQUALITY ACT 2010 CONSIDERATIONS

10.1 Human Rights Implications

10.1.1 The Convention rights potentially applicable to the making of the Orders are Articles 6, 8 and Article 1 of the First Protocol as contained in the Schedule to the Human Rights Act 1998. The position is summarised in paragraph 12 of Stage 2 of the Guidance.

10.1.2 Relevant parts of Article 1 of the First Protocol of the Convention provide:

"Every natural or legal person is entitled to peaceful enjoyment of his possessions" and "no one shall be deprived of his possessions except in the public interest and subject to the conditions provided for by law and by the general principles of international law".

10.1.3 Relevant parts of Article 8 of the Convention provide:

"1. Everyone has the right to respect for his private and family life, his home and his correspondence.

2. There shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society in the interests of ... the economic well-being of the country ..."

10.1.4 The Order has been made pursuant to Section 10 and Schedule 3 of the 1989 Act which authorises NGET to acquire land and new rights compulsorily subject to following the procedures laid down in the 1981 Act.

10.1.5 NGET considers that there is a compelling case in the public interest that the new rights and land referred to in the Order be acquired in order to achieve the purposes described in this Statement of Reasons. If the Secretary of State agrees with NGET that there is a compelling case in the public interest, he may confirm the Order. If the Order is confirmed, compensation may be claimed by persons

whose interests in land have been acquired or whose possession of land has been disturbed proportionate to any losses that they incur as a result of the acquisition. In the circumstances, if the Order is confirmed, it is considered that the compulsory acquisition of the land and new rights referred to in the Order will not conflict with Article 1 of the First Protocol or Article 8 of the Convention as any interference with the rights will be in accordance with the law, justified and proportionate.

10.1.6 Relevant parts of Article 6 provide that:

"1. In the determination of his civil rights and obligations ... everyone is entitled to a fair and public hearing within a reasonable time by an independent and impartial tribunal established by law."

10.1.7 So far as the Order is concerned, any owner, lessee or occupier of land included in the Order will be notified and may have the opportunity to make representations to the Secretary of State and to be heard at a public inquiry before a decision is made as to whether or not the Order should be confirmed, and would in any event have legal rights under the 1981 Act to challenge any order made on the relevant statutory grounds.

10.1.8 NGET is satisfied that there are no planning or financial impediments to the implementation of Circuit 3 of the LPT2 project and that Circuit 3 of the LPT2 project is therefore likely to proceed if the Order is confirmed.

10.1.9 For the reasons set out above, there is considered to be a compelling case in the public interest to proceed with the Order to facilitate the replacement of the existing ageing oil filled cables and the upgrade of the cables.

10.2 **Equality Act 2010**

10.2.1 As a non-public body exercising public functions, NGET has a statutory duty under section 149 of the Equality Act to have due regard to the need to:

- (a) eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under the Act;
- (b) advance equality of opportunity between persons who share a relevant protected characteristic and those who do not share it; and
- (c) foster good relations between persons who share a relevant protected characteristic and persons who do not share it.

10.2.2 The relevant protected characteristics are: age; disability; gender reassignment; pregnancy and maternity; race; religion or belief; sex; and sexual orientation.

10.2.3 NGET's use of the tunnelling method (as mentioned above) for the Circuit 3 Project will keep the disruption to those living along the route to a minimum; this will not cause differential impacts to those individuals or groups of individuals who share a relevant protected characteristic.

10.2.4 As mentioned in Paragraph 5 above, NGET has undertaken extensive negotiation with landowners impacted by the Circuit 3 Project and has made particular efforts to avoid the need to use compulsory purchase powers, by negotiating by private treaty and by using its powers under the New Roads and Street Works Act 1991. Furthermore, NGET is using existing sites in its ownership, or above ground sites that have been acquired voluntarily, such that this has minimised any disadvantages to those who share a relevant protected characteristic.

- 10.2.5 NGET has carried out extensive community consultation. Nothing arose from that consultation that caused NGET to become concerned that the Circuit 3 Project would have a disproportionate effect on any individuals or groups of individuals with protected characteristics.
- 10.2.6 In light of the above, NGET considers that it has given due regard to the public sector equality duty set out in s149 of the Equality Act 2010 in promoting this Order for the Circuit 3 Project.

Dated: 6 December 2019

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Solicitors to National Grid Electricity Transmission PLC**

LIST OF DOCUMENTS:

In the event of a public inquiry being held in respect of the Order, NGET would intend to refer to or put in evidence the following documents:

- 1 The Compulsory Purchase Order dated 6 December 2019.
- 2 Map showing the route of the proposed tunnel.
- 3 Such other documents as NGET considers necessary to respond to any objections.