

Brief for North London Reinforcement Project: Compliance with Archaeology Condition

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1. The National Grid (North London Reinforcement) Development Consent Order 2014 was made by the Secretary of State for Energy and Climate Change for the Project on 16 April 2014, and came into force on 7 May 2014. The DCO provides powers to National Grid to carry out the Project, which comprises of the replacement of the existing 275kV overhead line (OHL) with a 400kV OHL from Waltham Cross substation in Epping Forest, through Enfield, and then to Tottenham substation in Haringey. The DCO also contains powers to carry out associated works to the substations at Waltham Cross, Brimsdown and Tottenham.
2. The DCO includes a Condition relating to Archaeology:
 14. —(1) No stage of the authorised development shall commence until for that stage, a written scheme for the investigation of areas of archaeological interest (as identified in the environmental measures document) has, after consultation with the Historic Buildings and Monuments Commission for England, been approved by the relevant planning authority.
 - (2) Each scheme submitted under requirement 14(1) shall identify areas where one or more of—
 - i. field work; and
 - ii. a watching briefare required, and the measures to be taken to protect, record or preserve any significant archaeological remains that may be found.
 - (3) Any archaeological works or watching brief carried out under the scheme submitted under requirement 14(1) must be by a suitably qualified person or body.
 - (4) Any archaeological works or watching brief must be carried out in general accordance with the scheme approved under requirement 14(1) unless otherwise agreed with the relevant planning authority.
3. The Greater London Archaeological Advisory Service (GLAAS) advises the local planning authorities in London on the archaeological implications of development. GLAAS is part of Historic England's London and Southeast Office. The official name of Historic England is the Historic Buildings and Monuments Commission for England. For works outside Greater London National Grid should contact the relevant local government archaeological advisory service.

4. A 'written scheme setting out all stages of the authorised development' (National Grid, November 2024) with accompanying plans provides details of the works programme which has been used to inform this archaeological assessment.
5. The DCO runs down the western side of the lower Lea Valley. The lower Lea Valley was formerly associated with heavy industry and gravel extraction but geo-archaeological studies have shown that deep alluvial deposits survive across the valley creating the conditions for excellent preservation of archaeological and palaeo-environmental remains where such deposits have survived modern disturbance (Corcoran et al, 2011). Consequently, the DCO runs through Archaeological Priority Areas identified in Local Plans for Enfield, Haringey and Waltham Forest. Discoveries have included log boats, timber structures and prehistoric and Roman artefacts. In recent years a highly unusual early medieval 'crannog'-like timber structure was excavated at Glover Drive about 300m north of the Tottenham sub-station and a Bronze Age land boundary and settlement at Navigation Park (Ponders End). These latter discoveries highlight the potential of ecotonal locations on the edge of the gravel terrace and floodplain. The confluence of historic streams with the floodplain is another indicator of potential.
6. As noted above much of the lower Lea Valley is covered by modern made ground. The modern deposits are generally of no or low archaeological potential. The depth of these deposits is locally variable from less than a meter to several meters with layers of higher archaeological potential often surviving beneath them. Contaminated land is commonly encountered and monitoring of deep excavation into alluvial deposits will need careful planning.
7. An archaeological written scheme of investigation will be needed for each project stage for which archaeology is scoped in. The WSI should be consistent and part of an overall strategy for the project with the works at Brimsdown and those at Tottenham each undertaken by a single organisation for continuity. Compliance with the standards and guidance of the Chartered Institute for Archaeologists and expertise in geo-archaeological recording and deposit modelling is a requirement. Current and draft [GLAAS London Archaeology Guidelines](#) and the London Archaeological Research Framework should be referred to. Each WSI will need to set out the overall approach to mitigation with phases of work and decision-points clearly identified. It is envisaged that each WSI would cover evaluation (e.g. observation of geo-technical investigations), geo-archaeological deposit modelling, observation and recording¹ of main works, contingency for high significance discoveries, post-excavation assessment, analysis, reporting and archiving. The nature of deep alluvial sites is such that previously unknown well-preserved high significance sites are sometimes discovered. Contingency arrangements covering resources and procedures will be required to agree and implement special mitigation measures in such circumstances. Public benefits should be considered and

¹ Formerly referred to as 'watching brief'.

whilst they may be limited in a project of this nature unexpected discoveries might provide opportunities. Reporting and publication should be proportionate to the significance of the results and appropriate to likely audiences -this would be agreed at post-excavation assessment.

8. The following table provides indicative archaeological mitigation for each project stage:

Stage	Name	Description	Works Nos	Indicative Period of Works	LPA	Archaeological Assessment
0	Early Enabling Works	Construction of 12 foundations for Cable Sealing End Compounds at Tottenham substation, at the location of pylon VC1R. [This stage of work has been completed and is therefore not detailed in this document]	N/A	Q1 2019 – Q3 2019	London Borough of Haringey	WSI approved for watching brief (12/2018) but no report provided. RECOMMENDATION: address apparent non-compliance/recover report.
1a	Stubbins Hall Lane construction compound				Epping Forest District Council	Outside GLAAS area – refer to Essex County Archaeological Service
1b	Waltham Cross substation				Epping Forest District Council	Outside GLAAS area – refer to Essex County Archaeological Service
1c	Waltham Cross substation				Epping Forest District Council	Outside GLAAS area – refer to Essex County Archaeological Service
2a	Brimsdown substation	Extend existing Brimsdown substation.	6, 7 (a-e)	Q2 2025 – Q2 2028	London	Straddles boundary of Lea Valley Mapping Project zones 5.4 and 5.6 indicating high

		Construction of a new bridge over the Small River Lee (Turkey Brook). Installation of cable sealing end compound at ZBC19, Brimsdown substation; removal of cable sealing end compounds at ZBC20, and cables between ZBC20 and Brimsdown substation. Remodelling existing bund and works to temporarily divert footpath. Creation of new permanent footpath linking footpath at dismantled railway to Footpath No. 103; and new diversion Footpath No. 103. and underground cables to			Borough of Enfield	paleoenvironmental potential and archaeological potential especially along the terrace edge and associated with Lea/Turkey Brook confluence but test pits at Enfield Energy Centre in 1996 did not encounter archaeology. RECOMMENDATION: Desk-based assessment and geo-archaeological deposit model. Clarify depth and nature of modern overburden and underlying alluvial deposits. For groundworks likely to penetrate beneath modern overburden either observation and recording (brownfield) or trial trench (greenfield).
2b	Brimsdown substation landscaping	Landscaping works associated with Brimsdown substation.	N/A	Q4 2027 – Q4 2028	London Borough of Enfield	Assess as part of 2a. If surface works only then de-scope.
3a	Tottenham substation preparatory work	Demolition and remediation works.	13	Q2 2024 – Q4 2024	London Borough of Haringey	Geoarchaeological deposit model already created. Any additional G.I./Geotech information be added to this. RECOMMENDATION: Watching brief WSI approved and works in progress.

3b	Tottenham substation	Establishment of material holding facility and laydown area. Modifications to existing protection and control equipment to facilitate the bypass of Tottenham substation by the newly uprated 400kV overhead electricity line. Installation of new cable sealing end compounds at pylons ZBC43 and VC1R; installation of up to twelve 400kV cables predominantly underground from the northern cable sealing end compound at pylon ZBC43 to the southern cable sealing end compound at pylon VC1R; and installation of two cable bridges across Pymmes Brook.	9, 10c, 10d, 10e, 13	Q2 2025 – Q2 2028	London Borough of Haringey	Geoarchaeological deposit model already created. Any additional G.I./Geotech information should be added to this. RECOMMENDATION: Watching brief on groundworks below 1.5m depth i.e. cabling and? Compounds. Nature of works to be clarified. If this goes ahead and deposit of interest are seen add data to deposit model
3c	Tottenham substation landscaping	Landscaping works associated with Tottenham Substation	N/A	Q4 2027 – Q4 2028	London Borough of Haringey	If surface works only then can be de-scoped.
4	Reconducting Tottenham Hackney VC2	Installation of new transmission pylon VC1R, and conductors, insulators and fittings between VC1R and VC2, and new	11, 12	Q1 2025 – Q2 2028	London Borough of Haringey	Geoarchaeological deposit model created. Any additional G.I./Geotech information should be added to this.

		connections between VC1R and gantries. Removal of existing transmission pylon VC1, and conductors, insulators and fittings between VC1R and VC2, and connection between VC1 and the existing Tottenham substation.				RECOMMENDATION: Observation and recording on groundworks below 1.5m depth Nature of works to be clarified. If this goes ahead and deposit of interest are seen add data to deposit model
5a	Pylon Works – Waltham Cross					Outside GLAAS area – refer to Essex County Archaeological Service
5b	Overhead Lines – Epping Forest					Outside GLAAS area – refer to Essex County Archaeological Service
5c	Landscaping for Pylons in Epping Forest	Written landscaping scheme				Outside GLAAS area – refer to Essex County Archaeological Service

5d	Overhead Lines – Enfield Part 1	Uprating of ZBC OHL between ZBC13 to ZBC28 and ZBC36 to ZBC38.	1	Q1 2026 – Q3 2027	London Borough of Enfield	ZBC13 to ZBC 17 run across the former Enfield Ordnance Factory site documented in a desk-based assessment of 1996. RECOMMENDATION: walkover survey to identify any surface features at risk from works. ZBC18 to ZBC20 are in the same area as Brimsdown sub-station. RECOMMENDATION: should be covered by assessment recommended under 2a.
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						ZBC21 to ZBC36 run alongside the reservoirs where ground is likely to have been heavily disturbed. ZBC37 to ZBC38 cross an area shown to have low archaeological potential during construction of North London Heat & Power (NSIP). RECOMMENDATION: De-scope archaeology.
5d	Overhead Lines – Enfield Part 2	Establishment of material holding facility and laydown area at car park by Lee Park Way. Uprating of ZBC OHL between ZBC29 and ZBC35.	1,8	Q1 2026 – Q3 2027	London Borough of Enfield	ZBC21 to ZBC36 run alongside the reservoirs where ground is likely to have been heavily disturbed. RECOMMENDATION: De-scope archaeology.
5e	Landscaping for Pyons (ZBC13 – ZBC 38) in LB of Enfield	Written landscaping scheme			London Borough of Enfield	RECOMMENDATION: De scope archaeology
5f	Overhead Lines – Waltham Forest	Uprating of ZBC OHL between ZBC39 and ZBC42.	1	Q1 2026 – Q3 2027	London Borough of Waltham Forest	ZBC39 low risk from surface works ZBC40 to ZBC42 run alongside the Banbury reservoir where ground is likely to have been heavily disturbed. RECOMMENDATION: De-scope archaeology.

5g	Landscaping for Pylons (ZBC39-42) in Waltham Forest	Written landscaping scheme			London Borough of Waltham Forest	RECOMMENDATION: Descope archaeology
5h	Overhead Lines - Haringey	Works to facilitate bypassing of Tottenham substation to include removal of existing phase and earthwire conductors from pylon ZBC43 to existing anchor blocks and installation of new phase and	1, 10a, 10b	Q1 2026 – Q3 2027	London Borough of Haringey	If no groundworks over 1.5m depth .. RECOMMENDATION: De-scope archaeology.
5j	Landscaping for ZBC43 in Haringey	Written landscaping scheme			London Borough of Haringey	RECOMMENDATION: De-scope archaeology.

		earthwire conductors to gantries within new northern cable sealing end compound and removal of existing cables connecting ZBC34 to Tottenham substation. Modifications to existing protection and control equipment to facilitate the bypass of Tottenham substation. Upgrading of ZBC OHL at ZBC43.				
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