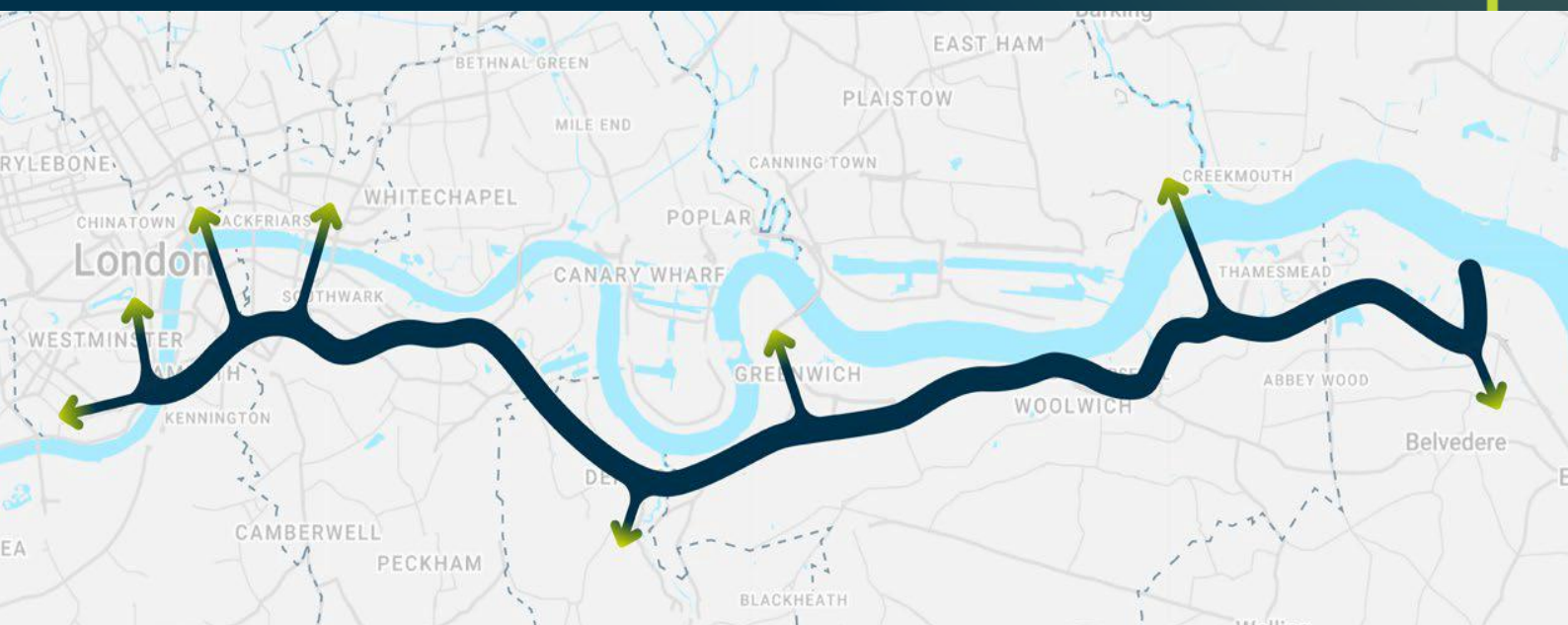




LONDON STRATEGIC HEAT MAIN

Environmental Impact Assessment Scoping Report Volume 1: Main Report



Cory Environmental Holdings Limited

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Glossary and Abbreviations

Glossary

Table 1: Glossary

Term	Definition
Above Ground Heritage Asset	A building, monument, site, place, area, or landscape that is situated above ground level and is identified as having a degree of significance meriting consideration in planning decisions because of its heritage interest. Heritage assets include designated heritage assets and non-designated heritage assets.
Above ground Infrastructure	Elements of the Proposed Scheme visible within the townscape, such as buildings, compounds, kiosks and plant.
Abstraction	The removal of water from surface water or groundwater sources for use (e.g. supply, construction, or industrial use).
Access Land	Land where the public have access either by legal right or by informal agreement.
Active Travel	Travel involving physical activity, such as walking and cycling, which contributes to improved physical and mental health.
Additional Mitigation Measures	Measures implemented specifically to reduce, control, or offset identified risks beyond those already incorporated into the design or process. These actions are introduced when embedded mitigation alone is insufficient to achieve the desired level of risk reduction, after likely significant effects have been identified.
Additionality	The extent to which a project generates economic impacts beyond what would have occurred in the absence of that project.
Additive Effect	An impact that occurs when the combined effect of two or more actions, pressures, or environmental changes is equal to the sum of their individual effects.
Aggregate	Granular materials such as sand, gravel, or crushed rock used in construction (e.g. concrete and asphalt).
Air Quality Action Plan (AQAP)	A plan prepared outlining measures to improve air quality in areas where Air Quality Objectives are not being met.

Term	Definition
Air Quality Management Area (AQMA)	An area declared by a local authority where Air Quality Objectives are exceeded or likely to be exceeded.
Air Quality Objectives (AQO)	Policy-based targets for ambient pollutant concentrations, set out in legislation, which local authorities must work towards achieving.
Air Quality Standards (AQS)	Legally binding limit values and target values for ambient air pollutants set under UK regulations.
Airborne Noise	Sound transmitted through the air from a source (e.g. construction activities or traffic) to a receptor.
Ambient Noise Level	The overall noise level at a location, including all background and extraneous noise sources.
Ambient Noise Level, $L_{Aeq,T}$	The equivalent continuous A-weighted sound pressure level of the totally encompassing sound in a given situation at a given time that is usually composed of sound from many sources near and far.
Amenity Receptors	Individuals, communities, or locations whose amenity, enjoyment, comfort, or quality of life may be affected by environmental effects arising from a development or activity.
Anchor Heat Source	A large, reliable and continuous source of heat that forms the core supply for a heat network, providing a stable baseline of heat generation.
Ancient Woodland	Land that has been continuously wooded since at least 1600 AD, recognised for its high biodiversity value.
Applicant	The organisation Cory Environmental Holdings Limited (or Cory) preparing and submitting the DCO Application.
Application	The application for a Development Consent Order under the Planning Act 2008 and any other associated applications or consents for the construction, operation and maintenance of the Proposed Scheme.
Aquatic Invertebrates	Water-dwelling organisms without a backbone, such as insects, worms, or molluscs.
Aquifer	A body of permeable rock, sediment, or soil that stores and transmits groundwater in sufficient quantities to supply wells, springs, or surface waters.

Term	Definition
Aquifer Designation – Principal Aquifer	Layers of rock or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale.
Aquifer Designation – Secondary A Aquifer	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.
Aquifer Designation – Secondary B Aquifer	Predominantly lower permeability layers that may store and transmit limited quantities of groundwater, generally supporting minor water supplies and contributing locally to base flow in rivers where conditions allow.
Aquifer Designation – Secondary Undifferentiated Aquifer	Aquifers where it is not possible to apply either a Secondary A or B definition because of the variable characteristics of the rock type.
Aquifer Designation – Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.
Archaeological Priority Area (APA)	Areas identified in local plans as having known or potential archaeological significance, used to guide planning and development decisions.
Arisings	Materials or waste generated during construction or operation activities.
Asphalt	A bituminous material used for road surfacing and construction works.
Attenuation	The reduction of peak flow or runoff rate, typically through storage or SuDS (sustainable drainage scheme) features.
Automatic Traffic Count (ATC)	Usually identified as two rubber tubes laid across the carriageway linked to a roadside recorder box. These tubes can measure both speed and number of vehicle movements and in some cases the weight of vehicles passing over.
Back Pressure Turbine	Specialised steam turbines designed to generate mechanical work while providing process steam at a useful pressure and temperature at the turbine exhaust.
Background Concentrations	Pollutant concentrations representative of a wider area, typically derived from national datasets, such as UK-AIR.

Term	Definition
Balanced Net Zero Pathway	A trajectory developed by the Climate Change Committee (CCC) outlining a feasible route for the UK to achieve net zero emissions by 2050.
Baseline Conditions	The environmental conditions that exist prior to Proposed Scheme and against which impacts will be assessed.
Baseline Studies	Work done to determine and describe the environmental conditions against which any future change(s) can be measured or predicted and assessed.
Bedrock	The solid geological formation underlying superficial deposits, such as London Clay or Chalk formations.
Below Ground Heritage Asset	Heritage assets that are situated below ground level, including unknown buried archaeological remains.
Benthic	Relating to organisms living on, in or near the seabed or riverbed (sediments).
Biodiversity	The biological diversity of the earth's living resources. The total range of variability among systems and organisms at the following levels of organisation: bioregional, landscape, ecosystem, habitats, communities, species, populations, individuals, genes, and the structural and functional relationships within and between these different levels.
Biodiversity Net Gain (BNG)	A concept that requires developers to ensure that their project results in a minimum of a 10% increase in biodiversity compared to the pre-development state. This increase must be maintained for at least 30 years through legally binding obligations. BNG aims to leave habitats in a measurably better state than they were before development, contributing to the recovery of nature.
Book of Reference	A document that describes the land over which land powers will be sought for the DCO, the types of powers sought, as well as the owners and occupiers of the affected land and those with an interest in it.
Brackish Water	Water with a mixture of fresh and saline water, typically found in estuaries such as the tidal River Thames.
Buffer	The specified distance or area surrounding a feature of interest or the Site.

Term	Definition
Built Heritage	Historic buildings, structures, and other above ground assets of heritage interest.
Carbon Budget	A legally binding limit on total greenhouse gas emissions over a defined time period, used to track progress towards net zero targets.
Carbon Capture	The capture of carbon dioxide (CO ₂) from industrial sources that would otherwise be emitted into the atmosphere.
Characterisation (of Landscape)	The process of identifying areas of similar landscape character, classifying and mapping them and describing their character.
Chartered Institute of Ecology and Environmental Management (CIEEM)	The professional body for ecologists and environmental managers, many of which are either Chartered Ecologists or Chartered Environmentalists.
Circular Economy	An approach that minimises waste and maximises reuse, recycling, and resource efficiency.
Climate Change	The long-term alteration of Earth's average weather patterns, with wide-ranging environmental and societal impacts.
Climate Change Risk Assessment	An assessment of hazards arising from climate change on the Proposed Scheme.
Climate Hazard	A weather or climate related event (e.g. flood, heatwave, storm) with the potential to cause harm.
Climate Projection	The simulated response of the climate system to a scenario of future emission or concentration of greenhouse gases (GHG) and aerosols, generally derived using climate models. Climate projections are distinguished from climate predictions by their dependence on the emission/concentration/radiative forcing scenario used, which is in turn based on assumptions concerning, for example, future socio-economic and technological developments.
Closed-Loop Circulation	System in which heated water continuously circulates through the network without exposure to the external environment.
Closed-loop System	A system in which water is circulated without discharge to the environment, preventing interaction with external water bodies.

Term	Definition
CO ₂ equivalent	A measure of how much a gas contributes to global warming, relative to carbon dioxide, by multiplying the mass of the gas (in tonnes), by the gas' global warming potential (GWP).
Combined Heat and Power (CHP)	A system that simultaneously generates electricity and heat from the same energy source.
Communal heat network	A network by means of which heating, cooling or hot water is supplied only to a single building divided into separate premises or persons in those premises.
Community Severance	The division or disruption of communities, affecting access between people and services, local facilities or social networks.
Conceptual Site Model (CSM)	A representation of potential contaminant sources, pathways and receptors used to assess land contamination risks.
Conservation Area	An area designated under section 69 of the Planning (Listed Buildings and Conservation Areas) Act 1990 ¹ , designated as being of special architectural or historic interest, whose character or appearance it is desirable to preserve or enhance.
Conservation Status	The overall condition of a habitat or species population, considering its extent, structure, function, abundance and distribution.
Construction and Demolition Waste (C&D Waste)	Waste generated from construction, demolition or excavation activities.
Construction Compound	Temporary area used during construction typically for storage, welfare facilities, equipment and site operations.
Construction Environmental Management Plan (CEMP)	A plan specific to the Proposed Scheme that ensures appropriate environmental management practices are followed during the construction phase.
Construction Logistics Plan (CLP)	A document, typically required by Transport for London (TfL), setting out how construction-related deliveries, servicing, vehicle movements, and logistics activities will be managed to minimise impacts on the transport network and surrounding area during construction of the Proposed Scheme.
Construction Traffic	Vehicle movements associated with the construction phase, including HGV, LGV and staff travel.

Term	Definition
Construction Traffic Management Plan	A plan specific to the Proposed Scheme that ensures appropriate controls are in place for the movement of vehicles and safe management of pedestrian access during works.
Consultation Bodies	Any 'body' specified in the relevant EIA Regulations which the competent authority must consult in respect of an EIA, and which also has a duty to provide information.
Contaminant Linkage	The relationship between a contamination source, pathway and receptor that may result in harm or pollution.
Contaminated Land	Land where (prior to commencement of the construction phase) substances are causing or have a significant possibility to cause significant harm to people, property or protected species; or, where significant pollution is being caused or has a significant possibility of being caused to controlled waters.
Contaminated Land: Application in Real Environments (CL:AIRE)	Framework for assessing the sustainability of soil and groundwater remediation.
Controlled waste	Household, industrial and commercial waste (not including agricultural waste, waste from mines or quarries and most radioactive waste).
Controlled Waters	Surface water, groundwater and coastal waters that are protected under environmental legislation. As defined under the Water Resources Act 1991.
Cory Decarbonisation Project (CDP)	A carbon capture and storage project at Riverside Campus granted consent under the Cory Decarbonisation Project Order 2025 (SI2025/1227) and Cory Decarbonisation Project Correction Order 2026 (SI2026/0606). The project will capture carbon dioxide generated during the waste combustion process, compressing ready for export it via ship for permanent offshore storage. The CDP will significantly reduce greenhouse gas emissions from the Riverside EfW facilities, supporting London and the UK in achieving net zero targets.
Cory Environmental Holdings Limited	Part of the Cory Group, a UK based resource management company with an extensive river logistics network in London.
Cumulative Effects	The interaction between the different aspects of the environment likely to be affected by a development and the likely significant effects of a development resulting from the cumulation of effects with

Term	Definition
	other existing or approved projects. Collectively, these effects are referred to as cumulative effects.
Cumulative Effects Assessment (CEA)	The process of identifying, analysing and evaluating cumulative effects as part of the Environmental Impact Assessment.
Cutterhead	A crucial component of a tunnel boring machine that is responsible for the initial excavation of the tunnel. It is located at the front of the tunnel boring machine and is equipped with various cutting tools designed to break through different types of soil and rock.
Decibel (dB)	A logarithmic unit used to measure sound level.
Delivery Management System	A system used to control and schedule deliveries to minimise congestion and overlap of vehicle arrivals. This is a potential mitigation measure that can be identified as part of the CLP.
Demineralised Water	Water from which dissolved minerals and salts have been removed to reduce scaling and corrosion.
Demographic and Economic Data / Indicators	Statistical data that provides information about the population (demographic) and the economy (economic), such as age, income, employment rates, etc.
Deposition (Sediment Deposition)	The settling of particles from suspension onto the riverbed or seabed.
Design Evolution	The iterative development and refinement of the scheme design as further assessment, consultation, and engineering detail are completed.
Designated Heritage Asset	A building, site, place, area, or landscape that has been formally recognised by a public authority for its special historic, architectural, archaeological, or cultural importance, and is therefore given legal protection.
Designated Landscape	Areas of landscape identified as being of importance at international, national or local levels, either defined by statute or identified in development plans or other documents.
Designated Site (Statutory /Non-Statutory)	Areas recognised for nature conservation: Statutory: Protected by law (e.g. SSSI, SAC, SPA). Non-statutory: Not protected by law but identified at a local level, for example by a local authority (e.g. SINC, Local Wildlife Sites).

Term	Definition
Designated Views	Strategically protected or recognised views identified in planning policy, e.g. London View Management Framework.
Desk Study	A review of existing information and data relevant to the environmental assessment, typically sourced from literature, maps, and databases.
Determinants of Health	Factors that influence health outcomes, including environmental, social, economic, behavioural and biological conditions.
Development Consent Order (DCO)	The means of obtaining permission to construct and maintain developments categorised as NSIP or where the SoS considers that the project is of national significance and therefore development consent is required. It combines planning permission, key consents, licenses, permits and land acquisition powers (where required) in one order, with final consent granted by the relevant Secretary of State.
Dewatering	The removal of water from construction sites to maintain dry working conditions.
Digital Terrain Model (DTM)	A digital representation of ground surface topography used in modelling visibility.
Direct effect	An effect that is directly attributable to the Proposed Scheme.
Direct Employment	Employment created directly by the Proposed Scheme during its construction, operation, maintenance, and decommissioning phases, including staff employed by the applicant, operator, and main contractors working specifically on the project.
Directional drilling	A controlled drilling technique used to intentionally steer the borehole along a planned horizontal, vertical, or curved path rather than drilling straight down. It is commonly used in utilities and infrastructure projects to install pipelines, cables, or ducts beneath obstacles such as roads, rivers, railways, or environmentally sensitive areas, allowing underground installation with minimal surface disruption.
Disaster	In the context of the Proposed Scheme, a naturally occurring phenomenon such as an extreme weather event (e.g. storm, flood, temperature) or ground-related hazard events (e.g. subsidence, landslide, earthquake) with the potential to cause an event or situation that meets the definition of a Major Accident.

Term	Definition
Dispersion Modelling	A technique used to predict how pollutants disperse in the atmosphere and affect concentrations at receptors.
Displacement (Socio-economics)	The extent to which economic activity or jobs generated by the Proposed Scheme replace activity elsewhere within the Study Area.
District Heat Network	A network by means of which heating, cooling or hot water is supplied to two or more buildings or persons in those buildings.
Do Nothing Scenario	Continued change or evolution of the baseline in the absence of the Proposed Scheme.
Drainage Strategy	A plan outlining how surface water runoff will be managed and discharged.
Driver Delay	Additional travel time experienced by road users due to increased traffic or temporary traffic management.
Duty of Care (Waste)	Legal responsibility to ensure waste is safely managed, transported and disposed of.
Ecological Effect	The outcome of an impact on the structure, function or conservation status of an ecological feature.
Ecological Feature	A habitat, species, ecosystem, or designated site that is of ecological value and may be affected by the Proposed Scheme.
Ecological Impact	An action resulting in change to an ecological feature (e.g. habitat loss or disturbance).
Economic Activity	Participation in the labour market, including employment, self-employment and unemployment.
Effect	The consequence of an impact on the environment.
Effect Interactions or Intra-project Effects	The combined effects of individual impacts from the Proposed Scheme, for example noise and air pollutants, impacting on a single receptor.
EIA Directive	Directive 85/337/EEC (as amended). The initial Directive of 1985 and its three amendments have been codified by Directive 2011/92/EU of 13 December 2011. Directive 2011/92/EU was amended in 2014 by Directive 2014/52/EU.

Term	Definition
EIA Regulations	For the purpose of this DCO Application, the relevant EIA Regulations are the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended).
EIA Scoping Boundary	The preliminary extent of land identified at the start of the EIA process as potentially required for the construction, operation and maintenance of the Proposed Scheme. This boundary is subject to refinement as the design and environmental assessments progress through the EIA process.
EIA Scoping Opinion	The SoS's written opinion as to the scope, and level of detail, of the information to be provided in the ES.
EIA Scoping Report	A report prepared by an applicant to provide the information required under the EIA Regulations to request a Scoping Opinion from the SoS.
Embedded Mitigation Measures	Actions that would occur with or without input from the EIA feeding into the design process. These include actions that will be undertaken to meet other existing legislative requirements, or actions that are considered to be standard practices used to manage commonly occurring environmental effects (direct and indirect).
Embodied Carbon	Greenhouse gas emissions arising from the manufacturing, transportation, installation, maintenance, and disposal of building materials.
Emergency Preparedness	The planning and coordination of measures to respond effectively to emergencies or MA&D (major accident & disaster) events.
Emission	A material that is expelled or released to the environment. Usually applied to gaseous or odorous discharges to the atmosphere.
Emission Sources	Activities or processes that release pollutants into the atmosphere (e.g. traffic, construction plant, generators).
Energy from Waste (EfW)	The conversion of waste into a useable form of energy, often electricity and/or heat.
Enhancement	Measures to improve the environment over and above its baseline condition.
Environmental Constraints	The limitations and challenges posed by the natural and built environment that can affect the planning, design, and implementation of a project. These constraints can include:

Term	Definition
	Physical constraints: Natural features such as topography, geology, hydrology, and climate conditions. Biological constraints: Presence of protected species, habitats, and ecosystems. Socio-economic constraints: Land use patterns, cultural heritage sites, and community concerns. Regulatory constraints: Compliance with environmental laws, regulations, and policies. These constraints are identified and analysed during the EIA process to ensure that potential negative impacts are minimised, and appropriate mitigation measures are implemented.
Environmental Impact Assessment (EIA)	The systematic process required under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 for identifying, predicting and evaluating the likely significant environmental effects of a proposed development, including the consideration of reasonable alternatives and the development of mitigation measures. The EIA informs the preparation of the Environmental Statement to support an application for a Development Consent Order.
Environmental Management Plan	Certified plans that secure environmental controls and long-term management measures.
Environmental Statement (ES)	The document submitted by the Applicant as part of the application for a DCO that reports the findings of the EIA, including the description of the development, reasonable alternatives studied, assessment methodologies, baseline conditions, likely significant effects, proposed mitigation measures, and a summary of the cumulative impacts in accordance with the applicable EIA Regulations.
Estuarine Environment	A transitional environment where freshwater mixes with seawater, characterised by tidal influence and variable salinity.
Examining Authority	The person(s) appointed by the SoS to assess the Application and make a recommendation on the decision to the SoS.
Extended UK Habitat Classification Survey	A standardised survey method used to identify habitat types and assess their ecological value and condition.

Term	Definition
Flood Defence	Infrastructure designed to protect against flooding (e.g. barriers, embankments).
Flood Map for Planning	Defines Flood Zones based on annual probability of flooding from fluvial and tidal sources to inform development planning and flood risk assessment. Nationally consistent delineation of 'high', 'medium' and 'low' flood risk updated by the Environment Agency as deemed appropriate, typically on a quarterly basis.
Flood Risk	The combination of the probability and consequences of flooding.
Flood Zone	Areas defined by the Environment Agency indicating flood probability (Zone 1–3).
Flood Zone 1	Land that has a low probability of flooding (less than 1 in 1,000 annual probability of river or sea flooding (<0.1%)).
Flood Zone 2	Land that has a medium probability of flooding (between 1 in 100 and 1 in 1,000 annual probability of river flooding (0.1-1%), or between 1 in 200 and 1 in 1,000 annual probability of sea flooding (0.1-0.5%).
Flood Zone 3a	Land that has a high probability of flooding (1 in 100 year or greater annual probability of river flooding (>1%), or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%).
Flood Zone 3b	Comprises land where water has to flow or be stored in times of flood.
Floodplain	Land adjacent to a watercourse that is susceptible to flooding.
Flow and Return Mains	Pair of pipes used to transport heated water to users and return cooler water back to the source.
Flow Rate	The volume of fluid passing through a pipeline per unit of time, typically measured in cubic meters per second.
Fluvial Flooding	Flooding from rivers and watercourses.
Foreshore	The intertidal area between low water and high water marks.

Term	Definition
Framework Construction Worker Travel Plan (CWTP)	Plan to outline measures to manage workforce travel during construction activities. The CWTP will encourage travel by active travel modes and public transport. The document will also look to manage and minimise the adverse traffic impacts caused by construction staff travelling to and from the Proposed Scheme during its construction phase.
Future Baseline	The likely evolution of the baseline without implementation of the Proposed Scheme.
Geodiversity	Refers to the variety of geological (rocks, minerals, fossils), geomorphological (landforms, processes), and soil features that exist within a particular area or on Earth as a whole. It includes the natural processes that have shaped the physical landscape, such as volcanic activity, erosion, sedimentation, and tectonic movements.
Geographical Information System (GIS)	A system that captures, stores, analyses, manages and presents data linked to location. It links spatial information to a digital database.
Geological Site	A site designated or identified for its geological or geomorphological importance, including features such as rock formations, fossils, minerals, landforms, or evidence of geological processes that are of scientific, educational, or conservation interest.
Geology	The physical structure and composition of the ground, including superficial deposits and bedrock.
Glass Reinforced Plastic (GRP) Pipe	GRP pipelines are made from composite materials known for their high corrosion resistance, lightweight properties, and versatility in various applications.
Green Infrastructure	Networks of natural and semi-natural green spaces, watercourses and water bodies within urban areas providing multiple environmental, social and economic benefits including biodiversity, climate regulation and recreation.
Greenhouse Gases (GHG)	Gas that absorbs and emits reflected solar radiation which result in the warming of the Earth's atmosphere. It is absorbed and emitted at specific wavelengths within the spectrum of infrared radiation emitted by the Earth's surface, the atmosphere, and clouds. The six main GHG whose emissions are human caused are: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbon, and sulphur hexafluoride. In combination, these GHG emissions are

Term	Definition
	commonly expressed in terms of 'carbon dioxide equivalents' (CO ₂ e) according to their relative global warming potential.
Gross Value Added (GVA)	A measure of economic output representing the value of goods and services produced minus input costs.
Ground Conditions	The combined characteristics of geology, hydrogeology, contamination, and geotechnical properties of the land.
Ground Investigation	Site-specific intrusive and non-intrusive investigations used to confirm ground conditions and contamination levels.
Ground Stability	The ability of soil and rock to support structures without excessive movement or failure.
Ground-borne Noise	Noise generated by vibration transmitted through the ground and radiated as sound within buildings or structures.
Ground-Borne Vibration (GBV)	Vibration transmitted through the ground from construction activities such as tunnelling.
Groundwater	Water located beneath the earth's surface within soil pores or rock fractures.
Groundwater Source Protection Zone	The Environment Agency has designated SPZ for 2000 groundwater supply sources. The SPZ are designed to control activities close to water supplies intended for human consumption. These water sources include wells, boreholes and springs, all of which are used for public drinking. Contamination of these zones from any activity might cause pollution in the area and pose a risk to the public who consume tap water. The closer the activity is to the water source, the greater the risk.
Habitat	The environment in which populations or individual species live or grow.
Habitats Directive	European legislation (Council Directive 92/43/EEC) introduced to protect natural habitats and wild species of European importance, including the designation and protection of internationally important conservation sites.
Habitats of Principal Importance (HPI)	Habitats recognised under national policy as being of key importance for biodiversity conservation.

Term	Definition
Habitats Regulations 2017	The Conservation of Habitats and Species Regulations 2017, as amended, which transpose the requirements of the European Habitats Directive into domestic law in the UK and provide protection for internationally important habitats and species.
Habitats Regulations Assessment	An assessment undertaken to determine whether a proposed plan or project is likely to have significant effects, or adverse effects on integrity, on internationally important nature conservation sites, either alone or in combination with other plans or projects, in accordance with the Habitats Regulations 2017.
Habitats Site	A site protected under the Habitats Regulations 2017 due to its importance for internationally significant habitats and species, including Special Areas of Conservation (SAC), Special Protection Areas (SPA), and Ramsar sites.
Hazard	Anything with the potential to cause harm, including ill health and injury, damage to property or the environment; or a combination of these.
Hazard Pathway	The mechanism through which a hazard can affect a receptor, often described as source–pathway–receptor linkage.
Hazardous Waste	Waste with any hazardous properties as listed in Annex III of The Hazardous Waste (England and Wales) Regulations 2005 ² .
Health Inequalities	Differences in health outcomes or access to health determinants between population groups (e.g. due to age, deprivation, income or ethnicity).
Health Receptor	A population, group or individual that may be affected by changes in environmental or socio-economic conditions.
Heat Distribution Network	A network that, by distributing a liquid or a gas, enables the transfer of thermal energy for the purpose of supplying heating, cooling or hot water to a building or persons in that building (and includes any appliance the main purpose of which is to heat or cool the liquid or gas).
Heat Exchanger	Device used to transfer thermal energy between fluids without direct contact.
Heat Recovery Centre	A specialised facility designed to capture and utilise waste heat generated from various processes, such as industrial operations, power generation, or waste incineration. The primary purpose of this centre is to improve energy efficiency and reduce overall energy

Term	Definition
	consumption by repurposing heat that would otherwise be lost to the environment.
Heritage Asset	A building, monument, site, place, area, or landscape identified as having a degree of heritage significance meriting consideration in planning decisions.
Highway Network	The system of roads, including strategic, major and local roads.
Historic Environment	All aspects of the environment resulting from the interaction between people and places through time, including archaeological remains, buildings, landscapes, and settings.
Historic Environment Record (HER)	A record of known archaeological features, historic buildings and historic landscape features maintained by each County and Unitary Authority within the United Kingdom.
Horizontal Directional Drilling (HDD)	Trenchless technique for installing underground cables beneath obstacles (e.g. certain roads or watercourses).
Human Health	A state of complete physical, mental and social wellbeing, not merely the absence of disease or infirmity.
Hydraulic Modelling	Process used to assess fluid flow, pressure and operational performance within a network.
Hydraulic Testing	A method of testing the strength and integrity of pipelines by filling them with pressurised water.
Hydrodynamics	The movement and behaviour of water, including tides, currents and flow.
Hydrogeology	The study of groundwater movement, flow regimes and aquifer characteristics.
Hydrological Cycle	The movement of water between atmosphere, land, and water bodies.
Hydrology	The study of surface water features such as rivers, streams, lakes and drainage systems.
Hydromorphology	The physical characteristics of the shape, boundaries, and content of a water body.

Term	Definition
Impact	A physical or measurable change to the environment attributable to the Proposed Scheme.
Impermeable Surface	A surface that prevents infiltration of water (e.g. concrete).
Important Ecological Feature (IEF)	An ecological feature of local or greater importance that requires assessment for potential significant effects.
Index of Multiple Deprivation (IMD)	The Index of Multiple Deprivation Score is an overall measure of multiple deprivation experienced by people living in an area.
Indirect (Linked) Emissions	GHG emissions occurring outside the site boundary but associated with the Proposed Scheme (e.g. supply chains, energy generation).
Indirect Effects	Secondary impacts that occur as a result of a development or action, which are not directly caused by the development itself but are a consequence of it.
Indirect Employment	Employment generated in the wider economy through the Proposed Scheme's supply chain, including jobs supported by the production of goods and provision of services to the construction, operation, maintenance, and decommissioning phases (i.e. supply linkage or multiplier effects).
Induced Effects	Economic impacts arising from additional spending by those directly or indirectly employed as a result of the Proposed Scheme.
Inert Waste	Waste that does not undergo significant chemical or biological change (e.g. soil, concrete).
Inter-project Effects	Effects arising from the interaction between the Proposed Scheme and other developments in the surrounding area.
Intertidal Zone	Area exposed at low tide and submerged at high tide, supporting specialised flora and fauna.
Intra-project Effects or Effects Interactions	Effects arising from interactions between multiple impacts within the Proposed Scheme itself.
Invasive Non-Native Species (INNS)	Plant/animal species introduced outside native range that can cause ecological harm; subject to biosecurity controls.

Term	Definition
Land Cover	The surface cover of the land, usually expressed in terms of vegetation cover or lack of it. Related to, but not the same as, land use.
Land Use	What land is used for, based on broad categories of functional land cover, such as urban and industrial use and the different types of agriculture and forestry.
Landfill	A site used for disposal of waste by burial.
Landfill Capacity	The available volume of landfill remaining for waste disposal.
Landscape	An area, as perceived by people, the character of which is the result of the action and interaction of natural and/or human factors.
Landscape Value	The relative value that is attached to different landscapes by society. A landscape may be valued by different stakeholders for a whole variety of reasons.
Launch Pit	An excavated area at the beginning points of a drilling operation. It is used to stage drilling operations, including the placement of equipment and the insertion of the drilling head.
Laydown Area	A designated space on a construction site for the storage, staging, and organisation of materials, equipment, and tools before they are installed or used.
Light Goods Vehicle	A commercial motor vehicle with a total gross weight of 3,500kg or less.
Likely Significant Effect	The significance of an environmental effect is typically a function of the 'value' or 'sensitivity' of the receptor and the 'magnitude' or 'scale' of the Impact. Combining the environmental value of the resource or receptor with the magnitude of change produces a significance of effect category. The definition of a significant effect for each environmental topic will be contained within their respective chapters of the Environmental Statement.
Listed building	A building considered to be of special architectural or historic interest which is listed in accordance with the Planning (Listed Buildings and Conservation Areas) Act 1990 ³ .
Local Air Quality Management (LAQM)	The statutory process by which local authorities monitor, assess, and manage air quality.

Term	Definition
Local Highway Authority (LHA)	The local authority responsible for managing local roads.
Local Impact Report (LIR)	A report prepared by a local authority following submission of a DCO Application, setting out the likely impacts of the Proposed Scheme on its area. Section 104 of the PA2008 directs the SoS to have regard to any LIR submitted by a relevant local authority.
Local Planning Authority (LPA)	The local government body responsible for deciding local planning applications.
Low Carbon Infrastructure	Infrastructure designed to reduce greenhouse gas emissions
Lowest Observed Adverse Effect Level (LOAEL)	The level below which no negative effect on health and quality of life due to noise emissions can be detected. Noise level exceeding the LOAEL can cause small changes in behaviour, attitude or other physiological response.
L _{pA} (or LA)	The A-weighted instantaneous sound pressure level. This unit of measurement is used as part of the noise assessment.
Made Ground	Area where material is known to have been placed by people on the pre-existing (natural or artificial) land surface (including engineered fill).
Magnitude	A combination of the scale, extent, and duration of an impact.
Main River	A watercourse designated by the Environment Agency with strategic flood risk importance.
Maintenance and Access Point (MAP)	A vertical chamber or pit that will be constructed from ground level down to the tunnel alignment designed to facilitate construction, operation and maintenance of the Proposed Scheme. The components of an operational MAP are largely underground with personnel accessing via an access at ground level to enable safe access to the below ground infrastructure. Some of the MAP will feature an above ground kiosk. A MAP will be of three types, with the following approximate diameters (including concrete collar):

Term	Definition
	a. *Launch MAP (11m diameter); b. *Reception MAP (9.5m diameter); and c. Pump Station MAP (14.5m diameter). * Launch/ reception MAP are referred to as non-pump MAP after the construction phase
Maintenance and Access Point (MAP) Construction Compound	The extent of the compound required around a MAP to construct it at a given location. The extent of a MAP construction compound will vary depending on the requirements at that location.
Major Accident	In the context of the Proposed Scheme, an event that threatens immediate or delayed serious damage to human health, welfare and/or the environment and requires the use of resources beyond those of the Applicant or its contractors. Serious damage includes the loss of life or permanent injury and/or permanent or long-lasting damage to an environmental receptor that cannot be restored through minor clean-up and restoration efforts.
Major Accidents and Disasters (MA&D)	A topic introduced into EIA to assess risks from natural hazards and major accidents associated with a development and its vulnerability to them.
Major Development	A development of significant scale or impact, typically defined in planning legislation or guidance.
Manual Classified Count (MCC)	A traffic survey method where traffic is manually categorised by type.
Marine Environment	For this project, encompasses saline, brackish and tidal environments below mean high water spring (MHWS) level, including sediments, habitats, species and human users.
Materials	Physical resources used in development such as concrete, steel, timber and aggregates.
Materials Management Plan (MMP)	A document prepared under CL:AIRE Definition of Waste: Development Industry Code of Practice to enable reuse of materials without classifying them as waste.
Mean High Water Spring (MHWS)	The average high tide level during spring tides, used to define marine influence limits.
Mental Wellbeing	A person's psychological and emotional state, including factors such as stress, anxiety, happiness and sense of belonging.

Term	Definition
Micro-tunnelling	A, trenchless method for installing pipelines, cables, and conduits underground. Unlike traditional open-cut methods, it eliminates the need to dig long trenches by excavating while simultaneously installing prefabricated pipeline sections. The process is remotely controlled from the surface, ensuring the safety of operators and enabling precise alignment and grade control.
Middleton Jetty	The jetty at the Riverside Campus used to transfer residual waste to, and incinerator bottom ash from, Riverside 1 and Riverside 2 via the River Thames.
Mineral Consultation Area (MCA)	An area within which local planning authorities must consult with mineral planning authorities before permitting development.
Mineral Resources	Naturally occurring concentrations of minerals, rocks, or aggregates in the ground that have potential economic value and may be extracted for use in construction, industry, or other purposes.
Mineral Reserves	The portion of a mineral resource that has been demonstrated to be economically and legally extractable, i.e. with an extant planning permission in place.
Mineral Safeguarding Area (MSA) and Mineral Consultation Area (MCA)	An area identified in planning policy to safeguard mineral resources from sterilisation by development, and the surrounding area within which consultation with the relevant mineral planning authority must occur if development is proposed.
Mitigation	Measures including any process, activity, or design to avoid, reduce, or, if possible, offset any identified significant adverse effects on the environment.
Mobile Heat Project	A project to transport heat generated at the Riverside Campus via barge along the River Thames intended to operate on a transitional basis while the Proposed Scheme is designed and constructed. The necessary planning consent for the Thames Mobile Heat Project is anticipated to come forward in due course, with operation expected to commence in advance of the construction phase of the Proposed Scheme.
Monitoring	The process of collecting data to evaluate the effectiveness of mitigation measures and verify predicted impacts.
National Planning Policy Framework (NPPF)	The document that sets out Government's planning policies for England and how these are expected to be applied. The NPPF was last revised in December 2024. It should be noted that a draft NPPF was published for consultation in December 2025, however it is not

Term	Definition
	expected that this draft will significantly alter the policy context or policy compliance of the Proposed Scheme.
National Policy Statement (NPS)	National policy that provides the primary framework for determining DCO applications. Section 104 of the PA2008 directs the SoS to have regard to any relevant NPS and that s/he must decide the application in accordance with the NPS unless to do so would contravene specific legal tests, including that the adverse impacts would outweigh its benefits. The principal NPS for the Proposed Scheme is Overarching National Policy Statement for Energy (EN-1), 2025.
Nationally Significant Infrastructure Project (NSIP)	A NSIP is a nationally significant infrastructure development that meets the criteria for being as such in the Planning Act 2008, such as harbours, power generating stations, highways projects and electricity transmission lines, which require a development consent under procedures governed by the Planning Act 2008 (and amended by the Localism Act 2011). They are treated separately from normal local authority planning because of their size and importance to wider communities.
Net Zero	A state where total GHG emissions are balanced by removals, resulting in no net contribution to atmospheric GHG levels.
'No Development' Scenario	A baseline scenario that assumes a project is not implemented. It is used to describe and compare the likely future conditions of the project site and surrounding area in the absence of the development
Noise Important Area (NIA)	Locations where the population is exposed to the highest levels of environmental noise (top 1% nationally).
Noise-Sensitive Receptor (NSR)	Any identified receptor likely to be affected by noise. These are generally human receptors, and may include residential dwellings, workplaces, schools, hospitals, community facilities, places of worship, recreational spaces, and heritage and ecological receptors.
Non-Designated Heritage Asset	A heritage asset identified as having heritage value but not formally designated (e.g. locally listed buildings, archaeological remains recorded in the HER).
Non-hazardous Waste	Waste that is neither inert nor hazardous, including general construction waste.

Term		Definition
Non-Motorised User Amenity	User	The quality and pleasantness of conditions for pedestrians and cyclists.
Non-Motorised (NMU)	User	People travelling without motor vehicles, including pedestrians and cyclists.
Non-Technical Summary		A clear and concise document summarising the ES. It simplifies technical information, making the ES easily understandable and accessible to a wider audience, including the general public.
Off-site Recovery		Reuse, recycling or treatment of waste at facilities located away from the development site.
Open Cut		A method of pipeline installation that involves opening up the surface of the ground to the required depth for installing a pipeline.
Operational Emissions		GHG emissions generated during the operation and maintenance of the Proposed Scheme.
Order Limits		The limits of land within which the Proposed Scheme will be constructed, operated and maintained. The Order Limits are generally shown on the Land Plans and Works Plans submitted with the Application.
Outstanding Value (OUV)	Universal	The cultural and/or natural significance of a World Heritage Site that is considered so exceptional as to transcend national boundaries.
Overcut		Micro-tunnelling machines are designed to excavate a diameter which that is slightly larger than the pipeline. This difference is known as overcut.
Parameters		A limit or boundary which defines the scope of a particular process or activity.
Peak Construction Phase		The period during construction when traffic and workforce movements are highest.
Peak Particle Velocity (PPV)		The peak speed of particle movement in the ground due to vibration and used to assess impacts from construction activity induced vibration. The PPV is defined as millimetres per second (mm/s).
Permeability		The ability of soil or rock to transmit water.

Term	Definition
Personal Injury Collision (PIC)	A recorded road collision involving injury to one or more persons.
Physical Constraints	Natural features such as topography, geology, hydrology, and climate conditions.
Pipe Lubrication System	A mechanism designed to deliver lubricants to moving machine components to reduce friction and wear.
Pipejacking	Trenchless construction method to install underground pipelines without the need for extensive excavation. This method involves using hydraulic jacks to push prefabricated pipes through the ground while excavating the soil in front of them. It is typically used for shorter distances and is ideal for straight-line installations in stable ground conditions. Pipe jacking requires access pits at both ends of the installation.
Pipeline Integrity	The process of ensuring that pipelines remain safe and functional throughout their operational life.
Planning Act 2008 (as amended)	The UK legislation establishing the Development Consent Order (DCO) regime for the authorisation of nationally significant infrastructure projects (NSIP) in England and Wales. The Act sets out the procedures for application, examination, and determination of such projects, as amended by subsequent legislation.
Planning Inspectorate	The executive agency of the UK Government responsible for operating the planning process for Projects under the Planning Act 2008, including the receipt, acceptance and examination of applications for Development Consent Orders and the preparation of a recommendation to the relevant Secretary of State on whether development consent should be granted or refused.
Planning Practice Guidance (PPG)	The PPG provides context and guidance to the NPPF in England. The PPG is web-based and is updated regularly.
Plate Heat Exchanger	A device that transfers heat between two fluids using a series of thin, corrugated metal plates, allowing efficient heat exchange without mixing the fluids.
PM ₁₀	A size fraction of particulate matter that has an effective aerodynamic diameter of 10 µm and if inhaled is unlikely to pass beyond the upper respiratory tract.

Term	Definition
PM _{2.5}	A size fraction of particulate matter that has an effective aerodynamic diameter of 2.5 µm and if inhaled may pass beyond the larynx.
Pollutants	Substances in the air that may harm human health or the environment (e.g. NO ₂ , PM ₁₀ , PM _{2.5}).
Preliminary Ecological Appraisal	The first stage in evaluating the ecological features of a site.
Preliminary Risk Assessment (PRA)	A desk-based review on the potential risks in relation to contaminated land in regard to human health, controlled waters and the wider environment.
Pressure-Rated Pipework	Pipework designed to operate under specified internal pressure conditions.
Primary Liner	A protective layer installed inside a pipeline to enhance its function.
Primary Mitigation	Modifications to the location or design of the Proposed Scheme made during the pre-application phase that are an inherent part of the Proposed Scheme and do not require additional action to be taken.
Principal Contractor	Contractor appointed to coordinate the construction phase of a project where it involves more than one contractor.
Proposed Scheme	The London Strategic Heat Main (SHM). The Applicant intends to construct, operate, and maintain a heat transmission network known as the London Strategic Heat Main. The London SHM will transport low carbon heat from anchor heat sources at Riverside Campus, located in Belvedere, London Borough of Bexley (LBB) to areas of high heat demand. The London SHM comprises a Transmission Trunk Main, and a series of Transmission Branches. Existing and future distribution networks and other heat sources will be able to connect along both the Transmission Trunk Main and Transmission Branches. The London SHM will be supported by ancillary infrastructure and landscaping, together referred to as the Proposed Scheme.
Propulsion System	A mechanism that produces thrust to propel an object forward, typically by converting energy into kinetic motion. It consists of a source of mechanical power and a propulsor, which converts this power into propulsive force.

Term	Definition
Proximity Principle	The principle that waste should be managed in one of the nearest appropriate installations.
Public Rights of Way (PRoW)	A right by which the public can pass along linear routes over land (which that may be privately owned) at all times. The mode of transport may be restricted (i.e. foot, horseback, cycle, non-motorised vehicle, or all vehicle).
Public Transport Accessibility Level (PTAL)	A measure of public transport accessibility based on walking time and service frequency, ranging from 0 (very poor) to 6b (excellent).
Pumping Station	A facility designed to move fluids, whether liquid or gas, from one location to another. It operates by mechanically increasing the fluid's energy to overcome resistance within the pipeline network, ensuring reliable transport across long distances or elevated points.
Ramsar Site	Wetland of international importance designated under the Ramsar Convention.
Reactive Maintenance	Maintenance undertaken in response to faults or failures.
Reasonable Alternatives	Options (for example in terms of development design, technology, location, size and scale) studied by a developer that are relevant to a project and its specific characteristics.
Receptor	A component of the natural, created or built environment such as a human being, water, air, a building, habitat or plant that has the potential to be affected by a project.
Representative Concentration Pathway (RCP)	A greenhouse gas concentration trajectory used for climate modelling (e.g. RCP 8.5 represents a high emissions scenario).
Residual Effects	Environmental effects that remain after mitigation measures have been applied.
Residual Waste	Waste remaining after reuse, recycling and recovery activities.
Risk Assessment	The process of identifying hazards, evaluating risks and determining appropriate mitigation.
Riverside 1	Riverside 1, an EfW facility generating up to 80.5 megawatt (MW) of electricity. Riverside 1 has been operational since 2011. Riverside 1 is owned and operated by the Applicant. It is located in Belvedere,

Term	Definition
	within the London Borough of Bexley (LBB). Riverside 1 is an anchor heat source for the London SHM.
Riverside 2	Riverside 2, an EfW facility with a generating capacity of approximately 76MW. Riverside 2 is currently under construction and anticipated to be operational in 2026. Riverside 2 is owned and will be operated by the Applicant. It is located in Belvedere, within the LLB. Riverside 2 is an anchor heat source for the London SHM.
Riverside Campus	The Cory Environmental Holdings Limited estate at Belvedere that currently accommodates Riverside 1 and 2, and Middleton Jetty and at which the Cory Decarbonisation Project and Mobile Heat Project would be located. The Riverside Campus will form the eastern end of the London SHM, where it will tie into Riverside 1 and 2.
Rochdale Envelope	EIA approach assessing a defined range of design parameters to capture a realistic worst-case.
Runoff	Water flowing over land into watercourses.
Salinity Gradient	Variation in salt concentration along an estuary, influencing ecological communities.
Schedule 1 and Schedule 2 Developments	Classifications under the EIA Regulations. Schedule 1 developments automatically require an EIA, while Schedule 2 projects require one only if they are likely to have significant environmental effects.
Scheduled Monument	A nationally important archaeological site or historic structure that is designated by the SoS and legally protected under the Ancient Monuments and Archaeological Areas Act 1979 ⁴ .
Scoping	The process of identifying the issues to be addressed by an EIA. It is a method of ensuring that an EIA focuses on the important issues and avoids those that are considered to be less significant.
Screening	The initial step to determine whether a project requires an EIA under UK regulations.
Secretary of State (SoS)	A senior government official responsible for various departments. In this context, it refers to the official responsible for determining a DCO application.
Section 35	A request for a direction by the SoS under section 35(1) of the Planning Act 2008 that a project be treated as development for which development consent is required. This was directed for the Proposed

Term	Definition
	Scheme on 27 August 2025. The Applicant therefore proposes to make an application for an order granting development consent (DCO) under the Planning Act 2008 for the construction, operation and maintenance of the Proposed Scheme.
Sediment Transport	Movement of sediment by water due to currents, tides or waves.
Segmental construction	A construction technique that involves the assembly of large, pre-manufactured segments or components to form a complete structure. This method is commonly used for bridges, tunnels, shafts and other components of large civil engineering projects.
Sensitivity	The sensitivity of a receptor is a function of its value, and capacity to accommodate change reflecting its ability to recover if it is affected.
Severance	The division of communities or disruption of access caused by physical barriers such as construction works or infrastructure.
Sheet piling	Sheet piling is a construction technique using interlocking sheets, primarily steel, to form continuous walls that retain soil or water.
Significance (of Effects)	A measure of the importance or gravity of the effect defined by significance criteria specific to the environmental topic.
Significant Observed Adverse Effect Level (SOAEL)	Noise above this level can cause a material change in behaviour, attitude or other physiological response and is a significant adverse effect on health and quality of life.
Site of Importance for Nature Conservation (SINC)	Usually selected within a local authority area and support both locally and nationally threatened habitats and species that are priorities under the county or UK Biodiversity Action Plan.
Site of Special Scientific Interest	A site statutorily notified under the Wildlife and Countryside Act 1981 (as amended) as being of special nature conservation or geological interest. They may include habitats, geological features, and landforms.
Site Waste Management Plan (SWMP)	A plan describing how construction waste will be minimised and managed.
Slurry	A mixture of denser solids suspended in liquid.

Term	Definition
Slurry Separation	The process of removing solid particles from a slurry mix, which is circulated for lubrication purposes. This forms an important part of some tunnelling techniques and is used to dewater the slurry generated by the tunnel boring machine TBM enabling off-site transport of the solid water and re-use of the liquid fraction.
Slurry Separation Plant	Slurry separation plants are essential systems used in various industries, particularly in tunnelling and construction, to efficiently separate solid particles from liquid suspensions
Smothering	The covering of habitats or organisms by deposited sediment.
Social Infrastructure	Facilities and services that support community wellbeing, including healthcare, education, recreational spaces and community centres.
Socio-economics	The study of how economic activity affects and is shaped by social processes. It involves understanding the relationship between economic activity and social life.
Sound	This is the physical phenomena of the transmission of energy through gaseous or liquid media via rapid fluctuations in pressure.
Sound Power Level (Lw)	The total sound energy emitted by a noise source.
Source Protection Zone (SPZ)	SPZ show the risk of contamination from any activities that might cause pollution to groundwater sources such as wells, boreholes and springs used for public water supplies. The closer the activity, the greater the risk. SPZ can comprise of up to three main zones (inner, outer and total catchment). A fourth zone of special interest can also occasionally be applied to a groundwater source.
Source Protection Zone Inner zone – SPZ1	The area of highest groundwater protection surrounding a potable groundwater abstraction point, defined as either (1) the area within 50 metres of the abstraction point, or (2) the area where groundwater takes up to 50 days to travel to the abstraction point, whichever is larger. This zone is considered most vulnerable to pollution.
Source Protection Zone Outer zone – SPZ2	The area of intermediate groundwater protection surrounding a potable groundwater abstraction point, defined as the area where groundwater takes between 50 and 400 days to travel to the abstraction point, or a 250-metre radius from the abstraction point, whichever is larger.

Term	Definition
Source Segregation	Separation of waste streams at the point of generation to improve recycling.
Special Area of Conservation	Area of protected habitat(s) and species as defined in the Habitats Directive.
Special Protection Area	Site classified in accordance with Article 4 of the EC Birds Directive (79/409/EEC) which came into force in April 1979. Classification is made for rare and vulnerable birds (as listed on Annex 1 of the Directive), and for regularly occurring migratory species.
Statutory Consultees	The EIA Regulations prescribe circumstances where the SoS is required to consult specified bodies prior to a decision being made on an application. Includes bodies such as: Environment Agency, Highways Authority, Historic England, Natural England, and Parish Councils, among others.
Study Area	The area in which a particular assessment is carried out. The Study Areas are a function of the nature of the impacts and the locations of potentially affected environmental resources or receptors. The Study Areas will vary depending on the nature of the technical assessment.
Substation	A set of equipment reducing the high voltage of electrical power transmission to that suitable for supply to consumers.
Subtidal Zone	Area permanently submerged below the lowest tide level.
Superficial Deposits	Unconsolidated materials overlying bedrock, such as alluvium, gravel, or peat.
Supplementary Planning Guidance (SPG) / Supplementary Planning Documents (SPD)	Documents produced by local planning authorities providing additional detail on how planning policies should be applied.
Supply Chain Effects	Indirect economic impacts on businesses providing goods and services to the Proposed Scheme.
Surface Water	Water present on the ground surface (e.g. rivers, lakes).
Surface Water Flooding	Flooding caused by excessive rainfall overwhelming drainage systems.

Term	Definition
Susceptibility	The ability of a defined landscape or visual receptor to accommodate the specific proposed development without undue negative consequences.
Suspended Sediment Concentration (SSC)	The concentration of sediment particles suspended within the water column.
Sustainable Drainage Systems (SuDS)	Drainage solutions designed to manage surface water sustainably and reduce flood risk.
Synergistic Effect	An effect where combined impacts produce a greater effect than the sum of individual effects.
Temporal Interaction	Interaction of effects due to overlap in timing (e.g. concurrent construction activities).
Temporal Scope	The timeframe over which impacts and effects are considered (e.g. construction, operation, permanent or temporary effects).
Temporary Traffic Management (TTM)	Short-term measures such as lane closures, diversions, or signals implemented during construction.
Temporary Works	Structures or systems installed temporarily to support construction activities.
Thermal Efficiency	The ratio of useful heat output to the total energy input in a heating system.
Thermal Emissions	Release of heat to the environment (e.g. from buried pipelines), potentially affecting water temperature.
Thermal Expansion	Expansion of materials caused by temperature increase.
Thermal Storage	The storage of heat energy for later use, often used to balance supply and demand in district heating systems. The Proposed Scheme will include thermal storage to hold surplus heat from the Heat Recovery System at Riverside Campus.
Thermal Store	The physical system or unit used to retain and release stored thermal energy for heating or cooling purposes. The Thermal Store(s) will be covered 'reservoirs' of hot water at or below ground level for discharge to the London SHM, as required, maintaining a consistent buffer of stratified hot water for distribution to provide network resilience

Term	Definition
Threat	A malicious act (e.g. vandalism or intentional damage) that could lead to a major accident.
Tidal Flooding	Flooding caused by sea or tidal influences.
Tourism Receptors	Assets related to tourism, including visitor attractions, accommodation and visitors themselves.
Townscape	The character and composition of the built environment including the buildings and the relationships between them, the different types of urban open space, including green spaces, and the relationship between buildings and open spaces.
Townscape Character Area (TCA)	A defined area with a distinct and recognisable townscape character.
Transboundary Effects	Environmental effects that extend beyond national boundaries to affect receptors in other countries.
Transmission Branch	An underground pipeline (with associated MAP and thermal storage infrastructure) to transport low carbon heat from the Transmission Trunk Main into areas of high demand in London.
Transmission Trunk Main	An underground pipeline (with associated MAP and thermal storage infrastructure) to transport low carbon heat from heat sources into areas of high heat demand in London.
Transport Assessment (TA)	A document assessing the transport impacts of a development and supporting mitigation.
Transport Network	All transport infrastructure including roads, public transport, and active travel routes.
Trenchless Construction	Construction methods carried out underground without excavation of the surface or riverbed.
Tunnel Boring Machine	Specialised piece of equipment used to excavate tunnels in a variety of geological conditions.
Turbidity	A measure of water clarity affected by suspended particles.
Unexploded Ordnance (UXO)	Explosive remnants of war that may remain buried and pose a hazard during ground disturbance.

Term	Definition
Utility Diversion	The rerouting of existing utilities (e.g. water, gas, electricity) to accommodate construction of the Proposed Scheme.
Vibration	Vibration is the transmission of energy through solid media by oscillation.
Visual Amenity	The overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating, visiting or travelling through an area.
Visual Effects	Effects on specific views and on the general visual amenity experienced by people.
Visual Receptors	People with views of the development or associated activities. These are located within the visual envelope and are typically residents, motorists, pedestrians, recreational users in residential areas on publicly accessible roads, footpaths and open spaces.
Vulnerability	Vulnerability describes the susceptibility of an individual, a community, assets or systems to the impacts of hazards, either in terms of the likelihood of that experience or the extent to which an impact might result in an effect (and how reversible that effect might be). Within MA&D assessment, the term 'vulnerability' is used to describe the ability of the Proposed Scheme to plan, control, resist and recover from a MA&D event in a timely manner.
Vulnerable Groups	Population groups more likely to experience disproportionate health effects (e.g. elderly people, those with disabilities, or deprived communities).
Walking Catchment	Distance within which people typically walk to access transport.
Waste	Any substance or object which is discarded or intended to be discarded.
Waste Exemption	A regulatory allowance enabling certain waste activities without a permit.
Waste Heat	Heat generated as a by-product of industrial processes that can be recovered and reused.
Waste Hierarchy	Prioritisation framework promoting waste prevention, reuse, recycling, recovery and disposal.

Term	Definition
Waste Management Facility	A site where waste is processed, treated, recycled or disposed of.
Waste Recovery Rate	The proportion of waste reused, recycled or recovered.
Water Framework Directive (WFD)	Legislation requiring protection and enhancement of water bodies.
Water Framework Directive Assessment	As part of its role, the Secretary of State must consider whether proposals for new developments have the potential to a) cause a deterioration of a water body from its current status or potential; and/or b) prevent future attainment of 'Good' status (or potential where not already achieved). A WFD Assessment determines whether a Proposed Scheme is compliant with these criteria.
Water Quality	Chemical and biological condition of water.
Water Resources	Availability and use of water sources.
Watercourse	A channel through which water flows, such as rivers, canals, or streams.
Whole Life Carbon Assessment	An assessment of total carbon emissions across the full lifecycle of a project, including indirect, embodied and operational carbon.
World Heritage Site (WHS)	A site inscribed by UNESCO as having Outstanding Universal Value and protected internationally.
Worst-case Scenario	A conservative assessment approach that considers the maximum potential environmental impact within defined design parameters.
Zone of Influence (Zoi)	The areas/resource(s) that may be affected by the biophysical changes caused by activities associated with a project. The Zoi typically varies depending on the environmental receptors under consideration.
Zone of Theoretical Visibility (ZTV)	A map, digitally produced, showing areas of land within which, the Proposed Scheme is theoretically visible.

Abbreviations

Table 2: Abbreviations

Term	Definition
AADT	Annual Average Daily Traffic
AEP	Annual Exceedance Probability
AIL	Abnormal Indivisible Load
ALARP	As Low As Reasonably Practicable
ANC	Association of Noise Consultants
AOD	Above Ordnance Datum
APA	Archaeological Priority Area
APFP	Applications: Prescribed Forms and Procedure
AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQO	Air Quality Objective
AQS	Air Quality Standards
ATC	Automatic Traffic Count
AW	Ancient Woodland
BAT	Best Available Techniques
BB93	Building Bulletin 93 (Acoustic Design of Schools)
BGL	Below Ground Level
BGS	British Geological Survey
BNG	Biodiversity Net Gain
BPM	Best Practicable Means
BRE	British Research Establishment
BRES	Business Register and Employment Survey
BS	British Standard
C&D	Construction and Demolition

Term	Definition
CAR-SOIL	Control of Asbestos Regulations 2012
CCC	Climate Change Committee
CCR	Climate Change Risk
CCS	Carbon Capture and Storage
CCTV	Closed Circuit Television
CDM	Construction (Design and Management)
CDP	Cory Decarbonisation Project
CEA	Cumulative Effects Assessment
CEMP	Construction Environmental Management Plan
CH ₄	Methane
CHP	Combined Heat and Power
CIEEM	Chartered Institute of Ecology and Environmental Management
CifA	Chartered Institute for Archaeologists
CIRIA	Construction Industry Research and Information Association
CL:AIRE	Contaminated Land: Applications in Real Environments
CLP	Construction Logistics Plan
CO ₂	Carbon Dioxide
CO _{2e}	Carbon Dioxide Equivalent
CoCP	Code of Construction Practice
CoL	City of London
COMAH	Control of Major Accident Hazards
CoPA	Control of Pollution Act 1974
COSHH	Control of Substances Hazardous to Health
CoW	City of Westminster
CR	Commitments Register
CRR	Community Risk Register

Term	Definition
CRTN	Calculation of Road Traffic Noise
cSAC	Candidate Special Area of Conservation
CSM	Conceptual Site Model
cSPA	Candidate Special Protection Area
CTMP	Construction Traffic Management Plan
CWTP	Construction Worker Travel Plan
dB	Decibel
dB (A)	A-weighted decibel
DBA	Desk-Based Assessment
DCO	Development Consent Order
DEFRA	Department for Environment, Food and Rural Affairs
DEM	Digital Elevation Model
DESNZ	Department of Energy Security and Net Zero
DfT	Department for Transport
DLR	Docklands Light Railway
DMRB	Design Manual for Roads and Bridges
Doc Ref.	Document Reference
DrWPA	Drinking Water Protected Area
DTM	Digital Terrain Model
EA	Environment Agency
EclA	Ecological Impact Assessment
EEA	Europea Economic Area
EEZ	Exclusive Economic Zone
EfW	Energy from Waste
EIA	Environmental Impact Assessment
EPA	Environmental Protection Act 1990

Term	Definition
EPRA	Environmental Permitting Regulations
EPS	European Protected Species
EPUK	Environmental Protection UK
ERP	Emergency Response Plan
ES	Environmental Statement
EU	European Union
EWC	European Waste Catalogue
FRA	Flood Risk Assessment
FTE	Full Time Equivalent
GBV	Ground-Borne Vibration
GDR	Geotechnical Design Report
GHG	Greenhouse Gas
GIR	Ground Investigation Report
GIS	Geographic Information System
GLA	Greater London Authority
GLAAS	Greater London Archaeological Advisory Service
GLHER	Greater London Historic Environment Record
GLVIA3	Guidelines for Landscape and Visual Impact Assessment (3rd Edition)
GP	General Practitioner
GRP	Glass Reinforced Plastic
GVA	Gross Value Added
GW	Gigawatt
GWDTE	Groundwater Dependent Terrestrial Ecosystem
H&S	Health and Safety
Ha	Hectare
HDD	Horizontal Directional Drilling

Term	Definition
HER	Historic Environment Record
HGV	Heavy Goods Vehicle
HIA	Health Impact Assessment
HPI	Habitat of Principal Importance
HRA	Habitats Regulations Assessment
HS2	High Speed Two
HSE	Health and Safety Executive
HWCN	Hazardous Waste Consignment Note
Hz	Hertz
IAQM	Institute of Air Quality Management
ICB	Integrated Care Board
ICCI	In-combination Climate Change Impact
ICS	Integrated Care System
IEF	Important Ecological Feature
IEMA	Institute of Environmental Management and Assessment
IHBC	Institute of Historic Building Conservation
IMD	Index of Multiple Deprivation
INNPS	Invasive Non-Native Plant Species
INNS	Invasive Non-Native Species
IOA	Institute of Acoustics
IoD	Indices of Deprivation
IPCC	Intergovernmental Panel on Climate Change
ISEP	Institute of Sustainability and Environmental Professionals
ISO	International Organization for Standardisation
JNCC	Joint Nature Conservation Committee
km	Kilometre

Term	Definition
kV	Kilovolt
kWp	Kilowatt peak
LAeq	A-weighted, equivalent continuous sound level
LAQM	Local Air Quality Management
LBB	London Borough of Bexley
LBBD	London Borough of Barking and Dagenham
LBLa	London Borough of Lambeth
LBLe	London Borough of Lewisham
LBS	London Borough of Southwark
LBT	Legally Binding Targets
LBTH	London Borough of Tower Hamlets
LCRM	Land Contamination Risk Management
LDP	Local Development Plan
LFRMS	Local Flood Risk Management Strategy
LGV	Light Goods Vehicle
LHA	Local Highways Authority
LiDAR	Light Detection and Ranging
LLCS	London Lorry Control Scheme
LNR	Local Nature Reserve
LOAEL	Lowest Observed Adverse Effect Level
LWS	Local Wildlife Site
LPA	Local Planning Authority
LRN	Local Road Network
LSE	Likely Significant Effects
LSOA	Lower Super Output Area
LWS	Local Wildlife Site
MA&D	Major Accidents and Disasters

Term	Definition
MAFF	Ministry of Agriculture, Fisheries and Food
MAGIC	Multi-Agency Geographic Information for the Countryside
mAOD	Meter above Ordnance Datum
MAP	Maintenance and Access Point
MCA	Mineral Consultation Area
MCC	Manual Classified Count
MCZ	Marine Conservation Zone
MHCLG	Ministry of Housing, Communities and Local Government
MHWS	Mean High Water Spring
MMO	Marine Management Organisation
MMP	Materials Management Plan
MOL	Metropolitan Open Land
MPA	Marine Protected Area
MPS	Marine Policy Statement
MRN	Major Road Network
MSA	Mineral Safeguarding Area
MW	Megawatt
MWh	Megawatt Hours
NCN	National Cycle Network
NERC	Natural Environment and Rural Communities Act
NFI	National Forestry Inventory
NGR	National Grid Reference
NH	National Highways
NHLE	National Heritage List for England
NHS	National Health Service

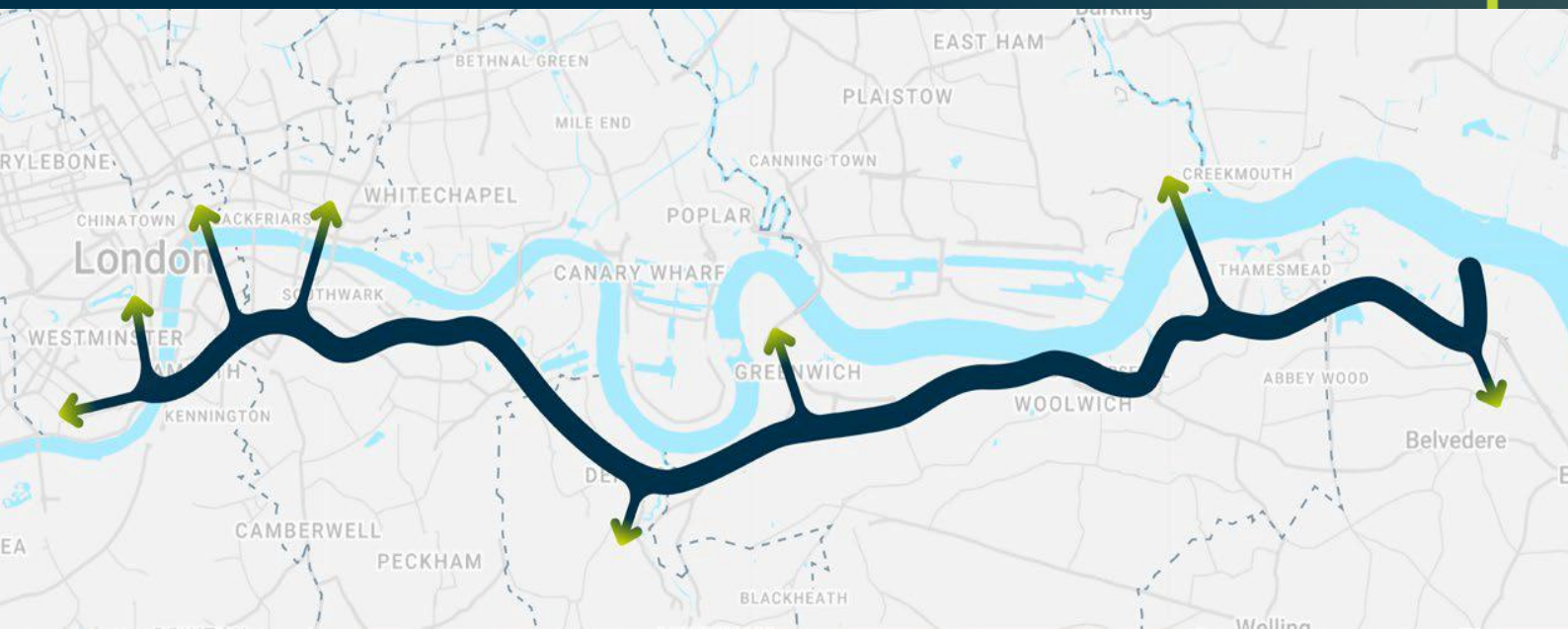
Term	Definition
NIA	Noise Important Area
NMU	Non-Motorised User
NNR	National Nature Reserve
NO ₂	Nitrogen Dioxide
NOEL	No Observed Effect Level
NO _x	Nitrogen Oxide
NPPF	National Planning Policy Framework
NPS	National Policy Statement
NPSE	Noise Policy Statement for England
NRMM	Non-Road Mobile Machinery
NRTF	National Road Traffic Forecast
NSIP	Nationally Significant Infrastructure Project
NSR	Noise-Sensitive Receptor
NTEM	National Trip End Model
NTM	National Transport Model
NTS	Non-Technical Summary
OHID	Office for Health Improvement and Disparities
ONS	Office for National Statistics
OS	Ordnance Survey
OUV	Outstanding Universal Value
OWMS	Operational Waste Management Strategy
PA2008	Planning Act 2008
PEA	Preliminary Ecological Appraisal
PHE	Public Health England
PIA	Planning and Infrastructure Act 2025
PIC	Personal Injury Collision
PINS	Planning Inspectorate

Term	Definition
PPE	Personal Protective Equipment
PPG	Planning Practice Guidance
PPV	Peak Particle Velocity
PRA	Preliminary Risk Assessment
PRN	Primary Reference Number (GLHER identifier)
PRoW	Public Rights of Way
PSR	Pipelines Safety Regulations
PTAL	Public Transport Accessibility Level
PWS	Public Water Supply
RBD	River Basin District
RBG	Royal Borough of Greenwich
RBKC	Royal Borough of Kensington and Chelsea
RCP	Representative Concentration Pathway
RICS	Royal Institution of Chartered Surveyors
RPG	Registered Park and Garden
RPS	Regulatory Position Statement
RSH	Regulator of Social Housing
SAC	Special Area of Conservation
SFRA	Strategic Flood Risk Assessment
SHM	Strategic Heat Main
SIC	Standard Industrial Classification
SINC	Site of Importance for Nature Conservation
SM	Scheduled Monument
SoS	Secretary of State
SP	Strategic Policy
SPA	Special Protection Area

Term	Definition
SPD/SPG	Supplementary Planning Document/Supplementary Planning Guidance
SPI	Species of Principal Importance
SPZ	Source Protection Zone
SRN	Strategic Road Network
SROH	Specification for the Reinstatement of Openings in Highways
SSC	Suspended Sediment Concentration
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage System
SWMP	Site Waste Management Plan
TA	Transport Assessment
TAG	Technical Advisory Group
TBM	Tunnel Boring Machine
TCA	Townscape Character Area
TCPA	Town and Country Planning Association
TfL	Transport for London
TGN	Technical Guidance Note
TLRN	Transport for London Road Network
TPA	Tonnes per annum
TRL	Transport Research Laboratory
TTM	Temporary Traffic Management
TTWA	Travel to Work Area
TVIA	Townscape and Visual Impact Assessment
UK	United Kingdom
UKBAP	UK Biodiversity Action Plan
UKHab	UK Habitat Classification
UNFCCC	United Nations Framework Convention on Climate Change

Term	Definition
UXO	Unexploded Ordnance
VOC	Volatile Organic Compound
WBCSD	World Business Council for Sustainable Development
WeBS	Wetland Bird Survey
WFD	Water Framework Directive
WHO	World Health Organisation
WHS	World Heritage Site
WRI	World Resources Institute
ZoI	Zone of Influence
ZTV	Zone of Theoretical Visibility

Environmental Impact Assessment Scoping Report Volume 1: Main Report Chapter 1: Introduction



Cory Environmental Holdings Limited

July 2026

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1. Introduction

1.1 Project Background

- 1.1.1 Cory Environmental Holdings Limited (Cory) ('the Applicant') proposes to construct, operate, and maintain a heat transmission network known as the London Strategic Heat Main (London SHM, or 'the Proposed Scheme')). The London SHM will transport low carbon heat and potentially cooling, initially from anchor heat sources¹ at Riverside Campus, located in Belvedere, in the London Borough of Bexley, to areas of high heat demand across London.
- 1.1.2 The Proposed Scheme will supply affordable, secure and low-carbon heat to local heat distribution networks therefore reducing reliance on fossil fuels and enhancing energy security across London. The Proposed Scheme has the potential to provide heat to the equivalent of up to approximately 650,000 homes.
- 1.1.3 The London SHM will comprise the construction, operation and maintenance of a Transmission Trunk Main and Transmission Branches. These will be supported by a series of Maintenance and Access Points (MAP). The function of a MAP is:
- a. to enable construction of the London SHM;
 - b. to enable ongoing maintenance during its operation; and
 - c. to facilitate connections to both heat distribution networks and other heat sources.
- 1.1.4 Once construction is complete, operational above ground infrastructure is expected to be limited to:
- a. kiosks at a small number of the MAP along the route of the London SHM;
 - b. new infrastructure to connect the London SHM to the facilities at the Riverside Campus; and
 - c. thermal storage infrastructure.
- 1.1.5 All aspects of the London SHM, including supporting features such as landscaping and ecological mitigation, are referred to as the 'Proposed Scheme'. A description of the Proposed Scheme is presented in **Volume 1, Chapter 2: Proposed Scheme**.

¹ A large, reliable and continuous source of heat that forms the core supply for a heat network, providing a stable baseline of heat generation.

1.2 Objectives of the London SHM

- 1.2.1 The Proposed Scheme addresses the strategic need for low-carbon heat infrastructure in London, supporting national and regional decarbonisation objectives. The Proposed Scheme seeks to deliver a flexible and future-proofed heat transmission system that can adapt to changes in the heat market over time, accommodate additional sources and customers, and be delivered in a timely manner that is technically feasible and economically viable whilst having regard to neighbours and the environment.
- 1.2.2 Accordingly, the overarching objectives for the London SHM are to:
- a. develop strategic heat transmission mains infrastructure from Riverside Campus (area of high supply) to London (area of high demand), in order to provide secure, affordable, abundant low carbon heat;
 - b. develop a project that is sufficiently flexible to enable connection by both third-party heat suppliers and customers;
 - c. ensure the project is deliverable in a cost effective and timely manner; and
 - d. develop a project that has regard to its neighbours and the environment.
- 1.2.3 These objectives will continue to inform development of the Proposed Scheme.

1.3 The Applicant

- 1.3.1 The Applicant is part of the Cory Group, one of the UK's leading resource management companies, with an extensive background managing the river logistics network in London underpinned by a long history and deep connection to the city stretching back to the late 1700s.
- 1.3.2 Cory has invested heavily in London's waste recycling, energy generation and river logistics infrastructure. In addition to its commercial customers, Cory is a trusted partner for several local authorities in London (serving a combined population of approximately 3 million people). It operates essential infrastructure which London relies heavily upon on a day-to-day basis.
- 1.3.3 Cory's primary operation is recovering energy from residual waste, which is undertaken at the Riverside Campus, located adjacent to the River Thames at Belvedere in the London Borough of Bexley (LBB). Riverside 1, an energy from waste (EfW) facility generating up to 80.5 megawatt (MW) of electricity, has been operational since 2011². Riverside 2, operational in 2026, is Cory's

² Pursuant to a Section 36C Variation issued by the Secretary of State on 17 December 2021, this capacity has now been increased to 80.5MW.

second EfW facility with a generating capacity of approximately 76MW. Together, Riverside 1 and Riverside 2 provide over 1.5 million tonnes per annum (tpa) of residual waste treatment capacity, making a substantial contribution to addressing the waste needs of London and South-East England.

- 1.3.4 In addition to the above and separately from the Proposed Scheme, Cory is developing a carbon capture and storage (CCS) project at Riverside Campus under the Cory Decarbonisation Project Order 2025 (SI2021/1227) (the 'Cory Decarbonisation Project') that will significantly reduce greenhouse gas emissions from the Riverside EfW facilities and support London and the UK in achieving net zero targets. The project will capture carbon dioxide generated during the waste combustion process, compress and liquify the captured CO₂, and export it via ship for permanent offshore storage. The Cory Decarbonisation Project was granted development consent under the Planning Act 2008 in November 2025.
- 1.3.5 Similarly, Cory is developing proposals for another standalone project, the 'Thames Mobile Heat Project'. This project would transport heat generated at the Riverside Campus via barge along the River Thames, and is intended to operate on a transitional basis while the Proposed Scheme is designed and constructed. A planning application for the Thames Mobile Heat Project is anticipated to come forward in due course, with operation expected to commence in advance of the construction phase of the Proposed Scheme.
- 1.3.6 It is anticipated that both the Cory Decarbonisation Project and the Thames Mobile Heat Project will form part of the future baseline scenario, as described in **Volume 1, Chapter 5: EIA Approach and Methodology**.

1.4 Purpose of the Scoping Report

Background

- 1.4.1 On 27 August 2025, the Secretary of State (SoS) for Energy Security and Net Zero directed, under section 35 of the Planning Act 2008 (Ref 1.1) that the Proposed Scheme is to be treated as development for which development consent is required (Ref 1.2).
- 1.4.2 The Applicant therefore proposes to make an application for an order granting development consent (DCO) under the Planning Act 2008 (Ref 1.1) for the construction, operation and maintenance of the Proposed Scheme.
- 1.4.3 Developments consented under the Planning Act 2008 (Ref 1.1) are subject to formal Environmental Impact Assessment (EIA) procedures under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) (Ref 1.3).

- 1.4.4 A project is 'EIA development' where it meets the project description and criteria listed in Schedule 1 of the EIA Regulations or it meets the project description and criteria listed in Schedule 2 of the EIA Regulations and is likely to have significant effects on the environment by virtue of factors such as its nature, size or location. A project is determined to be EIA development through the adoption of a screening opinion by the SoS or Examining Authority that the project is EIA development, a voluntary submission under Regulation 8(1)(b) of the EIA Regulations or a direction from the SoS.
- 1.4.5 It is the Applicant's view that the Proposed Scheme does not meet any of the descriptions and criteria listed in Schedule 1, but could be considered to fall under development as described in Schedule 2, Part 3(b) of the EIA Regulations:
- a. *'industrial installations for carrying gas, steam and hot water; transmission of electrical energy by overhead cables (projects not included in Schedule 1 to these Regulations)'*
- 1.4.6 Schedule 3 of the EIA Regulations sets out the selection criteria for screening Schedule 2 developments to determine whether EIA is required. These are included under three main headings:
- a. characteristics of development, including factors such as the size and design of the whole development, cumulation with other existing development and/or approved development and the use of natural resources, in particular land, soil, water and biodiversity;
- b. location of development, with a focus on the environmental sensitivity of geographical areas likely to be affected by the Proposed Scheme; and
- c. types and characteristics of the potential impact, including a consideration of factors such as the magnitude and spatial extent of the impact, the intensity and complexity of the impact and the possibility of effectively reducing the impact.
- 1.4.7 In summary, if a Schedule 2 development is considered likely to have significant environmental effects, then it should be subject to EIA and the DCO Application should be accompanied by an Environmental Statement (ES). It is the Applicant's view, through applying the Schedule 3 criteria to the Proposed Scheme, that it is appropriate for the Proposed Scheme to be subject to EIA.
- 1.4.8 This Scoping Report also provides formal notification to the SoS, under Regulation 8(1)(b) of the EIA Regulations (Ref 1.3), that the Applicant proposes to provide an ES in respect of the Proposed Scheme.

- 1.4.9 Accordingly, the Applicant proposes to undertake an EIA and to report the findings of that assessment in an ES, which will accompany the application for development consent.

This Scoping Report

- 1.4.10 EIA is a formal process legally required for certain projects before they can be granted development consent. It involves identifying, consulting on, and evaluating potential significant environmental impacts. The overall aim is to ensure that the decision-makers, stakeholders, and the public are fully notified of the likely environmental consequences, and the measures to be undertaken in order to reduce, mitigate, and offset them, prior to consent being given, and any work commences.
- 1.4.11 This EIA Scoping Report identifies, where appropriate, likely significant effects that could arise and therefore scopes in aspects for further assessment. The EIA Scoping report also seeks to scope out aspects from further assessment, where significant effects are unlikely and provides suitable justification. This approach ensures that the ES focuses on the likely significant effects of the Proposed Scheme and that the EIA is proportionate.
- 1.4.12 The Applicant therefore is making a formal request to the Planning Inspectorate (PINS), on behalf of the SoS, under Regulation 10(1) of the EIA Regulations (Ref 1.3) to provide its written opinion as to the scope and level of detail of the information to be provided in the ES (this is referred to as the 'Scoping Opinion').
- 1.4.13 This Scoping Report has been prepared by the Applicant and accompanies the request for a Scoping Opinion, and contains the information stipulated in Regulation 10(3) of the EIA Regulations (Ref 1.3) as summarised in **Table 1-1**. This Scoping Report sets out the proposed content, the methodologies to be adopted and the likely significant environmental effects to be considered in the EIA, which is further discussed in section 1.6.
- 1.4.14 Following the completion of the surveys, assessments, and consultation processes outlined in this Scoping Report, and taking account of the Scoping Opinion, an application for a DCO will be made to the SoS for determination in accordance with the Planning Act 2008 (Ref 1.1). The DCO Application will be accompanied by an ES, in accordance with Regulation 5(2)(a) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 ('the APFP Regulations') (Ref 1.4), and Regulation 8(1)(b) of the EIA Regulations (Ref 1.3). The ES will set out the methods and findings of a comprehensive EIA undertaken in line with the EIA Regulations (Ref 1.3).

- 1.4.15 An explanation of the legislative and planning policy context for the EIA of the Proposed Scheme is provided in **Volume 1, Chapter 4: Legislative and Planning Policy Context**.

1.5 Geographical Context for Scoping

- 1.5.1 The 'Scoping Boundary' for the Proposed Scheme is shown in **Volume 2, Figure 1-1: EIA Scoping Boundary**. The Scoping Boundary identifies the land which is potentially required for the construction, operation and maintenance of the Proposed Scheme. It is important to note that the land required may be subject to change as the design and EIA process progress. The Scoping Boundary is however considered to provide a sound basis for the purpose of identifying likely significant environmental effects. The final Order Limits to be used in the DCO Application will be presented in the ES.
- 1.5.2 The Scoping Boundary includes land in the following local authority areas:
- a. London Borough of Bexley (LBB);
 - b. Royal Borough of Greenwich (RBG);
 - c. London Borough of Lewisham (LBLe);
 - d. London Borough of Southwark (LBS);
 - e. London Borough of Lambeth (LBLa);
 - f. London Borough of Barking and Dagenham (LBBD);
 - g. London Borough of Tower Hamlets (LBTH);
 - h. City of London Corporation (CoL);
 - i. City of Westminster (CoW); and
 - j. Royal Borough of Kensington and Chelsea (RBKC).

1.6 Structure of this Scoping Report

- 1.6.1 This Scoping Report has been prepared in accordance with the EIA Regulations (Ref 1.3), as well as having due regard to the PINS advice contained in Nationally Significant Infrastructure Projects – Advice Note Seven: Environmental Impact Assessment: process, preliminary environmental information and environmental statements ('Advice Note Seven') (Ref 1.5).
- 1.6.2 Regulation 10(3) of the EIA Regulations (Ref 1.3) sets out the elements that must be included within a Scoping Report in order for a person to request a Scoping Opinion from the SoS. **Table 1-1** sets out where, within this Scoping Report, those requirements are met.

Table 1-1: Compliance with Regulation 10(3) of the EIA Regulations

Information to be included within the EIA Scoping Report	Location within this Scoping Report
Regulation 10(3)(a) – A plan sufficient to identify the land.	The Proposed Scheme location and Scoping Boundary are shown on Volume 2, Figure 1-1: EIA Scoping Boundary .
Regulation 10(3)(b) - A description of the development, including its location and technical capacity.	This is provided in Volume 1, Chapter 2: Proposed Scheme
Regulation 10(3) (c) - An explanation of the likely significant effects of the development on the environment.	The likely significant effects are set out within each of the technical chapters, Volume 1, Chapter 6 to Chapter 19 .
Regulation 10(3) (d) – such other information or representations as the person making the request may wish to provide or make.	Volume 1, Chapter 5: EIA Approach and Methodology sets out the proposed approach for undertaking the EIA. Each of the technical chapters in Volume 1, Chapter 6 to Chapter 19 set out the current known baseline in relation to the topic and provides topic-specific assessment methodologies and information relating to potential mitigation measures.

1.6.3 **Table 1-2** identifies where the information set out in PINS Advice Note Seven (Ref 1.5) is presented within this Scoping Report.

Table 1-2: Compliance with PINS Advice Note Seven

Suggested information to be included within the scoping report	Location within this Scoping Report
The Proposed Scheme	
An explanation of the approach to addressing uncertainty where it remains in relation to the elements of the Proposed Scheme.	Volume 1, Chapter 2: The Proposed Scheme

Suggested information to be included within the scoping report	Location within this Scoping Report
Referenced plans presented at an appropriate scale to convey clearly the information and all known features associated with the Proposed Scheme.	The Proposed Scheme location and Scoping Boundary are shown on Volume 2, Figure 1-1: EIA Scoping Boundary .
EIA Approach and Topic Areas	
An outline of the reasonable alternatives considered and the reasons for selecting the preferred option.	Volume 1, Chapter 3: Approach to Alternatives
A summary table depicting each of the aspects and matters that are requested to be scoped out allowing for quick identification of issues.	Volume 1, Chapter 21: Summary and Conclusions Additionally, each of the technical chapters presents a summary table of matters proposed to be scoped in and scoped out in relation to that discipline.
A detailed description of the aspects and matters proposed to be scoped out of further assessment with justification provided.	This is presented within each of the technical chapters in Volume 1, Chapter 6 to Chapter 19 .
Results of desktop and baseline studies where available and where relevant to the decision to scope in or out aspects or matters.	Where available, information on the baseline characteristics is included within each of the technical chapters in Volume 1, Chapter 6 to Chapter 19 .
Aspects and matters to be scoped in, the report should include details of the methods to be used to assess impacts and to determine significance of effect e.g. criteria for determining sensitivity and magnitude	Sources, impacts and receptors proposed to be 'scoped in' for the purpose of the ES are identified within each of the technical chapters in Volume 1, Chapter 6 to Chapter 19 . The proposed EIA approach and methods are described in Volume 1, Chapter 5: EIA Approach and Methodology and each of the technical chapters Volume 1, Chapter 6 to Chapter 19 .

Suggested information to be included within the scoping report	Location within this Scoping Report
	describe how they will apply that methodology to their assessments or where it differs due to specific topic guidance set out their proposed methodologies.
Any avoidance or mitigation measures proposed, how they may be secured and the anticipated residual effects.	These are set out within each of the technical chapters in Volume 1, Chapter 6 to Chapter 19.
Information Sources	
References to any guidance and best practice to be relied upon.	These are set out within each of the technical chapters in Volume 1, Chapter 6 to Chapter 19.
Evidence of agreements reached with consultation bodies (for example the statutory nature conservation bodies or local authorities).	These are set out within each of the technical chapters in Volume 1, Chapter 6 to Chapter 19.
An outline of the structure of the proposed ES.	This is set out in Volume 1, Chapter 21: Summary and Conclusions.
Transboundary Effects	
The Applicant may also wish to provide a completed transboundary screening matrix dealing with the potential effects of the Proposed Scheme on other European Economic Area (EEA) states	Volume 1, Chapter 5: EIA Approach and Methodology presents the Applicant's Transboundary Screening Matrix, which follows the suggested format provided in Nationally Significant Infrastructure Projects: Advice on Transboundary Impacts and Process (Ref 1.6).

1.6.4 The structure of **Volume 1** of this Scoping Report is outlined in **Table 1-3** below.

- 1.6.5 Figures are provided in **Volume 2** of the Scoping Report and Appendices are provided in **Volume 3** of the Scoping Report.

Table 1-3: Structure of Volume 1 of this Scoping Report

Chapter	Content
Chapter 1: Introduction	An introduction to the Proposed Scheme, and the purpose and structure of this Scoping Report.
Chapter 2: Proposed Scheme	A description of the Proposed Scheme including permanent features and associated temporary works.
Chapter 3: Approach to Alternatives	An outline of the strategy for identifying and considering the reasonable alternatives.
Chapter 4: Legislative and Planning Policy Context	A summary of the overarching and strategic level legislation and planning policy context informing the EIA scope.
Chapter 5: EIA Approach and Methodology	A description of the overall EIA methodology that is proposed to be adopted for the assessment of the Proposed Scheme, including temporal durations and the approach to mitigation. It also outlines areas of uncertainty in relation to design parameters.
Chapter 6: Air Quality	Each chapter (6-20) provides a description of: - the regulatory and planning context specific to the topic area; - a description of the Study Area for the topic area; - a description of the relevant baseline environment; - any embedded or good practice measures taken into consideration when proposing the scope; - the likely significant effects;
Chapter 7: Climate	
Chapter 8: Ecology	
Chapter 9: Ground Conditions	
Chapter 10: Historic Environment	
Chapter 11: Human Health	
Chapter 12: Major Accidents and Disasters	
Chapter 13: Marine Environment	

Chapter	Content
Chapter 14: Materials and Waste	- proposed assessment methodology; - details of any assumptions, limitations or uncertainties; and - a brief conclusion summarising the proposed scope of the assessment to be included within the ES.
Chapter 15: Noise and Vibration	
Chapter 16: Socio-Economics	
Chapter 17: Townscape and Visual	
Chapter 18: Transport	
Chapter 19: Water Environment and Flood Risk	Provides a description of those receptors likely to be screened into the intra-project cumulative impact assessment. Provides a description of the proposed methodology for the assessment of inter-project cumulative effects.
Chapter 20: Approach to Cumulative Effects	
Chapter 21: Summary and Conclusions	Provides an overview of the key findings from the scoping process, including the aspects and matters that are proposed to be scoped in or scoped out of the EIA.

1.7 The ISEP Quality Mark

- 1.1.1 Regulation 14 (4) of the EIA Regulations (Ref 1.3) requires that *"in order to ensure the completeness and quality of the environmental statement (a) the applicant must ensure that the environmental statement is prepared by competent experts; and (b) the environmental statement must be accompanied by a statement from the applicant outlining the relevant expertise or qualifications of such experts."*



- 1.7.1 The EIA for the Proposed Scheme will be prepared by AECOM.
- 1.7.2 AECOM is an ISEP Registered Impact Assessor and also holds the ISEP EIA Quality Mark as recognition of the quality of their EIA products and continuous training of their environmental consultants. A Statement of Competence will

be included within the ES outlining the relevant expertise or qualifications of the experts who prepared the ES.

1.8 References

- Ref 1.1 His Majesty's Stationery Office (2008). The Planning Act 2008. Available at: <https://www.legislation.gov.uk/ukpga/2008/29/contents> [Accessed 9 April 2026]
- Ref 1.2 Department for Energy Security & Net Zero (2025). Direction by the secretary of state for energy security and netzero ("the secretary of state") under section 35 of the planning act 2008 relating to the cory heat main 1 project. Available at: <https://assets.publishing.service.gov.uk/media/68af03cd9e1cebdd2c96a204/cory-heat-main-1-section-35-direction.pdf> [Accessed 9 April 2026]
- Ref 1.3 His Majesty's Stationery Office (2017). The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. Available at: <https://www.legislation.gov.uk/uksi/2017/572/contents> [Accessed 9 April 2026].
- Ref 1.4 His Majesty's Stationery Office (2009). The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009. Available at: <https://www.legislation.gov.uk/uksi/2009/2264/contents/made> [Accessed 9 July 2026]
- Ref 1.5 Planning Inspectorate (2020). Advice Note Seven: Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements. Available at: <https://www.gov.uk/government/publications/nationally-significant-infrastructure-projects-advice-note-seven-environmental-impact-assessment-process-preliminary-environmental-information-an/nationally-significant-infrastructure-projects-advice-note-seven-environmental-impact-assessment-process-preliminary-environmental-information-an> [Accessed 9 April 2026]
- Ref 1.6 Planning Inspectorate (2024). Nationally Significant Infrastructure Projects: Advice on Transboundary Impacts and Process. Available at: <https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-transboundary-impacts-and-process> [Accessed 9 April 2026]

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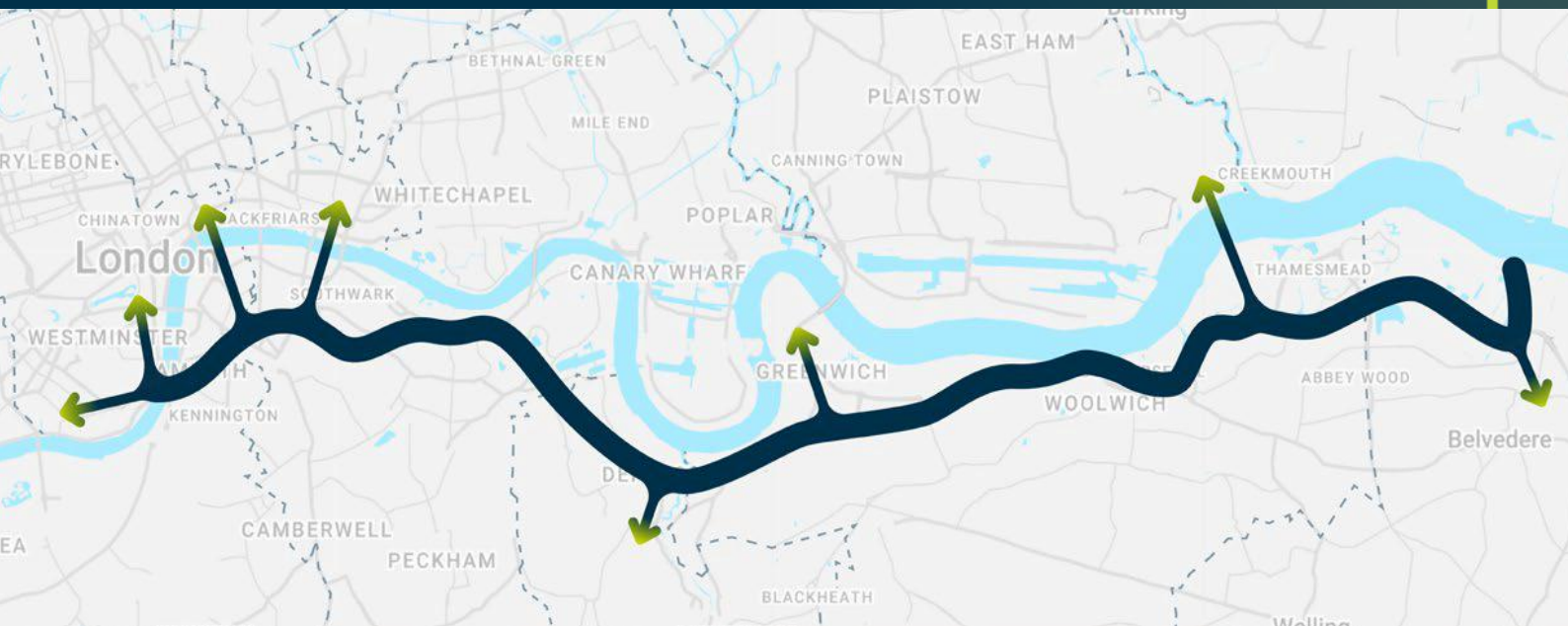


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2. Proposed Scheme

2.1 Introduction

2.1.1 This chapter of the EIA Scoping Report is structured as follows:

- a. Section 2.1 Introduction;
- b. Section 2.2 Overview of the Proposed Scheme;
- c. Section 2.3 EIA Scoping Boundary;
- d. Section 2.4 Existing Site and Surroundings;
- e. Section 2.5 Description of the Key Components of the Proposed Scheme;
- f. Section 2.6 Construction Approach;
- g. Section 2.7 Operation; and
- h. Section 2.8 Decommissioning.

2.1.2 This chapter is supported by the following figures within **Volume 2** of the EIA Scoping Report:

- a. **Figure 2-2: Components of the Proposed Scheme;** and
- b. **Figure 2-3: Key Environmental Constraints.**

2.2 Overview of the Proposed Scheme

2.2.1 The Applicant proposes to construct, operate, and maintain a heat transmission network known as the London Strategic Heat Main (London SHM). The London SHM will transport low carbon heat (and potentially cooling) to areas of high heat demand across London, initially from anchor heat sources at Riverside Campus, located in Belvedere, London Borough of Bexley (LBB).

2.2.2 Currently, homes and businesses across London and the UK are principally heated by burning gas. To meet policy goals of decarbonisation, energy security and consumer protection from international price shocks, a major expansion of district heating is planned in UK urban centres. District heating enables pre-existing waste heat to be used across neighbourhoods and entire cities and is extensively deployed across continental Europe and Asia. Central London has a large and dense heat load, making it particularly well suited to district heating. However, the largest and most suitable sources of waste heat are located around the edges of London. Heat transmission infrastructure is therefore required to bring waste heat from where it is generated, to where it is needed.

- 2.2.3 The largest source of high-grade waste heat in Greater London is the Riverside Campus, a strategic part of London's waste treatment infrastructure. The Applicant provides waste services across London, completing upstream recycling, and transporting residual (i.e. non-recycled) waste to the Riverside Campus by a system of barges moved with the tide. The residual waste is then diverted from landfill by incineration at the Riverside Campus – a process which generates electricity – before the resulting ash is transported by barge to Tilbury, where metals are extracted for recycling and the ash is processed to create recycled aggregates. Significant waste heat is available from the incineration process.
- 2.2.4 The Applicant which owns and operates the Riverside Campus also has consent to build and operate a carbon capture facility at the same site, which would produce further waste heat that could also be utilised.
- 2.2.5 The Proposed Scheme would recover, store and efficiently transport the waste heat from these anchor sources, and in due course other heat sources, to heat users along the London SHM route. As well as supplying end user heating, the London SHM may also be used to supply end user cooling.
- 2.2.6 The London SHM comprises a Transmission Trunk Main and a series of Transmission Branches. Existing and emerging heat distribution networks and additional heat sources will be able to connect along both the Transmission Trunk Main and Transmission Branches. The London SHM will be supported by ancillary infrastructure and landscaping, together referred to as the Proposed Scheme. In summary, the key components of the Proposed Scheme include:
- a. an underground pipeline network, comprising the Transmission Trunk Main and a series of Transmission Branches;
 - b. Maintenance and Access Points (MAP) to the underground pipeline network, including pumping stations and connection apparatus for heat distribution networks;
 - c. thermal storage infrastructure located at the eastern extent of the Proposed Scheme, close to Cory's Riverside Campus and/ or co-location at MAP;
 - d. connection to electrical supply either from the Riverside Campus or the electricity distribution network;
 - e. new heat recovery system infrastructure at the Riverside Campus; and
 - f. any required ecological, landscaping and public realm works.
- 2.2.7 Section 2.5 of this chapter provides further information on each of the above components of the Proposed Scheme, and each is illustrated on **Volume 2, Figure 2-1**.

2.3 EIA Scoping Boundary

- 2.3.1 An EIA Scoping Boundary¹ has been adopted for the purposes of this EIA Scoping Report to define the potential extent of land currently assumed to be necessary to construct, operate and maintain the Proposed Scheme. The EIA Scoping Boundary has been drawn to provide flexibility, where the Proposed Scheme's design details are not yet confirmed, including alternative options for the route of the London SHM and land required to facilitate construction. Given this, the EIA Scoping Boundary is subject to change as the Proposed Scheme's design progresses, taking into account the findings of the ongoing environmental and technical assessments and consultation. It is however considered to provide a sound basis for the purpose of identifying potential significant environmental effects.
- 2.3.2 Where buildings have been included in the EIA Scoping Boundary, these have been illustrated by red hatching. Where buildings are located within the EIA Scoping Boundary, physical works (including tunnelling) will not, as far as practicable, interface with them, but they have been included within the boundary on a precautionary basis, as the Applicant's design work continues. Where required, offsets and other protective measures for existing buildings and structures will be defined as part of ongoing design development of the Proposed Scheme.
- 2.3.3 The EIA Scoping Boundary², in which the Proposed Scheme will be located, is shown in **Volume 2, Figure 1-1** of this Scoping Report.
- 2.3.4 The EIA Scoping Boundary crosses a number of local authority areas, with the Transmission Trunk Main running from the Riverside Campus in the LBB then crossing Royal Borough of Greenwich (RBG), London Borough of Lewisham (LBLe), London Borough of Southwark (LBS), London Borough of Lambeth (LBLa) and City of Westminster (CoW). The Transmission Branches would provide links to London Borough of Barking and Dagenham (LBBD), London Borough of Tower Hamlets (LBTH), City of London (CoL) and Royal Borough of Kensington and Chelsea (RBKC).

2.4 Existing Site and Surroundings

- 2.4.1 Given that the route of the London SHM primarily follows the highways network, the EIA Scoping Boundary includes a large number of roads and streets. A number of these (including but not limited to A2016, A206, A200,

¹ All references to 'EIA Scoping Boundary' correspond to the area shown in **Volume 2, Figure 1-1**.

A3203) form part of the Transport for London Road Network (TLRN)³. The EIA Scoping Boundary is largely comprised of hardstanding associated with roads, streets, adjacent footways and public realm, including street trees and street furniture such as benches, utilities boxes, traffic lights and street lights.

- 2.4.2 The topography of the EIA Scoping Boundary is broadly flat, closely following the River Thames and its immediate surroundings. There are localised areas of relatively higher land including within the RBG at Woolwich and also within CoW to the north of Oxford Circus.
- 2.4.3 The EIA Scoping Boundary falls within two National Character Areas (NCA), NCA 81: Greater Thames Estuary and NCA 112: Inner London. The relevant key characteristics of NCA 81, as stated within the published assessment include a predominantly flat, low-lying landscape, highly urbanised within London with increasing development pressures and major historic and current transport links along the River Thames.
- 2.4.4 NCA 112 is located across most of the EIA Scoping Boundary. The relevant key characteristics as stated within the published assessment include a wide flood plain, hills to the north providing highly valued views, natural feature of the River Thames, extensive network of parks and open spaces providing recreation, extensive urban forest including small woodlands and street trees, remnant sites of former industry, historic buildings and designed landscapes and a network of blue infrastructure providing recreational opportunities and important views.
- 2.4.5 The EIA Scoping Boundary includes a number of heritage assets including Grade I, II and II* listed buildings, two Scheduled Monuments and the A206 corridor through the Greenwich World Heritage Site. However, any potential impacts to these assets would be minimised as far as practicable as the design evolves. Further information is provided in **Volume 1, Chapter 10: Historic Environment**.
- 2.4.6 Key environmental constraints within and in close proximity to the EIA Scoping Boundary are shown in **Volume 2, Figure 2-2**.

³ The TLRN is a network of major arterial routes which run through London, managed by TfL, handling high volumes of traffic including freight, bus routes and strategic cycle routes. The TLRN includes TfL Red Routes, which carry up to 30% of the city's traffic and help reduce congestion.

2.5 Description of the Key Components of the Proposed Scheme

London SHM

- 2.5.1 The London SHM comprises an underground pipeline network with flow and return mains transporting pressurised hot water. The London SHM includes the Transmission Trunk Main and multiple Transmission Branches. It will range in depth from the crown of the upper tunnel being approximately 5m below ground level at Riverside Campus down to 40m below ground level, typically running below other existing near-surface utilities. Where the London SHM crosses the River Thames, it will be at a minimum depth of 5m below the river bed and this has formed an assumption for this Scoping Report. However, and subject to further analysis, the crossings are anticipated to be constructed at depths of between 20 to 30m below the river bed. The depths of river crossings will be detailed in the ES.
- 2.5.2 Operational above ground infrastructure would be limited to kiosks and ground level coverings at MAP (described in the section Maintenance and Access Points (MAP) and Pump Stations) and new infrastructure at Cory's Riverside Campus (described in the section below on Riverside Campus – Heat Recovery System).
- 2.5.3 The London SHM would operate using closed-loop circulation, with hot water supplied to heat users at approximately 95°C. The internal operating pressure is likely to be maintained at approximately 6 to 16 bar nominal, although actual design pressures may vary by location. Pipelines will be fully insulated and designed to minimise the potential for heat loss.
- 2.5.4 The circulating water would be treated to protect equipment longevity and efficiency, which may be affected by component corrosion, scaling and microbiological growth. The ES will include further details; however, it is anticipated that this will be managed through the use of demineralised water or additives such as corrosion inhibitors.
- 2.5.5 The anticipated total length of the London SHM is 55km; this will be refined as the design of the Proposed Scheme progresses. The Transmission Trunk Main would be approximately 25km in length. The EIA Scoping Boundary includes allowance for optionality in the Transmission Branches, as described in paragraph 2.2.6. Assuming that only one of the options for the Barking and Greenwich Peninsula Transmission Branches is taken forward, and assuming the longest option was chosen, the total length of the Transmission Branches would be approximately 30 km.
- 2.5.6 The Transmission Trunk Main will require between 20 to 80 MAP; between three to eight MAP will be required along each of the Transmission Branches.

The distances between MAP are expected to range from between 50m up to approximately to 1km, depending on the final pipeline alignment and the chosen tunnelling methodology.

- 2.5.7 At the time of writing, the design of the London SHM is under development. However, the pipeline network is expected to consist of pressure-rated glass reinforced plastic (GRP) jacking pipes, which will be suitable for the operational conditions. There will be up to two tunnels and the maximum tunnel outer diameter of any tunnel would be 2.5m.
- 2.5.8 Up to 14 Transmission Branches have been included in the EIA Scoping Boundary as follows:
- a. Transmission Branch – Barking 1;
 - b. Transmission Branch – Barking 2; and
 - c. Transmission Branch – Barking 3.
 - d. Transmission Branch – Greenwich Peninsula 1;
 - e. Transmission Branch – Greenwich Peninsula 2;
 - f. Transmission Branch – Wapping;
 - g. Transmission Branch – Cannon Street;
 - h. Transmission Branch – City of London;
 - i. Transmission Branch – Blackfriars;
 - j. Transmission Branch – Embankment;
 - k. Transmission Branch – Paddington;
 - l. Transmission Branch – Victoria;
 - m. Transmission Branch – Kensington; and
 - n. Transmission Branch – Chelsea.
- 2.5.9 In the instances above where reference is made to multiple options (i.e. Transmission Branch – Barking 1, 2 and 3; and Greenwich Peninsula 1 and 2) only one such Transmission Branch will be constructed. However, all options have been included in the EIA Scoping Boundary to provide design flexibility and the basis for a reasonable worst-case scenario for this Scoping Report.

Maintenance and Access Points (MAP) and Pump Stations

- 2.5.10 MAP would be critical elements of the London SHM and comprise a vertical chamber or pit that will be constructed from ground level down to the tunnel alignment designed to facilitate construction, operation and maintenance of the Proposed Scheme. The components of an operational MAP are largely underground with personnel accessing via an access at ground level to enable safe access to the below ground infrastructure. Some of the MAP will feature an above ground kiosk.
- 2.5.11 The function of the MAP is threefold:
- a. to enable the construction of the London SHM;
 - b. to enable ongoing maintenance of the network; and
 - c. to facilitate future connections to both existing and future heat distribution networks.
- 2.5.12 A MAP will be of three types, with the outer diameters (including concrete collars) measuring up to approximately the following:
- a. Launch MAP (11m diameter);
 - b. Reception MAP (9.5m diameter); and
 - c. Pump Station MAP (14.5m diameter).
- 2.5.13 Illustrative cross sections of the Launch and Reception MAP and Pump Station MAP are shown in **Plate 2-1** and **Plate 2-2** respectively.
- 2.5.14 The Launch and Reception MAP would be constructed from the surface down, to depths ranging between 5m and 40m (dependent on the depth of the London SHM at that location). They would facilitate directional changes in the London SHM during construction and operation and in the operation phase they would accommodate equipment that helps to manage thermal expansion⁴ of the pipework, bridge piping to connect the pipework and also include heat exchangers, pumps and absorption heat pumps.
- 2.5.15 The primary pumping station for the London SHM would be located at the Riverside Campus with a series of intermediate Pump Station MAP constructed from the surface along the route of the London SHM. It is currently anticipated that most pump station infrastructure would be located underground, within the footprint of the individual Pump Station MAP; however, it is possible that some pumping infrastructure would be above ground. In this case, any above ground pumping infrastructure would be contained within a kiosk at ground level (refer to **Plate 2-3**). The Pump Stations

⁴ Thermal expansion occurs when infrastructure (including pipelines) expands laterally due to heating and there is a consequent need for space to allow for that expansion to occur, to mitigate the potential for fracture or buckling.

would help maintain suitable operating conditions by enabling heat to flow through the London SHM from the Riverside Campus. The Pump Stations would move the water through the pipeline network, maintain pressure, balance supply and keep the network operating efficiently and reliably.

- 2.5.16 Each Pump Station MAP would require an electrical connection to enable operation of the key plant, likely involving the provision of an above ground kiosk in the immediate vicinity. An example of the above ground kiosk is shown in **Plate 2-3**. Some equipment may also be necessary to provide some ventilation into the Pump Station MAP.
- 2.5.17 At the time of writing, approximately eight intermediate Pump Station MAP would be required for the Transmission Trunk Main at appropriate spacing as determined by the pumping requirements. The total number required for the entire London SHM, including the Transmission Branches, will be subject to further hydraulic modelling as part of the design development. The total number, locations and footprint of the Pump Station MAP will be detailed and assessed in the ES.

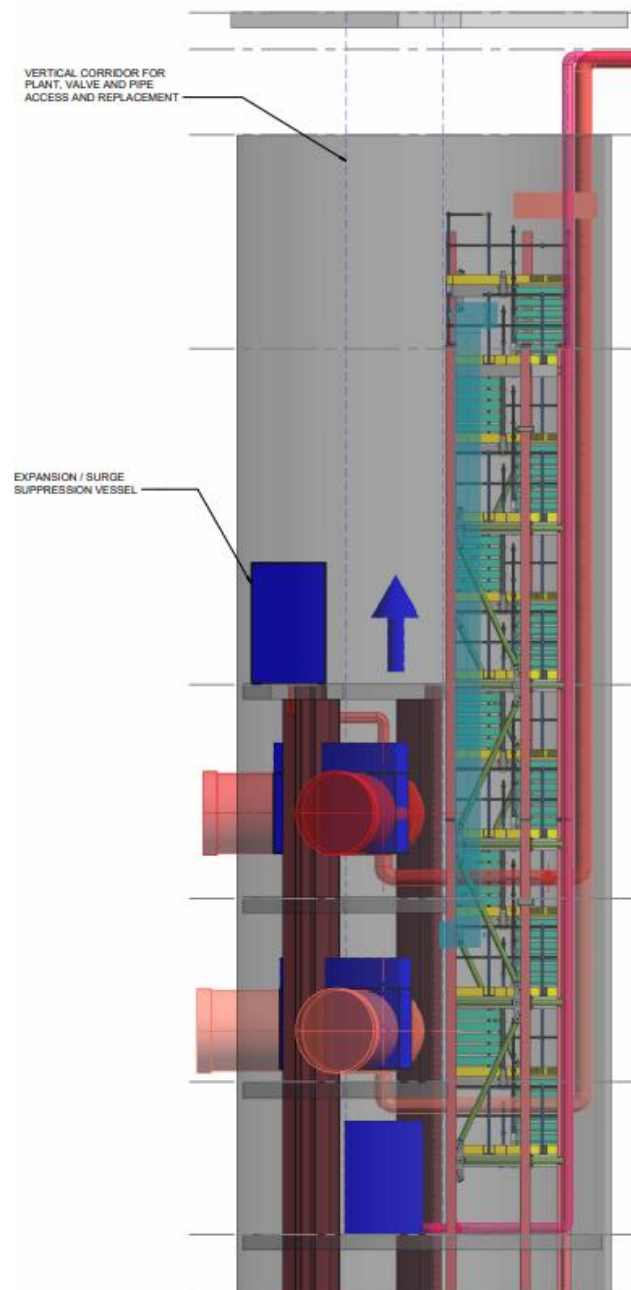


Plate 2-1: Indicative Launch and Reception MAP Cross Section

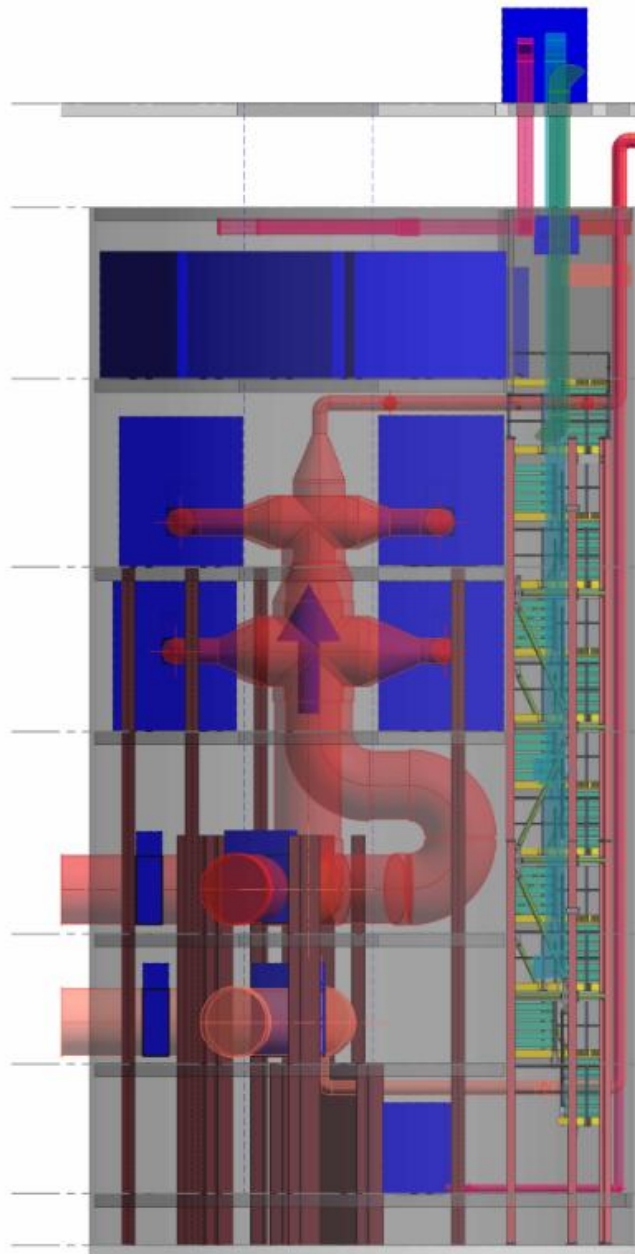


Plate 2-2: Indicative Pump Shaft Cross Section



Plate 2-3: Example of Above Ground Infrastructure – Pumping Station Kiosk

Riverside Campus – Heat Recovery System

- 2.5.18 The London SHM will be supplied by a Heat Recovery System at Riverside Campus, specifically designed to support the London SHM. This system will require works at the existing Riverside Campus to provide essential components such as heat exchangers, pumps and ancillary equipment. It is also envisaged that back pressure turbines may be installed to enable maximal heat recovery with minimal electrical loss. These enhancements will significantly increase the capacity and efficiency of the heat recovery system, ensuring a reliable supply of heat for the transmission network. The maximum height of proposed infrastructure at Riverside Campus will be 53m in height and will not exceed the current maximum height of existing Riverside Campus.

Thermal Storage

- 2.5.19 The Proposed Scheme will include thermal storage to hold surplus heat from the Heat Recovery System at Riverside Campus. A common design for this kind of thermal storage is a covered 'reservoir' (with bunded perimeter) of hot water at or below ground level, for discharge to the London SHM as required, maintaining a consistent buffer of stratified hot water for distribution to provide network resilience.
- 2.5.20 The final strategy for thermal storage will be described and assessed in the ES, including the location, preliminary design, indicative capacity and any consequential impact to flood risk. However, it is anticipated that it could

include a combination of co-location with MAP and larger stores located within and/or in close proximity to the Riverside Campus.

Utilities

- 2.5.21 The electricity supply for the operation of the Proposed Scheme, primarily the pumping requirements, would come either from the Riverside Campus or from local connections to the electricity grid built into the Pump Station MAP. If the supply for the London SHM is supplied from the Riverside Campus, the power supply would be provided within the transmission pipelines or within a separate utilities pipeline within the same tunnel. If the power supply to the Pump Station MAP is provided via local connections, minor tunnelling works may be required to establish these connections. A range of construction techniques may be used to deliver these works, such as pipe jacking, horizontal directional drilling (HDD), open cut, or other suitable methods and will be selected subject to further design development and consideration of environmental constraints. The routes of the connections would be defined in the ES where known.
- 2.5.22 The Proposed Scheme may be able to support other utilities, such as third party cables, co-located within the tunnel alignment. This potential will be considered during ongoing design development and assessed as appropriate.

Landscaping and Public Realm

- 2.5.23 The MAP will have surface level coverings that are likely to vary in finish, depending on the existing context. These may vary between coverings within existing roads that would match the existing road surface (other than the inclusion of secure 'man-hole' access points) and bespoke designs where MAP need to be incorporated into re-instated public realm. The kiosks associated with the Pump Station MAP would be installed at ground level that will require further consideration of how they are incorporated into the local public realm.
- 2.5.24 Surface reinstatement would primarily be undertaken on a like-for-like basis, ensuring that any highways, footways, public realm surfaces and landscaped areas disturbed during construction are restored to, or enhanced over and above, their original condition, character and performance. All reinstatement works will comply with the Specification for the Reinstatement of Openings in Highways (SROH) (Ref 2.1) together with the relevant local highway authority specifications and asset protection requirements. This includes full structural reinstatement of pavement build-ups, reinstatement or replacement of kerbs, tactile paving, drainage features, street furniture, and surface materials to match existing finishes.

- 2.5.25 In sensitive urban environments, particular care will be taken to protect and reinstate high quality public realm materials and heritage assets. This may include the careful lifting, cataloguing, storage and reinstallation of paving units, as well as the protection or temporary removal and reinstatement of monuments, street furniture and other features where required.

2.6 Construction Approach

MAP Construction and Compounds

- 2.6.1 The Launch and Reception MAP would be constructed from the surface down. Each MAP would require an individual MAP Construction Compound to facilitate construction. The MAP Construction Compounds will have an approximate indicative footprint of 750m² for Launch MAP and 500m² for Reception MAP to provide space for construction plant and equipment including:
- a. 35 tonne excavator;
 - b. 25 tonne mobile crane;
 - c. portacabin(s) for construction operatives with a typical maximum height of 3m;
 - d. perimeter security fencing with a typical maximum height of 3m;
 - e. closed circuit television (CCTV);
 - f. Slurry separation plant, likely maximum height of 8m;
 - g. parking area for construction and workers vehicles;
 - h. secure compound for storage;
 - i. temporary hardstanding;
 - j. wheel washing facilities;
 - k. temporary gated compound; and
 - l. storage bins for recyclables and other waste.
- 2.6.2 Temporary lighting would be provided at the MAP Construction Compounds.
- 2.6.3 The requirement for temporary spoil storage, slurry processing, craneage, temporary staff welfare and parking facilities mean that temporary construction compounds would be required at each MAP. Given that space at or adjacent to many of the MAP sites is likely to be limited, additional temporary construction compounds are expected to be required in addition to the MAP Construction Compounds, to support efficient construction, e.g. to store larger equipment including slurry separation plant. However, the requirements and

constraints at each MAP site are likely to differ and construction layouts will reflect this.

Pipeline Construction

- 2.6.4 The transmission pipelines are likely to be installed by being hydraulically pushed through the ground via pipejacking from the base of a Launch MAP to a Reception MAP. The distance of this pipejacking process is likely to range from 50m up to 1km. In some locations, as dictated by ground conditions or other constraints, a different construction technique may be used.
- 2.6.5 The material generated by the typical tunnel construction process is expected to be a slurry that would need to be treated and separated on-site by a slurry separation plant within the MAP Construction Compound, before being transported away for disposal at an existing, suitably licenced, disposal site. Further information is provided in the Materials Management section below.
- 2.6.6 Although the strategy for the London SHM is for the vertical alignment of the pipelines to run along the highway network, underneath existing near-surface utilities, it is likely that the construction of the MAP will require some local diversions of these utilities. Where these are currently known, the EIA Scoping Boundary has allowed for the required diversion, and the EIA will consider the potential for any related effects. It is expected that the Order Limits and/or the pipeline Limits of Deviation (LoD) within the DCO will typically extend to the highway boundary to allow for any required lateral diversion of existing utilities and for the relevant powers to undertake the diversion.

Construction Management

- 2.6.7 A Framework Construction Environmental Management Plan (CEMP) will accompany the DCO Application and describe the framework of mitigation measures identified in the ES to be carried forward to a detailed CEMP to be implemented during the construction phase. The Applicant is also considering the need for specific management proposals and policies, in relation to impacts such as ground borne noise, vibration and settlement, which may be required depending on the exact routing of the London SHM. Such proposals would form part of the DCO Application.
- 2.6.8 Impacts to traffic from construction activities, as well as the impacts from construction traffic (and related slurry disposal) movements, will be considered carefully within the ES and described in a Framework Construction Logistics Plan (CLP). Close engagement will be undertaken with stakeholders to bring forward scheme specific appropriate management measures to manage the impacts of streets works, including working alongside scheme specific adaptation for cumulative schemes to ensure that such impacts are appropriately managed.

Clearance Works

- 2.6.9 No major demolition works are likely to be required to support the Proposed Scheme. The need for any small scale removal of structures, the temporary removal of any street furniture and the clearance of any vegetation will be detailed in the DCO Application and assessed in the EIA as required.

Construction Programme

- 2.6.10 Construction of the Proposed Scheme is likely to be phased. However, for the purposes of the EIA, the Construction Phase will assume a reasonable worst-case scenario, whereby the entire Proposed Scheme is built out over four years with overlapping construction activities. For the purposes of the EIA, it is assumed that the Construction Phase would commence in 2030, and the full London SHM would be operational by 2035. An indicative construction programme will be included within the ES.

Materials Management

- 2.6.11 Excavation required to construct the London SHM will generate materials requiring careful management and disposal. Where groundwater is present in superficial deposits or at the London Clay interface, dewatering will be undertaken via well points, deep wells or sump pumping. Water will be treated within the MAP Construction Compounds to remove suspended solids prior to disposal in accordance with permits and consent requirements. Further information will be provided in the ES.
- 2.6.12 Excavated materials unsuitable for reuse will be transported off-site to appropriately licensed waste management facilities in accordance with a Framework Site Waste Management Plan (SWMP) and relevant regulatory requirements.
- 2.6.13 Spoil will be stockpiled temporarily within the MAP Construction Compound or loaded directly into sealed skips or tipper lorries to minimise double handling. In central London, where space is constrained, spoil may be loaded via conveyors or vacuum extraction systems to reduce lorry dwell time and congestion.

Construction Traffic, Delivery and Access

- 2.6.14 HGV and LGV movements will be assessed in the ES (refer **Volume 1, Chapter 18: Transport**). During peak construction periods, HGV and LGV movements are currently anticipated to peak at 102 daily vehicle movements (two way); comprising 38 HGV and 13 LGV. Overall, the construction programme vehicle movements are anticipated to average at 44 daily vehicle movements (two way); this would be broadly split between 75% HGV and 25% LGV.

- 2.6.15 Many of the MAP construction compounds are likely to be within or adjacent to existing roads. This will mean that temporary road closures, single-line working and other traffic management measures would be required during construction. The DCO is expected to include powers to enable these traffic management measures to be implemented. In preparing the DCO Application, careful thought will be given, alongside consultation with relevant authorities, to confirm how such measures will interact with existing measures and permitting schemes. Further consideration is given to construction impacts on the existing highways network in **Volume 1, Chapter 18: Transport**.

Construction Hours of Work

- 2.6.16 Many of the activities for construction of the Proposed Scheme will require 24-hour working, seven days a week. For example, tunnelling operations will require continuous working once a drive has commenced due to engineering and safety requirements.
- 2.6.17 For works and activities that do not require 24/7 working the core project working hours are anticipated to be:
- a. Monday to Friday: 07:00 – 19:00; and
 - b. Saturday: 07:00 – 13:00.
- 2.6.18 The ES will set out the approach to working hours for the various construction activities to inform the technical assessments.

Construction Workforce

- 2.6.19 The Proposed Scheme is anticipated to be constructed by four teams working simultaneously. The average construction workforce is anticipated to be between 210 to 220 personnel, with a peak construction workforce of 290 to 310 personnel.
- 2.6.20 Of the construction workforce, 75-85% are expected to be full time equivalent (FTE) and the remaining 15-25% part-time workers. Where practicable, the Applicant will seek to recruit a local based workforce engaging with appropriate partners; the framework for which will be set out in an Outline Skills and Employment Plan to be submitted as part of the DCO Application. No temporary worker accommodation is proposed.
- 2.6.21 A Framework CLP will be submitted alongside the DCO Application that will include measures such as:
- a. all site personnel will be encouraged to use public transport where reasonably practicable; and
 - b. travel by private car will not be permitted except under exceptional circumstances.

2.7 Operation

Operational Management and Maintenance

- 2.7.1 The Proposed Scheme would be operational 24 hours per day and 365 days per year.
- 2.7.2 Maintenance of the Proposed Scheme would involve routine, planned maintenance and system checks, as well as any required reactive maintenance and repairs, taking access via the MAP. Anticipated operational traffic movements are anticipated to be minimal and this will be confirmed within the ES. The ES will also provide a description of the operational and maintenance activities associated with the Proposed Scheme. The management of any landscape and ecological features (provided as part of the Proposed Scheme) will be undertaken in accordance with a Framework Landscape and Ecological Management Plan.
- 2.7.3 The DCO Application will include the necessary information to demonstrate compliance with statutory biodiversity net gain requirements.

Operational Lighting

- 2.7.4 New external lighting will be required at Riverside Campus to ensure safe and secure operations and access for the new infrastructure associated with the Heat Recovery System.
- 2.7.5 At this stage, no external operational lighting is proposed for Thermal Store(s) or the MAP with any permanent lighting restricted to the internal spaces within the MAP to enable safe inspection and maintenance.

Site Staff

- 2.7.6 It is anticipated that up to eight staff would be required for the operation and maintenance of the Proposed Scheme. They are expected to be based at the Riverside Campus.

2.8 Decommissioning

- 2.8.1 The current assumption is that the London SHM would become part London's critical infrastructure and elements of the Proposed Scheme would be refurbished and replaced, as required, so that there is no decommissioning.
- 2.8.2 However, if decommissioning were to be required, it is likely that minor works would be needed to remove above ground infrastructure. Any above ground infrastructure, such as Pump Station MAP Kiosks, Thermal Store(s) and Heat Recovery System, would be removed and recycled or disposed of in accordance with relevant good practice following the waste hierarchy, with

materials being reused or recycled, wherever practicable. All waste would be managed in accordance with the legislation at the time of decommissioning. Underground pipelines and below ground MAP structures are expected to be left in-situ to minimise adverse environmental effects. Standard practice management measures used during decommissioning would be expected to avoid any likely significant effects, considering the small scale of works required.

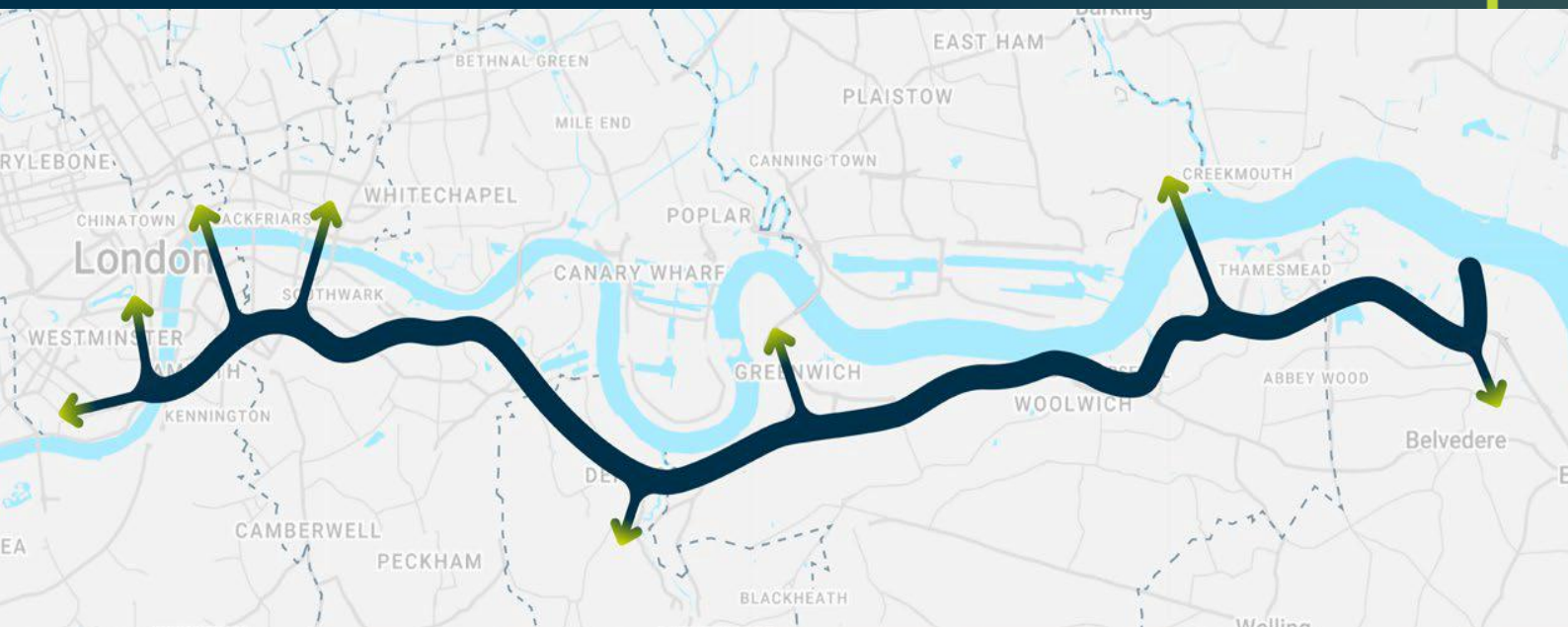
2.9 References

Ref 2.1 Department for Transport (2020) Specification for the Reinstatement of Openings in Highways. Available at: <https://assets.publishing.service.gov.uk/media/6839b437210698b3364e86f7/reinstate-works-after-doing-streetworks.pdf> [Accessed 1 May 2026]

Environmental Impact Assessment Scoping Report

Volume 1: Main Report

Chapter 3: Approach to Alternatives



Cory Environmental Holdings Limited

July 2026

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3. Approach to Alternatives

3.1 Consideration of Alternatives

- 3.1.1 At section 14(2)(d), the Environmental Impact Assessment (EIA) Regulations (Ref 3.1) state that the Environmental Statement (ES) should include “*a description of the reasonable alternatives studied by the applicant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment.*”
- 3.1.2 In addition, paragraph 2 of Schedule 4 of the EIA Regulations notes that an ES should include “*a description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.*”
- 3.1.3 To ensure compliance with the requirements identified above, the ES will include a chapter setting out the alternatives considered and the main reason(s) for selecting the Proposed Scheme. The chapter will focus on:
- a. pipeline route selection;
 - b. construction methodology; and
 - c. alternative technologies.
- 3.1.4 The consideration of ‘no development’ as an alternative to the Proposed Scheme will not be explored in the ES. Consideration of the ‘no development’ scenario would be unreasonable given that low carbon projects are considered by the Government to be critical national priority infrastructure by the UK government (refer **Volume 1, Chapter 4: Legislative and Planning Policy Context** for further information on legislation and policy). The Proposed Scheme is considered essential in achieving London’s decarbonisation objectives and is recognised as strategic infrastructure within the London Infrastructure Framework (LIF) (Ref 3.2).

3.2 Rochdale Envelope

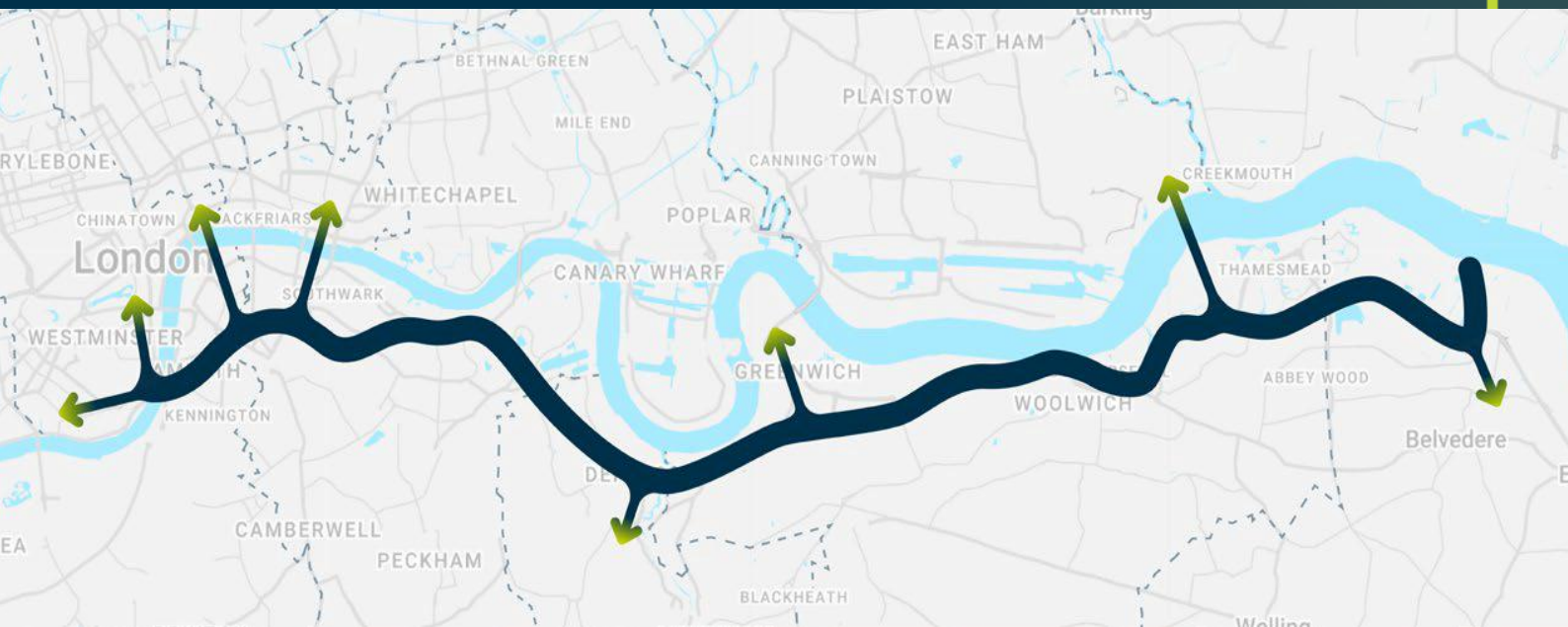
- 3.2.1 Planning Inspectorate Advice Note 9 (Ref 3.3) sets out guidance on the use of the ‘Rochdale Envelope’ as a way of assessing a proposed scheme comprising EIA development where uncertainty exists and necessary flexibility is sought. The Note identifies when and where the implications of seeking that flexibility need to be addressed, as follows:
- a. during the pre-application consultation process;

- b. within the ES; and
 - c. within the description of the project in the application documents, particularly the Development Consent Order (DCO) but also other application documents as identified in the Note.
- 3.2.2 The Note further explains that at the time of the EIA Scoping Report, it may be necessary to leave certain matters open, so that the Scoping Report and Scoping Opinion are based on a worst-case scenario for the Proposed Scheme. Given this, the description of development presented within **Volume 1, Chapter 2: The Proposed Scheme** incorporates broad parameters which will be refined for the purposes of the DCO Application.
- 3.2.3 The Applicant will seek to utilise beneficial developments in both construction technology and methodologies and technological advances in operational heat mains (transmission and thermal storage) as this develops over time and will utilise reasonable and proportionate flexibility within the DCO to ‘future proof’ the consent, where this is possible. Where parameters within this Scoping Report are further refined within the DCO Application following further design development, environmental assessment and consultation, a summary of design evolution will be presented within the ES and Design Approach Document.

3.3 References

- Ref 3.1 His Majesty's Stationary Office (2017). The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended). Available at: <https://www.legislation.gov.uk/ukSI/2017/572/contents> [Accessed 24/02/2026].
- Ref 3.2 Mayor of London (2026). London Infrastructure Framework. Available at: https://www.london.gov.uk/sites/default/files/2026-03/London%20Infrastructure%20Framework_March%202026.pdf [Accessed 28/05/2026]
- Ref 3.3 Planning Inspectorate (2018) Advice Note Nine: Rochdale Envelope, (Version 3). Available at: <https://www.gov.uk/government/publications/nationally-significant-infrastructure-projects-advice-note-nine-rochdale-envelope>. [Accessed 28/04/2026].

Environmental Impact Assessment Scoping Report Volume 1: Main Report Chapter 4: Legislative and Planning Policy Context



Cory Environmental Holdings Limited

July 2026

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4. Legislative and Planning Policy Context

4.1 Introduction

- 4.1.1 This chapter provides an overview of the legislation and planning policy context relevant to the Environmental Impact Assessment (EIA) of the Proposed Scheme, which has informed the scope and method of assessment presented in this EIA Scoping Report. Legislation and planning policy that is relevant to the topic-specific technical assessments is provided within **Volume 1, Chapters 6 to 19** of this EIA Scoping Report.
- 4.1.2 The purpose of setting out relevant legislation and planning policy at the scoping stage of the EIA is as follows:
- a. to ensure compliance with relevant legislative requirements;
 - b. to identify legislation and policy that could influence the sensitivity of receptors (and therefore the significance of effects) and any requirements for mitigation; and
 - c. to identify relevant legislation and policy that could influence the methodology of the EIA. For example, a planning policy may require the assessment of a particular impact or the use of a particular methodology.
- 4.1.3 Legislation and policy relevant to the EIA will be kept under review and updated as necessary in the Environmental Statement (ES).

4.2 Legislation

Planning Act 2008

- 4.2.1 The Proposed Scheme benefits from a Section 35 Direction from the Secretary of State (SoS) for Energy Security and Net Zero directing that the Proposed Scheme should be treated as development for which development consent is required. Given this, the consenting strategy for the Proposed Scheme is to apply for a Development Consent Order (DCO).
- 4.2.2 The Planning Act 2008 (Ref 4.1) provides the primary legal framework for applying for, examining and determining DCO applications for projects of national significance.
- 4.2.3 Section 104 of the Planning Act 2008 (Ref 4.1) sets out that the SoS must have regard to:
- a. any relevant National Policy Statements (NPS);

- b. the appropriate marine policy documents (if any);
- c. any local impact reports;
- d. any matters prescribed in relation to development of the description which the application relates to; and
- e. any other matters which the SoS deems important and relevant to the decision.

4.2.4 This chapter provides an overview of the policy documents as well as other relevant and important considerations relevant to the EIA of the Proposed Scheme, which have informed the scope and method of assessment presented in this EIA Scoping Report.

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended)

4.2.5 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (the EIA Regulations) (Ref 4.2) define the EIA process for DCO applications.

4.2.6 In line with the relevant guidance and legislation, this EIA Scoping Report seeks, where appropriate, to scope in aspects/matters that require assessment and also scope out aspects/matters where further assessment is not required, with suitable justifications provided. This approach will ensure a proportionate approach is taken to the EIA for the Proposed Scheme.

4.3 Policy Context

Overarching National Policy Statement for Energy (EN-1)

4.3.1 As mentioned above, under Section 104 (3) of the Planning Act 2008 (Ref 4.1), the SoS is required to decide applications for development consent in accordance with the relevant NPS subject to certain exceptions.

4.3.2 The Overarching NPS for Energy (NPS EN-1) (Ref 4.3) sets out the government's overarching national policy with regard to the development of nationally significant infrastructure projects (NSIP), as well as projects of national significance, in the field of energy. Therefore, NPS EN-1 represents the primary basis for determining whether development consent should be granted for projects of national significance in the field of energy. Paragraph 1.3.10 of NPS EN-1 states that in circumstances where the SoS has given a Section 35 Direction: "[NPS] EN-1, in conjunction with any relevant technology specific NPS, will be the primary policy for SoS decision making on projects in the field of energy for which a direction has been given under section 35". As

there is no relevant technology specific NPS for the Proposed Scheme, NPS EN-1 is the primary policy framework for the Proposed Scheme.

- 4.3.3 NPS EN-1 (Ref 4.3) was updated in 2025 and the revised version came into force on 6 January 2026.
- 4.3.4 Part 5 of NPS EN-1 sets out policies in respect of impacts from all types of energy infrastructure in respect of the topics considered in the topic chapters (**Volume 1, Chapters 6 to 19**) of this EIA Scoping Report. A summary of the impacts relevant to each technical assessment is provided in each environmental topic chapter.
- 4.3.5 The NPS for Renewable Energy Infrastructure (EN-3) (Ref 4.4) outlines that any new energy from waste (EfW) facilities must provide heat to the heat network within three years of entering operation. Whilst the Proposed Scheme does not relate to a new EfW, and therefore EN-3 is not the NPS governing the Proposed Scheme, it is noted that the Proposed Scheme will allow the existing EfW facilities at Riverside Campus to be connected to the heat network.

4.4 Marine Legislation and Planning Policy

- 4.4.1 Under Section 104(2) (aa) of the Planning Act 2008 (Ref 4.1), the SoS is required to decide applications for development consent in accordance with the relevant marine policy documents and in accordance with Section 59 of the Marine and Coastal Access Act 2009 (MCAA2009), subject to certain exceptions. The relevant marine policy documents have therefore been considered in preparing this Scoping Report.
- 4.4.2 The UK Marine Policy Statement ('MPS') (Ref 4.5) was published in March 2011 under the MCAA2009 (Ref 4.6) to provide a policy framework for marine spatial planning, specifically for preparing Marine Plans and taking decisions that affect the marine environment. The MMO has taken a regional approach to developing marine plans in English waters.
- 4.4.3 Under Section 58 of the MCAA 2009 (Ref 4.6), all public authorities are required to take authorisation or enforcement decisions that affect or might affect the UK marine area in accordance with the MPS (Ref 4.5) and the relevant Marine Plans.
- 4.4.4 Furthermore, Section 42 of the MCAA 2009 (Ref 4.6) defines the "*UK marine area*" as not just the area of the sea but also includes: "*the bed and subsoil of the sea within those areas*".

- 4.4.5 The MPS (Ref 4.5) provides that the following issues should be considered by decision-makers when examining and determining applications for energy infrastructure:
- a. the national level of need for energy infrastructure, as set out in NPS EN-1 (Ref 4.3);
 - b. the positive wider environmental, societal and economic benefits of low-carbon electricity generation and carbon capture and storage as key technologies for reducing carbon dioxide emissions; and
 - c. the potential impact of inward investment in offshore wind, wave, tidal stream and tidal range energy-related manufacturing and deployment activity, as well as the impact of associated employment opportunities on the regeneration of local and national economies. These activities support the objective of developing the UK's low-carbon manufacturing capability (MPS, paragraph 3.3.4 (Ref 4.5)).
- 4.4.6 Given this, the following Marine Plan has been considered in the development of this Scoping Report:
- a. South-East Inshore Marine Plan (June 2021) (Ref 4.7).
- 4.4.7 A summary of specific marine policies relevant to each technical assessment is provided within each relevant environmental topic chapter.

4.5 Other Important and Relevant Considerations

- 4.5.1 Section 104 (2)(d) of the Planning Act 2008 states that the SoS must have regard to “*any other matters which the Secretary of State thinks are both important and relevant to the decision*”. The Applicant considers that the following documents would be relevant and important to the decision made by the SoS for the Proposed Scheme:
- a. The National Planning Policy Framework (NPPF), published in December 2024 and updated in February 2025 (Ref 4.8);
 - b. National Planning Practice Guidance (PPG) (Ref 4.9);
 - c. Local Planning Policy – the Proposed Scheme lies within the administrative areas of 10 London boroughs, as well as the Greater London Authority (GLA). The adopted and emerging development plans (including Neighbourhood Plans) relevant to the Proposed Scheme comprise the documents set out within **Table 4-1**, which have been considered in the preparation of the EIA Scoping Report (Ref 4.10- Ref 4.27).
 - d. Relevant Supplementary Planning Guidance for each London borough.

- e. Heat Network Zoning Government Response to 2023 Consultation (Ref 4.28);
- f. London Heat Network Manual II (Ref 4.29);
- g. London Infrastructure Framework (Ref 4.30);
- h. The London Growth Plan (Ref 4.31);
- i. Strategy and Policy Statement for Energy Policy in Great Britain (Ref 4.32);
- j. UK Heat Networks: Market Overview Guidance (Ref 4.33);
- k. London Environmental Strategy (Ref 4.34);
- l. UK Infrastructure: A 10 Year Strategy (Ref 4.35);
- m. Industrial Decarbonisation Strategy (Ref 4.36); and
- n. Carbon Budget Delivery Plan (Ref 4.37).

4.5.2 The Government published a consultation draft of the revised National Planning Policy Framework (draft NPPF) on 16 December 2025, and the consultation period closed on 10 March 2026. While the draft NPPF published for consultation seeks to update and refine national planning policies, it is not anticipated to introduce material changes that would alter the requirements of the EIA. This EIA Scoping Report has been prepared in accordance with the current NPPF, and any future updates to the framework will be monitored to ensure continued compliance of the EIA with national planning policy.

4.5.3 The national PPG website (Ref 4.9) provides more in-depth guidance to the NPPF specifically related to planning practice. The PPG is a suite of topic-specific online documents intended to make planning guidance more accessible and to ensure that guidance is kept up to date.

4.5.4 The EIA approach aligns with the procedures established by the PPG, which, in turn, ensures compliance with the NPPF. Topic-specific PPG and policies from the NPPF are also considered, where appropriate, within the topic chapters (**Volume 1, Chapters 6 to 19**) of this EIA Scoping Report.

Table 4-1: List of Key Local Development Plan Documents

Local Planning Authority	Adopted and Emerging Development Plan	Reference
Greater London Authority	• London Plan (2021)	Ref 4.10
	• Towards a New London Plan (2025)	Ref 4.11

Local Planning Authority	Adopted and Emerging Development Plan	Reference
London Borough of Bexley	Bexley Local Plan (2023)	Ref 4.12
Royal Borough of Greenwich	- Royal Greenwich Local Plan: Core Strategy with Detailed Policies (2014) - Royal Borough of Greenwich Draft Local Plan – Regulation 18 Consultation Version (2025)	Ref 4.13 Ref 4.14
London Borough of Lewisham	Lewisham Local Plan 2020-2040 (2025)	Ref 4.15
London Borough of Southwark	The Southwark Plan (2022)	Ref 4.16
London Borough of Lambeth	Lambeth Local Plan 2020-2035 (2021)	Ref 4.17
	South Bank & Waterloo Neighbourhood Plan 2017 - 2032	Ref 4.18
	Kennington, Oval and Vauxhall Neighbourhood Plan 2035	Ref 4.19
London Borough of Barking and Dagenham	London Borough of Barking and Dagenham Local Plan 2020-2037 (2024)	Ref 4.20
London Borough of Tower Hamlets	Tower Hamlets Local Plan 2031: Managing Growth and Sharing Benefits (2020)	Ref 4.21
	Tower Hamlets: Consolidated Draft Local Plan (2025)	Ref 4.22

Local Planning Authority	Adopted and Emerging Development Plan	Reference
City of London	City of London Local Plan (2015)	Ref 4.23
	City of London Local Plan – Revised Proposed Submission Draft (2024)	Ref 4.24
City of Westminster	City of Westminster: City Plan 2019-2040 (2026)	Ref 4.25
	Victoria Neighbourhood Plan 2025-2040	Ref 4.26
Royal Borough of Kensington and Chelsea	Royal Borough Kensington and Chelsea Local Plan (2024)	Ref 4.27

4.5.5 A summary of local planning policy that is relevant to each technical assessment is provided in each environmental topic chapter. Supplementary Planning Guidance provides more detail as to how local planning policy should be applied, where relevant to the Proposed Scheme and this has been considered in each of the topic chapters (**Volume 1, Chapters 6 to 19**) of this EIA Scoping Report, as relevant.

4.6 References

- Ref 4.1 His Majesty's Stationery Office (2008). The Planning Act 2008. Available at: <https://www.legislation.gov.uk/ukpga/2008/29/contents> [Accessed 9 April 2026]
- Ref 4.2 His Majesty's Stationery Office (2017). The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. Available at: <https://www.legislation.gov.uk/uksi/2017/572/contents> [Accessed 9 April 2026].
- Ref 4.3 Department for Energy Security and Net Zero (2026). Overarching National Policy Statement for Energy (EN-1). Available at: <https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1-2025>. [Accessed 9 April 2026].
- Ref 4.4 Department for Energy Security and Net Zero (2026). National Policy Statement for Renewable Energy Infrastructure (EN-3). Available at: <https://www.gov.uk/government/publications/national-policy-statement-for-renewable-energy-infrastructure-en-3-2025> [Accessed 11 May 2026]
- Ref 4.5 HM Government (2011). UK Marine Policy Statement. Available at: <https://assets.publishing.service.gov.uk/media/5a795700ed915d042206795b/pb3654-marine-policy-statement-110316.pdf> [Accessed 28 May 2026].
- Ref 4.6 HM Government (2009). Marine and Coastal Access Act. Available at: <https://www.legislation.gov.uk/ukpga/2009/23/contents> [Accessed 28 May 2026].
- Ref 4.7 HM Government (2021). South East Inshore Marine Plan. Available at: https://assets.publishing.service.gov.uk/media/60f6f6dde90e0764ccfbd836/FINAL_South_East_Marine_Plan_1.pdf [Accessed 28 May 2026].
- Ref 4.8 Ministry of Housing, Communities and Local Government, Ministry of Housing, Communities & Local Government (MHCLG) (2018 to 2021) and Department for Levelling Up, Housing and Communities (DLUHC) (December 2024) National Planning Policy Framework – Last updated 7th February 2025. Available at: <https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf> [Accessed 9 April 2026].
- Ref 4.9 Ministry of Housing, Communities and Local Government, Ministry and Department for Levelling Up, Housing and Communities (published between 2016 and 2024). Planning Practice Guidance Available at: <https://www.gov.uk/government/collections/planning-practice-guidance> [Accessed 9 April 2026].

- Ref 4.10 Greater London Authority (2021) The London Plan. Available at: https://www.london.gov.uk/sites/default/files/the_london_plan_2021.pdf [Accessed 9 April 2026].
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- Ref 4.12 London Borough of Bexley (2023) Bexley Local Plan. Available at: <https://www.bexley.gov.uk/sites/default/files/2023-07/bexley-local-plan-adopted-26-april-2023.pdf> [Accessed 9 April 2026].
- Ref 4.13 Royal Borough of Greenwich Council (2014) Royal Greenwich Local Plan: Core Strategy with Detailed Policies. Available at: https://www.royalgreenwich.gov.uk/sites/default/files/2025-07/Royal_Greenwich_Local_Plan__Core_Strategy_with_Detailed_Policies_main.pdf [Accessed 9 April 2026].
- Ref 4.14 Royal Borough of Greenwich Council (2025) Royal Borough of Greenwich Draft Local Plan: Regulation 18 Consultation Version. Available at: <https://www.royalgreenwich.gov.uk/sites/default/files/2025-12/Draft%20Local%20Plan%20Regulation%2018%20v14.pdf> [Accessed 13 May 2026]
- Ref 4.15 London Borough of Lewisham (2025) Lewisham Local Plan 2020-2040. Available at: <https://lewisham.gov.uk/myservices/planning/policy/adopted-local-plan/adoption-of-the-local-plan> [Accessed 9 April 2026].
- Ref 4.16 London Borough of Southwark (2022) The Southwark Plan 2022. Available at: <https://www.southwark.gov.uk/planning-environment-and-building-control/planning/planning-policy-and-guidance/southwark-plan-2022> [Accessed 9 April 2026].
- Ref 4.17 London Borough of Lambeth (2021) Lambeth Local Plan 2020-2035. Available at: <https://www.lambeth.gov.uk/sites/default/files/2021-09/Lambeth%20Local%20Plan%202021.pdf> [Accessed 9 April 2026].
- Ref 4.18 South Bank & Waterloo Neighbours (2019) South Bank & Waterloo Neighbourhood Plan 2017 – 2032. Available at: https://www.lambeth.gov.uk/sites/default/files/2021-06/pl_South_Bank_and_Waterloo_Neighbourhood_Development_Plan-accessible.pdf [Accessed 29 April 2026]
- Ref 4.19 Kennington, Oval and Vauxhall Neighbourhood Forum (2026) Kennington, Oval and Vauxhall Neighbourhood Plan 2035. Available at:

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- Ref 4.20 London Borough of Barking and Dagenham (2024) London Borough of Barking and Dagenham 2020-2037. Available at: https://www.lbdd.gov.uk/sites/default/files/2024-10/B%26D_LocalPlan_A4_SEP24_digital.pdf [Accessed 9 April 2026].
- Ref 4.21 London Borough of Tower Hamlets (2020). Tower Hamlets Local Plan 2031: Managing Growth and Sharing Benefits. Available at: https://www.towerhamlets.gov.uk/lgnl/planning_and_building_control/planning_policy_guidance/Local_plan/local_plan.aspx [Accessed 9 April 2026].
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- Ref 4.23 City of London Council (2015) City of London Plan 2015. Available at: <https://www.cityoflondon.gov.uk/services/planning/planning-policy/local-plan-2015> [Accessed 9 April 2026].
- Ref 4.24 City of London (2024) City of London Local Plan. Available at: <https://www.cityoflondon.gov.uk/assets/Services-Environment/City-Plan-2040.pdf> [Accessed 28 May 2026].
- Ref 4.25 City of Westminster Council (2026) City of Westminster: City Plan 2019-2040. Available at: <https://www.westminster.gov.uk/sites/default/files/media/documents/city-plan-2019-2040-january-2026.pdf> [Accessed 9 April 2026].
- Ref 4.26 Victoria Neighbourhood Forum (2025) Victoria Neighbourhood Plan 2025-2040. Available at: https://www.westminster.gov.uk/sites/default/files/media/documents/VNDP_Plan_Submission.pdf [Accessed 15 May 2026]
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- Ref 4.37 Department for Energy Security & Net Zero (2023). Carbon Budget Delivery Plan. Available at: <https://www.gov.uk/government/publications/carbon-budget-delivery-plan/carbon-budget-delivery-plan> [Accessed 28 May 2026].

Environmental Impact Assessment Scoping Report Volume 1: Main Report Chapter 5: EIA Approach and Methodology

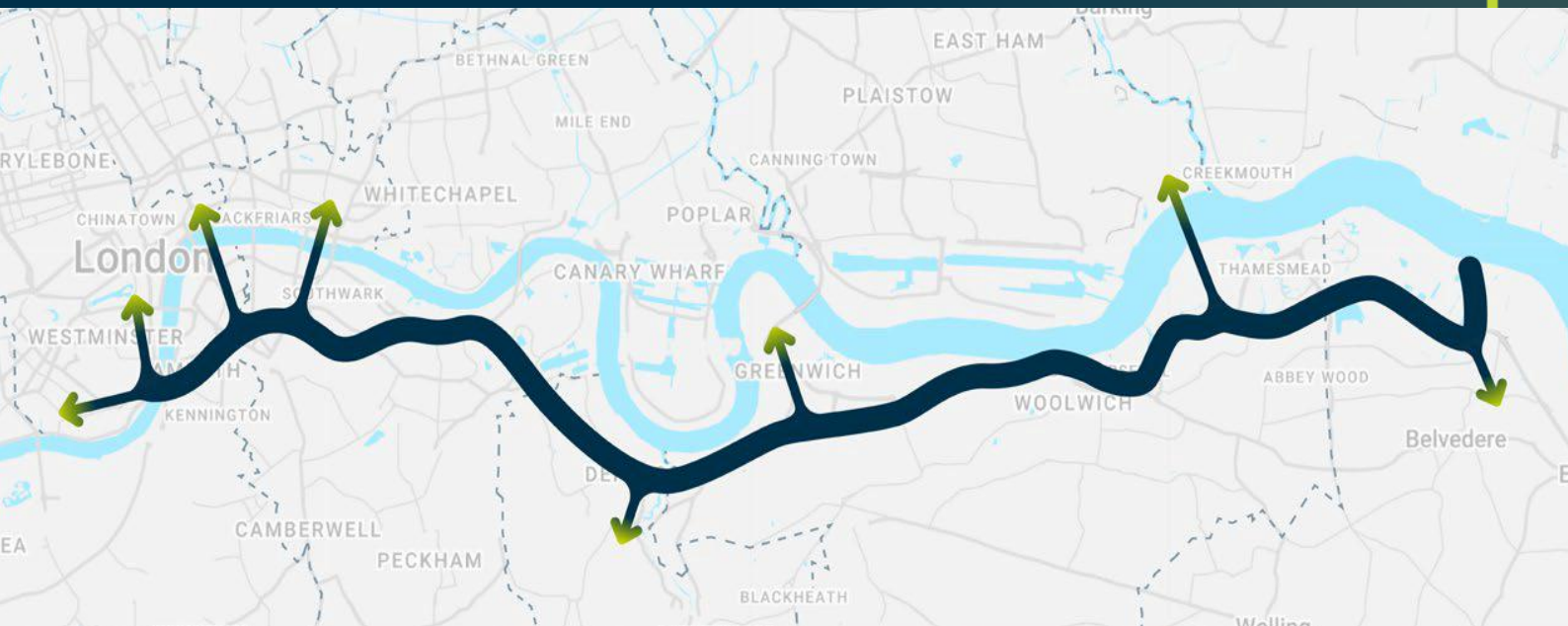


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5. EIA Approach and Methodology

5.1 Introduction

- 5.1.1 This chapter sets out the proposed overarching approach to the Environmental Impact Assessment (EIA) for the Proposed Scheme. Topic specific methods of assessment are presented in **Volume 1, Chapters 6 to 19** of this EIA Scoping Report.
- 5.1.2 This chapter is supported by the following appendix in **Volume 3** of this EIA Scoping Report:

a. **Appendix 5-1: Transboundary Effects Screening Matrix.**

5.2 Consultation

- 5.2.1 Effective stakeholder engagement and consultation is fundamental to the success of the Proposed Scheme. In accordance with the Aarhus Convention on access to information, public participation in decision-making and access to justice in environmental matters (Ref 5.1), the consultation process will ensure that relevant environmental information is made publicly available and that stakeholders are provided with early and effective opportunities to participate in decision-making related to the Proposed Scheme.
- 5.2.2 The process of consultation is, amongst other things, critical to the evolution of the Proposed Scheme design, identification of mitigation measures and enhancement opportunities, and for collating a comprehensive and balanced Environmental Statement (ES). The views of consultees serve to focus the environmental studies and to identify specific issues that require further investigation. Consultation is an ongoing process, which enables mitigation measures to be incorporated into the project design thereby limiting adverse effects and enhancing environmental benefits.
- 5.2.3 The Proposed Scheme has a wide range of stakeholders (including land interests, local authorities, statutory environmental bodies, local communities and specialist interest groups) with differing interests that will require varied levels of consultation.
- 5.2.4 Specific communication activities therefore need to be focussed to meet the needs of particular individuals and groups. This requires an understanding of the stakeholders and their interests in the Proposed Scheme.
- 5.2.5 Stakeholder engagement for the Proposed Scheme is based on the following principles:

- a. early and ongoing engagement to inform and influence the design process;
 - b. seeking feedback on the iterative design process and taking this feedback into consideration; and
 - c. building of long-term relationships with key stakeholders throughout the different stages of the Proposed Scheme to help better understand their views and where possible and practicable, ensuring concerns are addressed.
- 5.2.6 The Planning Act 2008 previously included statutory minimum requirements regarding consultation during the Development Consent Order (DCO) process. These requirements stipulated that certain stakeholder groups, the community and land interests must be consulted as part of the pre-application process. Consultation requirements for the DCO process have however recently been 'streamlined' by the Planning and Infrastructure Act 2025 (PIA2025) which received royal assent on 18 December 2025. Secondary legislation and guidance to reflect the government's reforms set out in the PIA are due to be published later this year (2026).
- 5.2.7 Notwithstanding the changes outlined above, the following approach to consultation and engagement will be undertaken to inform the proposals for the Proposed Scheme prior to the submission of the DCO Application. Environmental information will be shared as relevant:
- a. EIA Scoping consultation;
 - b. Consultation 1 - consultation stage for general public, land interests and statutory/non statutory bodies;
 - c. Consultation 2 consultation stage for general public, land interests and statutory/non statutory bodies;
 - d. ongoing technical engagement; and
 - e. ongoing engagement with potentially affected landowners and targeted local communities.

5.3 The Purpose of EIA

Purpose

- 5.3.1 EIA is a process for identifying the likely significant environmental effects (beneficial and adverse) of a project to inform the decision-making process for development consent to be granted. The EIA process will culminate in the preparation of an EES, in accordance with The Infrastructure Planning

(Environmental Impact Assessment) Regulations 2017 (as amended) (the EIA Regulations) (Ref 5.2). The ES will provide an assessment of the likely significant effects associated with the Proposed Scheme.

5.3.2 Schedule 4(4) of the EIA Regulations specifies that the ES should describe the:

- a. *“...factors...likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.”*

5.3.3 Regulation 5(2) of the EIA Regulations (Ref 5.2) requires the interaction between these factors to be considered. In addition, Regulation 5(4) requires an ES to consider *“....the expected significant effects arising from the vulnerability of the proposed development to major accidents or disasters that are relevant to that development”*.

5.3.4 The EIA process aims to be systematic, analytical, impartial, consultative and iterative allowing opportunities for environmental concerns to be addressed in the design and evolution of the Proposed Scheme.

5.3.5 A number of design iterations may be required to address environmental impacts identified during the EIA process or through stakeholder engagement and consultation, prior to the final design being submitted for consent.

5.4 Receptor-based approach

5.4.1 In this EIA Scoping Report, and ultimately the ES, the methodology for assessing the significance of an effect will vary between environmental topics. A receptor-based approach is proposed. Receptors are those aspects of the environment that may be sensitive to change as a result of the Proposed Scheme. This approach determines the significance of effect based on the environmental sensitivity (or value or importance) of a receptor and the magnitude of change (the ‘impact’) from baseline conditions that it experiences.

5.4.2 When deciding on which receptors to include in the EIA, consideration is given to Regulation 5(2) and Schedule 4 paragraph 4 of the EIA Regulations.

5.4.3 Where aspect-specific guidance requires that particular criteria or scales for determining significance are to be used, this is outlined in the relevant topic

chapter. In some cases, particularly in respect of qualitative criteria, the professional judgement of technical specialist authors is required to justify the final judgements on significance.

- 5.4.4 In instances where limited information is available, assessments have and will continue to apply a precautionary principle, in that a reasonable ‘worst-case’ scenario is assessed.

5.5 Determining the scope of the assessment

- 5.5.1 The EIA scoping process establishes which aspects of the environment are likely to be significantly affected by a project and involves identifying:

- a. the people and environmental resources (collectively known as ‘receptors’) that could be significantly affected by the Proposed Scheme; and
- b. the work required to take forward the assessment of the likely significant effects.

- 5.5.2 Scoping is an important procedure, which sets the context for the EIA process. It is intended to inform a proportionate and robust approach to assessment through the initial identification of potential likely significant effects in a Scoping Report.

- 5.5.3 Effective scoping enables agreement to be reached with stakeholders on the aspects and methodologies to be taken forward, assessed and reported in detail in the ES. Scoping also provides an opportunity for early interaction with stakeholders, strengthening the assessment evidence base and allowing active participation of interested parties in project development and decision making. This helps improve project design, environmental soundness and social acceptability.

- 5.5.4 When considering which aspects of the environment have the potential to be significantly affected by the Proposed Scheme, and therefore which aspects should be scoped into the assessment, a conceptual ‘source-pathway-receptor’ approach has been adopted which considers the following criteria:

- a. Source: location of a material or activity that may be harmful, i.e. the origin of the potential impacts (such as pipeline installation and a resultant impact, e.g. mobilisation of contaminants).
- b. Pathway: the route by which a harmful action or material is able to reach the receptor (e.g. the mobilisation of contaminants could enter a local surface waterbody).

- c. Receptor: the feature or aspect of the receiving environment that is impacted, such as: humans, property, ecology, habitat, atmosphere, water (for the example above, species living within the local waterbody).

5.5.5 Once the above criteria have been identified by technical specialists, they will be examined to assess the potential impact(s) upon a receptor, and ultimately the significance of the effect upon the receptor. In general, the impact assessment for each aspect will adopt this approach when considering the potential effects arising from the Proposed Scheme. This approach allows for a transparent impact assessment and clear justification as to why particular aspects are either scoped in, or scoped out of, the EIA process.

Technical Scope

5.5.6 The technical scope of assessment for each environmental aspect is detailed in **Volume 1, Chapters 6 to 19** of this EIA Scoping Report and this covers the scoping in and out of impacts and effects to be assessed as part of the EIA. Justification is provided for the individual approach and scoping of matters to be considered in the assessment of each environmental aspect. The technical scope also details the approach to baseline data collection and assessment methodologies.

Spatial Scope

5.5.7 As described in **Volume 1, Chapter 2: Proposed Scheme** (and shown on figures presented in **Volume 2** of the EIA Scoping Report), an 'EIA Scoping Boundary'¹ has been defined for the purposes of this EIA Scoping Report to indicate areas in which land, or rights over or under land are anticipated, at this stage, to potentially be required for works associated with the Proposed Scheme. The land required for the Proposed Scheme within the envelope of the EIA Scoping Boundary is subject to change as design work progresses and through consideration of environmental and technical factors, as well as consultation feedback. The EIA will be undertaken, as relevant, for the Proposed Scheme as defined within the draft Order limits as set out in the DCO Application.

5.5.8 PINS recommends (in Advice Note Seven (Ref 5.3)) that a shapefile "...representing the proposed DCO site boundary (including any temporary, permanent and associated development)" is submitted with the EIA Scoping

¹ All references to 'EIA Scoping Boundary', correspond to the area shown in Volume 2, Figure 1-1.

Report. This has been provided separately to the EIA Scoping Opinion Request.

- 5.5.9 The spatial scope of assessment for each environmental aspect (referred to as the 'Study Area') comprises the area over which changes to the environment are predicted to occur because of the Proposed Scheme and will depend on the nature of the potential effects and the location of receptors that could be affected. It takes account of:
- a. the physical area of the Proposed Scheme;
 - b. the nature of the baseline environment;
 - c. the manner and extent to which environmental impacts may occur; and
 - d. relevant guidance, best practice and/or legislation.
- 5.5.10 The geographical extent of the Study Area will thus generally be greater than the EIA Scoping Boundary and will vary depending on the environmental aspect and specific receptors or resources under consideration for that aspect. For each aspect, the Study Area proposed is of sufficient size to encompass the spatial extent over which relevant impacts on receptors or resources might occur.
- 5.5.11 Each of the technical methodologies (**Volume 1, Chapters 6 to 19**) describes the Study Area to be considered for that topic, providing a clear explanation as to why the Study Area has been adopted. The spatial scope of each assessment may be refined for the ES in response to comments from consultees and/or further assessment or survey work.

Temporal Scope

- 5.5.12 The temporal scope covers the time period over which changes to the environment and the resultant effects are predicted to occur, and are typically defined as either being temporary or permanent:
- a. Permanent: these are effects that will remain even when the Proposed Scheme is complete, although these effects may be caused by environmental changes that are permanent or temporary; or
 - b. Temporary: these are effects that are related to environmental changes associated with a particular activity and that will cease when that activity finishes
- 5.5.13 To predict the potential environmental effects of the Proposed Scheme, it will be necessary to determine the environmental conditions that currently exist

within the EIA Scoping Boundary and surroundings, in the absence of the Proposed Scheme. These are known as 'baseline conditions'. The EIA will assess the changes (impacts) to the current and future baseline as a result of the Proposed Scheme, in order to identify the likely significant effects.

Baseline Scenarios

5.5.14 The ES will identify the following baseline scenarios:

- a. Existing baseline: current baseline conditions based on desktop studies and surveys. The baseline is the reference level of the environmental conditions without implementation of the Proposed Scheme, against which the potential impacts of the Proposed Scheme are to be assessed; and
- b. Future baseline: the future conditions without the Proposed Scheme in place, against which the potential impacts of the Proposed Scheme are to be assessed, if these conditions are expected to differ substantially from the existing baseline. When describing the future baseline scenario for each technical topic, the current baseline will be extrapolated to take account of anticipated change factors including, but not limited to, those caused by changing climatic conditions, natural evolution or planned management of habitats, changes to policy or legislation, expected new development (including other planned infrastructure projects inclusive of both Cory projects: Cory Decarbonisation Project; and Thames Mobile Heat Project) to provide a description of the likely changes to the baseline environment over an appropriate timescale that can be supported by datasets and modelling.

Assessment scenarios

5.5.15 The ES will consider the following assessment scenarios:

- a. Construction assessment: impacts arising during the construction period (4 years) will be considered within the environmental assessments. Where appropriate for some topics, such as traffic, air quality and noise and vibration, a peak year of construction will be assessed, as this will represent a worst-case scenario; and
- b. Operation assessment: impacts at the opening year of the Proposed Scheme (presented as 2034 in this EIA Scoping Report) will be considered.

5.5.16 Further details of any topic specific consideration for assessment scenarios are provided in **Volume 1, Chapters 6 to 19** of this EIA Scoping Report.

- 5.5.17 The EIA Scoping Report proposes to scope out assessment of decommissioning effects from technical assessments, on the basis that the Proposed Scheme is likely to operate indefinitely. If decommissioning were to be required, this would likely be limited to minor works associated with the removal of above ground infrastructure, which, with the adoption of standard good practice measures, are not likely to give rise to significant effects .
- 5.5.18 As part of maintenance, during the operation phase of the Proposed Scheme, there is likely to be replacement of plant/equipment as a result of general wear and tear. Therefore, the ES project description will clearly set out the predicted requirements and timescales for replacement of equipment during operation, including the process and methods, and any land use requirements. Where this information is not known, parameters representing a worst-case scenario will be provided. The ES will also assess any likely significant effects arising from this activity. Any measures required to mitigate significant adverse effects from such maintenance activities will be described in the ES and demonstrably secured in the DCO.

5.6 Assessment of Effects and Determining Significance

Overview

- 5.6.1 The methodology described in this section will be applied when preparing the ES. This methodology is designed to consider whether impacts of the Proposed Scheme would lead to a likely significant effect on any environmental receptors. Assessments will consider the magnitude of impacts and sensitivity of resources or receptors that could be affected, to classify the likely significance of the resultant effects.
- 5.6.2 The conclusion that is made on whether an effect should be considered significant is based both on standard significance criteria (see **Table 5-3** below) and upon professional judgement, with reference to the description of the Proposed Scheme and consideration of:
- a. the magnitude and other characteristics of the potential changes (impacts) that are expected to be caused by the Proposed Scheme;
 - b. the sensitivity of receptors to these changes;
 - c. the value of receptors (where relevant); and
 - d. the effects of these changes on relevant receptors.
- 5.6.3 For each environmental aspect, the categories of resource or receptor sensitivity and magnitude of impact will be described or defined.

- 5.6.4 The sensitivity or value of a receptor is largely the product of the importance of an asset, as informed by legislation and policy, and as qualified by professional judgement. For example, higher value receptors for biodiversity or historic environment may be defined as being international or national importance; lower value resources may be designated as being sensitive or important at a regional or local level.
- 5.6.5 The use of a receptor also plays a part in the classification of its value or sensitivity. For example, when considering visual amenity, a receptor that is residential in nature may be valued more than a place of work, as the environmental quality of the residential receptor is more likely to be an important part of that receptor's use. General criteria for defining the importance or sensitivity of receptors are set out in **Table 5-1**.

Table 5-1: Sensitivity of Receptors

Sensitivity	Description
High	Receptor has little or no ability to absorb change without fundamentally altering its character. For example: • receptor has little capacity to return to baseline conditions within the project life, e.g. low tolerance to change and low recoverability such as a physical feature formed over a geological time scale, or loss of access with no alternatives; or • the receptor is a designated feature of a protected site or is rare or unique.
Medium	Receptor has moderate capacity to absorb change without significantly altering its character; however some damage to the receptor will occur. For example: • receptor has intermediate tolerance to change; • receptor has medium capacity to return to baseline condition, e.g. >5 of up to 10 years; or • the receptor is valued but not protected.
Low	The receptor is tolerant to change without significant detriment to its character. Some minor damage to the receptor may occur. For example: • receptor has high tolerance to change. • receptor has high capacity to return to baseline condition, e.g. within 1 year or up to 5 years;

Sensitivity	Description
	• impact may affect socio-economic behaviour but is not a nuisance to users; or • the receptor is common and/or widespread within the Study Area.
Very Low	The receptor is tolerant to change with no effect on its character. The project activity does not have a detectable effect on survival or viability.

5.6.6 **Table 5-2** sets out the guidelines of the assessment of the magnitude of impact. Where relevant, individual topic chapters set out variations in magnitude description requirements.

Table 5-2: Impact Magnitude

Magnitude	Criteria
High	Long term and/or regional level (or above regional level) loss; or major alteration to key elements/features of the baseline condition such that post-development character/composition of the baseline will be fundamentally changed.
Medium	Medium term loss and/or local level change (greater than the Proposed Scheme footprint) or alteration to one or more key elements/features of the baseline conditions such that post-development character/composition of the baseline condition will be materially changed.
Low	Short term, site specific and/or a minor shift away from baseline conditions. Changes arising from the alteration will be detectable but not material; the underlying character/composition of the baseline condition will be similar to the pre-development situation.
Very Low	Very little change from baseline conditions. Change is barely distinguishable, approximating to a “no change” situation.

5.6.7 The environmental topic chapters (**Volume 1, Chapters 6 to 19**) provide greater detail on the approach to the assessment and specific guidelines for the definition of impact magnitude and resource or receptor sensitivity, which may adapt the methodology set out above.

- 5.6.8 As part of this, applicable standards which are mandated by professional bodies (e.g. the Chartered Institute of Ecology & Environmental Management (CIEEM) or the Landscape Institute) will also be considered.

Determination of significance

- 5.6.9 The significance of effects is derived with reference to information about the nature of the Proposed Scheme, the sensitivity or value of receptors that could be affected, together with the magnitudes of change that are likely to occur.
- 5.6.10 For many environmental aspects, significance can be determined by using a matrix. Variations to this matrix approach, which may be applicable to specific environmental aspects, are detailed within the respective chapters (**Volume 1, Chapters 6 to 19**), along with descriptions of receptor sensitivity, magnitude of change and levels of effect that are considered significant. Definitions of how the categories that are used in the matrix are derived for each environmental aspect are also set out.
- 5.6.11 In addition, professional judgement is applied in the assessment, as the boundaries between the sensitivities or magnitudes of change may not be clearly defined and the resulting assessment conclusions may need clarifying.
- 5.6.12 The overarching significance matrix that will be used to classify effects is shown in **Table 5-3**, reference is made to:
- a. 'Major' effects, which will always be determined as being significant;
 - b. 'Moderate' effects are generally considered significant, subject to the consideration of specific scenarios and/or professional judgement;
 - c. 'Minor' effects are generally considered not significant but may be deemed significant at a local scale based on industry guidance or professional judgement; and
 - d. 'Negligible' effects, which will always be deemed as 'not significant'.
- 5.6.13 Significant effects with reference to the criteria above have been shaded grey in **Table 5-3**.
- 5.6.14 Effects can be either beneficial or adverse.

Table 5-3: Effects Matrix

Sensitivity or value of resource/receptor	Magnitude of Impact			
	High	Medium	Low	Very Low
High	Major	Moderate	Moderate	Minor
Medium	Moderate	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Very Low	Minor	Negligible	Negligible	Negligible

5.6.15 **Table 5-4** provides general definitions of effects, although this may vary depending upon the topic. Where relevant, the respective topic chapter in the ES will provide any alternative definitions.

Table 5-4: Generic Effect Definitions

Generic Effect	Description
Major	Effects that are likely to be important considerations at a national to regional level because they contribute to achieving national/regional objectives, or which are likely to result in exceedance of statutory objectives and/or breaches of legislation.
Moderate	Effects that are likely to be important considerations at a regional and local level.
Minor	Effects that could be important considerations at a local level.
Negligible	Effects that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

5.7 Mitigation Measures and Monitoring

5.7.1 Regulation 14, Part 2 (c) of the EIA Regulations (Ref 5.2) requires that the ES provides “a description of any features of the proposed development or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment.” These are referred to as ‘mitigation measures’.

5.7.2 The Proposed Scheme will adopt a hierarchical approach to identifying the mitigation measures:

- a. Avoid or Prevent: In the first instance, mitigation should seek to avoid or prevent the adverse effect at source.
- b. Reduce: If the effect is unavoidable, mitigation measures should be implemented that seek to reduce the significance of the effect, for example, the use of a noise barrier to reduce airborne construction noise at nearby terrestrial noise sensitive receptors.
- c. Offset: If the effect can neither be avoided nor reduced, mitigation should seek to offset the effect through the implementation of compensatory mitigation, for example habitat creation to replace any habitat losses.

5.7.3 Mitigation measures fall into two categories: 'embedded mitigation measures', which are built into the design of the Proposed Scheme and approach to construction, and 'additional mitigation measures' which are added to the design commitments for the Proposed Scheme.

Embedded Mitigation Measures

5.7.4 The Proposed Scheme is being developed through an iterative EIA and design process that involves seeking to avoid or reduce and, if practicable, offset likely significant environmental effects. If possible, these measures will be incorporated into the design of the Proposed Scheme, for example, through appropriate routing and siting of infrastructure.

5.7.5 Once the mitigation measures are incorporated into the design they are termed 'embedded measures'. Those embedded measures that are associated with the construction and operation phase of the Proposed Scheme will be described within each technical ES chapter. Embedded measures are either incorporated into the design from the outset or identified through the assessment process.

5.7.6 The embedded measures in the ES will also incorporate the legislative requirements and industry standard control measures that are common practice on construction sites. These will be summarised in each relevant topic chapter and described within the framework management plan for the construction activities associated with the Proposed Scheme, this is referred to as the Framework Construction Environmental Management Plan (CEMP) and will be prepared as part of the DCO Application.

- 5.7.7 The Framework CEMP provides the framework by which the appointed contractor(s) and any sub-contractors/suppliers involved in the construction of the Proposed Scheme will plan, implement, and deliver the environmental management, mitigation and monitoring requirements during the construction phase. The Framework CEMP is expected to evolve into Detailed CEMP(s) by the appointed contractor(s) prior to construction commencing. Production of the detailed CEMP will be secured through the DCO.
- 5.7.8 In addition to the Framework CEMP, further framework management plans may be prepared as part of the DCO Application that could be required to support the effective delivery of environmental mitigation as set out within the ES, monitoring and regulatory compliance during construction and operation.
- 5.7.9 Embedded mitigation during the operation phase comprises inherent design features and standard operational controls that are integral to the Proposed Scheme and function continuously to avoid or reduce environmental effects. These measures will be described in the ES, which will also confirm how those measures will be secured.
- 5.7.10 The identified management plans will be produced in substantial accordance with the Framework/Outline documents/information submitted with the DCO Application. As the Proposed Scheme crosses multiple local authorities, the Applicant is considering the approach to how, and by whom, detailed management plans and mitigation measures (including any additional mitigation measures), will be approved. This will be the subject of engagement with local authorities and relevant statutory bodies as the Proposed Scheme progresses, with the Applicant's proposals to be set out in the DCO Application.

Additional Mitigation Measures

- 5.7.11 The individual technical assessments will be undertaken and reported on the basis that the embedded measures are being delivered and/or implemented. If significant adverse environmental effects continue to be identified despite the implementation of the embedded measures, additional mitigation measures will be proposed. These will be presented within each of the topic chapters, where required, and may include site-specific measures beyond industry standards. An example of this is the installation of temporary fencing until planting has properly established and is fulfilling its intended function as a visual screen. The measures will also be within the Framework CEMP, and a Commitments Register. A draft Commitments Register has been included in this Scoping Report (**Volume 3, Appendix 21-1**) and will be updated as part of the DCO Application.

Monitoring

- 5.7.12 Schedule 4 Paragraph 7 of the EIA Regulations (Ref 5.2) states that, where appropriate, the ES should include “*A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis).*” Where monitoring is proposed, this will be set out in the relevant ES topic chapter.

5.8 Assessment of Residual Effects and Re-Evaluation of Significance

- 5.8.1 Following the identification of the any required additional mitigation measures, the assessment of significance will be re-evaluated to determine whether there is likely to be a residual effect and if it remains significant.
- 5.8.2 Residual effects assessed as ‘moderate’ or ‘major’ after consideration of the Proposed Scheme's mitigation measures will normally require additional analysis (unless stated otherwise aspect chapters, **Volume 1, Chapters 6 to 19**) and consultation to identify further mitigation measures, where these can be applied. However, where further mitigation is not possible, a residual significant effect may remain and will be reported in the ES.

5.9 Cumulative Effects

- 5.9.1 There is a possibility that some of the impacts identified are not significant individually, however could become significant when considered in combination with other impacts of the Proposed Scheme and/or in combination with the impacts of other projects.
- 5.9.2 Accordingly, the scope of the EIA will include a cumulative effects assessment, the purpose of which will be to identify:
- a. **Intra-project Effects:** these effects derive from combinations of Proposed Scheme specific impacts which, when acting together, may result in a new or different likely significant effect or an effect of greater significance than one impact would result in when considered in isolation. An example could be where a local community is affected by dust, noise, and traffic disruption during the construction of the Proposed Scheme, whereby these impacts combine to cause a greater level of nuisance than that associated with each individual impact acting alone; and

- b. **Inter-project Effects:** these effects derive from combinations of Proposed Scheme specific impacts which interacting with the effects associated with 'other developments' in the surrounding area.

5.9.3 The proposed methodology for the cumulative effects assessment is presented in **Volume 1, Chapter 20: Approach to Cumulative Effects**.

5.10 Indirect and Secondary Effects

5.10.1 Indirect and secondary environmental effects are those which are not a direct result of the project, often produced away from the project site or through a complex pathway. An example is that an operational effect of an oilfield development would be oil pumped from the wells. This, subsequently refined offsite as fuel, will lead to carbon emissions when this fuel is eventually burnt, resulting in a secondary effect on climate change that may or may not be significant. The ES will consider likely significant indirect and secondary effects in respect of the Proposed Scheme.

5.11 Transboundary Effects

5.11.1 The EIA Regulations require an ES to consider the transboundary effects of a development (paragraph 5 of Schedule 4) (Ref 5.2). Transboundary effects are those that may cross country boundaries and affect receptors in neighbouring countries, such as the Republic of Ireland or France. However, given the nature of the Proposed Scheme and its proposed location, significant transboundary effects are unlikely as there are no obvious pathways for effects to occur outside of the United Kingdom.

5.11.2 As outlined in the PINS Advice Note Twelve: 'Transboundary Impacts and Process' (Ref 5.4) the screening process for transboundary effects will be carried out by PINS.

5.11.3 A preliminary Transboundary Effects Screening Matrix is provided in **Volume 3, Appendix 5-1** of this EIA Scoping Report to enable PINS to begin considering transboundary effects.

5.12 Assumptions and Limitations

5.12.1 Assumptions and limitations are addressed under each environmental aspect for the Proposed Scheme, as identified in the appropriate EIA Scoping Report chapters.

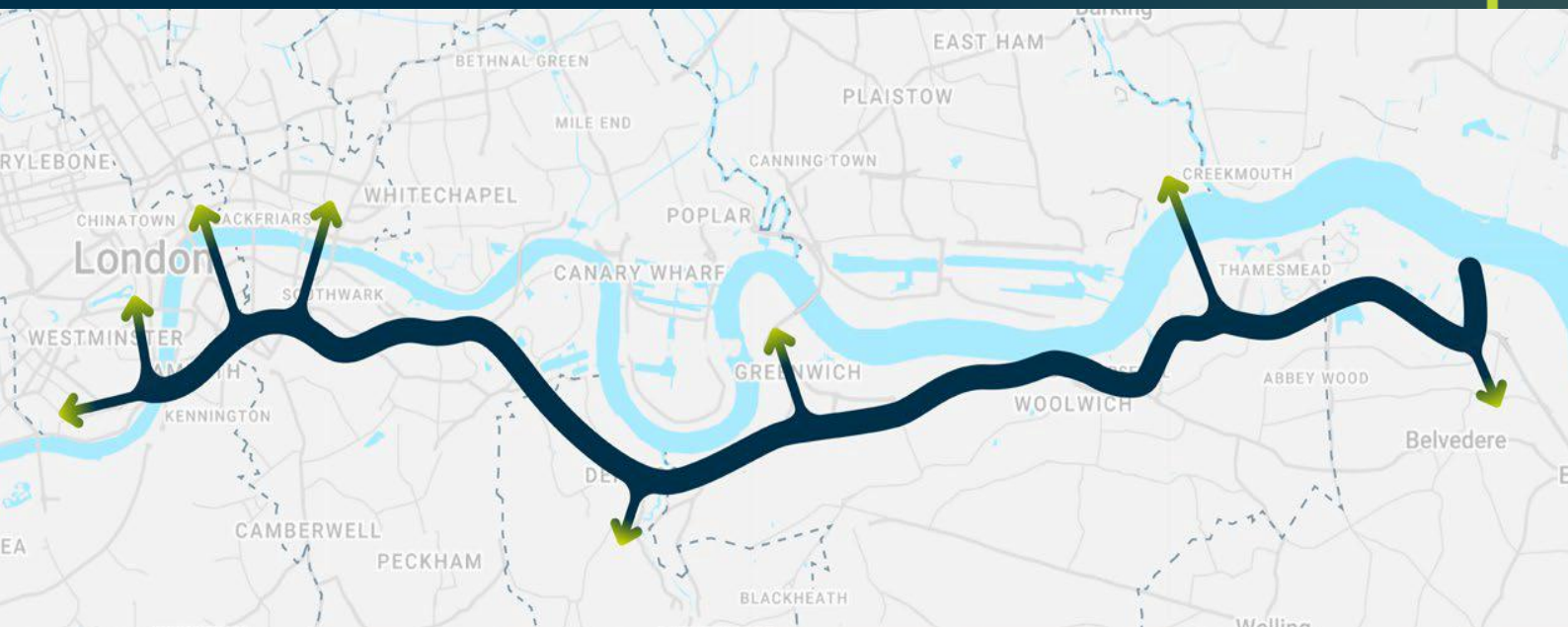
5.13 References

- Ref 5.1 United Nations Economic Commission for Europe (UNECE) (1998). Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention). Available at: [Text of the Convention | UNECE](#) [Accessed 16/04/2026]
- Ref 5.2 His Majesty's Stationery Office (2017). The Infrastructure Planning (Environmental Impact Assessment) Regulations (as amended). Available at: <https://www.legislation.gov.uk/uksi/2017/572/contents>. [Accessed 16/04/2026].
- Ref 5.3 Planning Inspectorate (2018). Nationally Significant Infrastructure Projects- Advice Note Seven: Environmental Impact Assessment. Available at: <https://www.gov.uk/government/publications/nationally-significant-infrastructure-projects-advice-note-seven-environmental-impact-assessment-process-preliminary-environmental-information-an>. [Accessed 16/04/2026].
- Ref 5.4 Planning Inspectorate (2020) Advice Note Twelve: Transboundary Impacts and Process, (Version 6). Available at: <https://www.gov.uk/government/publications/nationally-significant-infrastructure-projects-advice-note-twelve-transboundary-impacts-and-process>. [Accessed 16/04/2026].

Environmental Impact Assessment Scoping Report

Volume 1: Main Report

Chapter 6: Air Quality



Cory Environmental Holdings Limited

July 2026

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6. Air Quality

6.1 Introduction

- 6.1.1 This chapter identifies the potential for likely significant effects of the Proposed Scheme on air quality. It sets out the proposed methodology for the air quality assessment in the Environmental Statement (ES) and identifies those impacts which should be scoped into or out of the assessment of likely significant effects.
- 6.1.2 This chapter is supported by the following figure in Volume 2 of this Scoping Report:

a. Figure 6-1: Construction Dust Assessment Study Area

- 6.1.3 This chapter should be read in conjunction with **Volume 1 Chapter 8: Ecology, Chapter 11: Human Health and Chapter 18: Transport.**

6.2 Study Area

- 6.2.1 The Study Area used in this EIA Scoping Report is based on the EIA Scoping Boundary¹. However, it is noted that air quality impacts could occur beyond the EIA Scoping Boundary, due to construction phase traffic movements and their emissions on the wider road network. The Study Area will be reviewed and refined on the basis of the Order limits within the ES, following the principles set out below.
- 6.2.2 For the assessment of air quality impacts, the methodological approach to defining the spatial extent of the Study Area will be informed by Institute of Air Quality Management (IAQM) guidance documents (Ref 6.1 and Ref 6.2). These guidance documents provide a framework for determining the appropriate extent and level of detail of the assessment, informed by established screening criteria.
- 6.2.3 In line with IAQM guidance for the assessment of construction phase emissions (Ref 6.2), the Study Area for on-site construction phase emissions impacts (i.e. dust and plant emissions) will include:
- a. human health and amenity sensitive receptors located within 250m of the area within which above ground works may be undertaken, 50m of public roads used by construction traffic and up to 250m from site access points; and
 - b. ecology sensitive habitat receptors located within 50m of the area within which above ground works may be undertaken, 50m of a public

¹ All references to 'EIA Scoping Boundary' correspond to the area shown in **Volume 2, Figure 1-1.**

road used by construction traffic and up to 250m from site access points.

6.2.4 In line with IAQM guidance for the assessment of air quality impacts for development and planning (Ref 6.1), the Study Area for both construction and operation phase road traffic emissions impacts will include human health sensitive receptors located within 200m of a road that experiences:

- a. an increase in daily average two-way Light Duty Vehicles² (LDV) of 100 movements or more on roads within or adjacent to an Air Quality Management Area (AQMA) or 500 movements or more on roads not located within or adjacent to an AQMA, due to the Proposed Scheme; and/or
- b. an increase in daily average two-way Heavy Duty Vehicles³ (HDV) of 25 movements or more on roads within or adjacent to an Air Quality Management Area (AQMA) or 100 movements or more on roads not located within or adjacent to an AQMA, due to the Proposed Scheme.

6.2.5 Road traffic emissions impacts can also affect air quality sensitive nature conservation sites. In addition to the air quality sensitive nature conservation sites located close to the EIA Scoping Boundary (including numerous Sites of Importance for Nature Conservation (SINC), two Local Nature Reserves (LNR) and the Gilbert's Pit (Charlton) Site of Special Scientific Interest (SSSI)) it is possible that there may be other air quality sensitive nature conservation receptors within 200m of a road that experience the following change in traffic flows due to the construction (and/or operation) of the Proposed Scheme:

- a. an increase in daily average two-way LDV of 1,000 movements (including in-combination movements) or more; and/or
- b. an increase in daily average two-way HDV of 200 movements (including in-combination movements) or more.

6.2.6 As the design progresses, the Proposed Scheme will be refined. For construction phase site emissions impacts, the use of the EIA Scoping Boundary to define the Study Area at this stage accounts for any uncertainty in design. In the absence of construction and operation phase traffic data, the exact geographical scope of the Study Area for road traffic emissions impacts cannot be defined at this time. Once the alignment has been more precisely defined and traffic data becomes available, the Study Area will be refined to focus on the assessment of likely significant effects within the distances listed above.

6.2.7 **Volume 2, Figure 6-1** shows the 250m Study Area for the assessment of construction dust impacts based on the EIA Scoping Boundary of the

² Light Duty Vehicles are vehicles that weigh less than 3.5 tonnes.

³ Heavy Duty Vehicles are vehicles that weigh 3.5 tonnes or more.

Proposed Scheme, and nearest nature conservative sites, including SINCR, LNR and SSSI. At this stage, it is not possible to show the extent of the Study Area that will be applicable to the roads traffic emissions assessment. That element of the Study Area can only be confirmed following review of project-specific traffic data. However, it will likely include air quality sensitive receptors within 200 m of the construction traffic route, including residential properties, schools and medical facilities, which will be considered in relation to impacts on human health, and other nature conservation sites with sensitive habitats.

6.3 Relevant Legislation, Planning Policy and Guidance

6.3.1 Legislation, planning policy and guidance relating to air quality is outlined below.

Legislation

6.3.2 Key legislation applicable to the air quality assessment includes those described below.

The Environment Act 1995

6.3.3 The Environment Act 1995 (Ref 6.3), as amended, by the Environment Act 2021 (Ref 6.4) relates to a wide range of environmental issues. The Act) includes provisions for the control of pollution and sets out the responsibilities of public bodies in relation to the regulation and enforcement of environmental laws.

6.3.4 Part IV of the Act requires that local authorities periodically review air quality within their individual areas. This process of Local Air Quality Management (LAQM) is an integral part of delivering the Government's Air Quality Objectives (AQOs).

6.3.5 The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 were the legal instrument by which requirement of the Environment Act 2021 to reduce PM_{2.5} exposure was introduced.

The Air Quality (England) Regulations 2000

6.3.6 The Air Quality (England) Regulations 2000 (Ref 6.5), and subsequent amendments in 2002 and 2016, set statutory Air Quality Objectives (AQO) for a range of pollutants for the purpose of LAQM.

6.3.7 Unlike legally binding Air Quality Standards, there is no statutory requirement for local authorities to achieve the AQO. Instead, the objectives act as policy-based targets against which air quality must be reviewed and assessed.

6.3.8 AQO are generally expressed as maximum ambient pollutant concentrations, to be met over a defined averaging period, in some cases allowing a permitted number of exceedances. Where objectives are unlikely to be achieved, authorities are required to declare an Air Quality Management Area (AQMA)

and implement an Air Quality Action Plan (AQAP). **Table 6-1** provides the AQOs relevant to this assessment.

Table 6-1: Relevant Air Quality Standards, Objectives and Targets

Pollutant	Averaging Period	Value ($\mu\text{g}/\text{m}^3$)
Human Health		
Nitrogen dioxide (NO_2)	Annual mean	40
	1-hour mean (not to be exceeded more than 18 times per year)	200
Particulate matter with an aerodynamic diameter of $10 \mu\text{g}/\text{m}^3$ (PM_{10})	Annual mean	40
	24-hour mean (not to be exceeded more than 35 times per year)	50
Particulate matter with an aerodynamic diameter of $\leq 2.5 \mu\text{g}/\text{m}^3$ ($\text{PM}_{2.5}$)	Annual mean	10
Ecology		
Oxides of nitrogen (NO_x)	Annual mean	30

[The Air Quality Standards \(England\) Regulations 2010 \(SI 2010/1001\)](#)

- 6.3.9 The Air Quality Standards (AQS) (England) Regulations 2010 (Ref 6.6), as amended by the AQS (Amendment) Regulations 2016 (Ref 6.7) (the AQS Regulations), set legally binding limit values and target values for ambient air pollutants, expressed over different averaging periods. The AQS Regulations include limit values for the protection of human health for sulphur dioxide (SO_2), nitrogen dioxide (NO_2), benzene, carbon monoxide (CO) and lead (Pb). Target values and a limit value are also specified for fine particulate matter ($\text{PM}_{2.5}$).
- 6.3.10 The AQS Regulations place a statutory duty on the Secretary of State (SoS) to ensure compliance with the relevant limit values. Where limit values are exceeded, the AQS Regulations require the preparation of air quality plans setting out appropriate measures to ensure that exceedance periods are kept as short as possible.

[The Non-Road Mobile Machinery \(Type-Approval and Emission of Gaseous and Particulate Pollutants\) Regulations 2018 \(SI2018/764\)](#)

- 6.3.11 The Non-Road Mobile Machinery (NRMM) Regulations (Ref 6.8) provide the requirements relating to gaseous and particulate pollutant emission limits and type-approval for internal combustion engines for non-road mobile machinery.

National Planning Policy

6.3.12 The relevant national policies, plans and strategies for air quality are summarised below and within **Table 6-2**. These documents have informed the assessment methodology, identification of sensitive receptors and Study Area.

Overarching National Policy Statement for Energy (EN-1)

6.3.13 The Scoping Report takes account of the Overarching National Policy Statement (NPS) for Energy (EN-1) 2025.

6.3.14 The relevant NPS EN-1 requirements for air quality are summarised in **Table 6-2**.

Table 6-2: National Policy Statement – Air Quality Requirements

National Policy	Relevant Requirements	Relevance to the Assessment
Overarching National Policy Statement for Energy (EN-1)	Paragraph 5.2.7 in relation to the proximity of sensitive receptors and the requirement for mitigation. Paragraph 5.2.8 in relation to when an air quality assessment should be undertaken and what such an assessment should include. Paragraph 5.2.10 in relation to the consideration of relevant air quality standards. Paragraph 5.2.13 in relation to construction phase mitigation measures. Paragraph 5.2.16 in relation to how air quality impacts could be a substantial concern to the Secretary of State. Paragraph 5.2.17 – 5.2.19 in relation to why the Secretary of State may refuse consent on air quality grounds. Paragraph 5.7.12 in relation to emissions to air also causing harm to amenity.	In light of this policy, an assessment of air quality will be undertaken where there is the possibility that the impacts of the Proposed Scheme could contribute to a significant effect. The assessment will consider the potential for impacts at relevant and representative air quality sensitive locations and identify mitigation measures, should they be required. The assessment will follow relevant guidance and an approach that is current at the time of the assessment.

National Planning Policy Framework

- 6.3.15 The National Planning Policy Framework (NPPF) (Ref 6.9) sets out the Government's planning policies for England and how these are expected to be applied.
- 6.3.16 Relevant NPPF requirements relating to air quality are provided in:
- a. Paragraph 187;
 - b. Paragraph 199.
- 6.3.17 These policies direct assessments of new developments to consider compliance with the relevant air quality standards, by use of mitigation, if required, and the consideration of cumulative air quality impacts.
- 6.3.18 The Government consulted on a revised NPPF, with a draft version published alongside the consultation that ran until 10 March 2026 (Ref 6.10). No outcome to this consultation has been published yet. The updated framework contains requirements relating to air quality that are discussed in Section 17: Pollution, Public Protection and Security of the draft NPPF. These requirements are set out in policies:
- a. P1: Planning for clean and safe places;
 - b. P3: Living conditions and pollution.
- 6.3.19 These policies require for assessments of new developments to confirm that the development does not cause unacceptable pollution with respect to relevant air quality standards, affect vulnerable elements of the community in particular and to mitigate impacts, where required. Air quality assessments should be appropriate for their location and consider the impact on human health, living conditions and the natural environment, both in isolation and cumulatively with other development.

Clean Air Strategy 2019

- 6.3.20 Defra's Clean Air Strategy (Ref 6.11) outlines the Government's proposed ambitions relating to reducing air pollution in order to protect health and nature, whilst boosting the economy. The strategy sits alongside three other UK government strategies: the Industrial Strategy (Ref 6.12); the Clean Growth Strategy (Ref 6.13); and the 25 Year Environment Plan (Ref 6.14). Amongst others, the Clean Air Strategy proposes to halve the number of people living in locations where concentrations of particulate matter are above the World Health Organization (WHO) guideline limit of 10 µg/m³ by 2025 and work in close collaboration with industry to explore further opportunities for industrial emissions reductions by developing a series of sector roadmaps to set standards aimed at making UK industry world leaders in clean technology. The ES will assess the impacts of the Proposed Scheme with respect to the

relevant air quality standards, objectives and targets, as summarised within **Table 6-1**.

Air Quality Strategy 2023

- 6.3.21 The Air Quality Strategy: framework for local authority delivery (AQS) was revised in 2023 (Ref 6.15) and supersedes the Air Quality Strategy: Volume 1 (Ref 6.16) in England only. The AQS sets out the actions that Defra expects local authorities to take in support of its long-term air quality goals. It provides a framework to enable local authorities to make best use of their powers and make improvements for their communities.
- 6.3.22 Local authorities have a duty to address exceedances of air quality objectives in their area, including declaring Air Quality Management Plans Areas (AQMA) and publishing Air Quality Action Plans (AQAP) setting out the measures that they will take with the aim of achieving ongoing compliance. The AQS summarises current objectives and targets but does not define them.
- 6.3.23 The ES will assess the impacts of the Proposed Scheme with respect to the relevant air quality standards, objectives and targets, as summarised within **Table 6-1**.

Local and Neighbourhood Planning Policy

- 6.3.24 The local and neighbourhood planning policy listed in **Table 6-3** are considered relevant to the assessment of potential air quality impacts presented in this chapter.
- 6.3.25 As the Proposed Scheme is located completely within the respective AQMA of the ten different London Boroughs, the air quality assessment will consider the following Air Quality Action Plans (AQAP) which contain various measures for reducing local air quality pollutants concentrations⁴:
- a. London Borough of Bexley Air Quality Action Plan 2023-2028 (Ref 6.17);
 - b. The Royal Borough of Greenwich Air Quality Action Plan 2023 – 2027 (Ref 6.18);
 - c. London Borough of Lewisham Air Quality Action Plan 2022 – 2027 (Ref 6.19);
 - d. London Borough of Southwark Air Quality Action Plan 2023 – 2027 (Ref 6.20);
 - e. London Borough of Lambeth Air Quality Action Plan 2023 – 2025 (Ref 6.21);

⁴ Note that the Air Quality Action Plan for the London Borough of Bexley was not available at the time of writing.

- f. London Borough of Barking and Dagenham Air Quality Action Plan 2020 – 2025 (Ref 6.22);
- g. London Borough of Tower Hamlets Air Quality Action Plan 2022 – 2027 (Ref 6.23);
- h. City of London Air Quality Strategy 2025 – 2030 (Ref 6.24);
- i. City of Westminster Air Quality Action Plan 2025 – 2030 (Ref 6.25);
and
- j. The Royal Borough of Kensington and Chelsea Air Quality Action Plan 2022 – 2027 (Ref 6.26);

6.3.26 The air quality assessment will also be undertaken in accordance with relevant policies outlined in the neighbourhood plans, unless such policies contradict national or City-wide policy.

Table 6-3: List of Relevant Local and Neighbourhood policy – Air Quality

Local Authority	Relevant Local Policy	Relevance to the Assessment
Greater London Authority (GLA)	London Environment Strategy (Ref 6.27)	The air quality assessment will consider the strategic targets for PM _{2.5} and NO ₂ reduction across London that are reported in the Strategy
	The London Plan 2021 Policy SI 1 Improving air quality (Ref 6.28)	Air Quality Neutral and Air Quality Positive assessments/statements will be developed, as relevant to the nature of the Proposed Scheme.
London Borough of Bexley (LBB)	Bexley Local Plan 2023 (Ref 6.29)	The air quality assessment will consider Policy SP10: Avoiding harm to the environment and air quality.
Royal Borough of Greenwich (RBG)	Royal Greenwich Local Plan: Core Strategy with Detailed Policies 2014 (Ref 6.30)	The air quality assessment will consider Policy E(c): Air quality assessment should be undertaken and the required level of mitigation incorporated.
	Draft Local Plan (Ref 6.31)	The air quality assessment will consider Policy EN4: Need to demonstrate how proposals will reduce local

Local Authority	Relevant Local Policy	Relevance to the Assessment
		pollutant emissions and minimise exposure to poor air quality. Air Quality Assessments will be required for: all major developments.
London Borough of Lewisham (LBLe)	Lewisham Local Plan 2020 - 2040 (Ref 6.32)	The air quality assessment will consider Policy SD6: Sustainable design in terms of reducing emissions to air.
London Borough of Southwark (LBS)	The Southwark Plan 2019 – 2036 (Ref 6.33)	The air quality assessment will consider Policy P65: Improving air quality from development.
London Borough of Lambeth (LBLa)	Lambeth Local Plan 2020 – 2035 (Ref 6.34)	The air quality assessment will consider Policy EN4: Improving air quality, and Policy PN2: Use of sustainable design and construction to improve air quality.
	South Bank & Waterloo Neighbourhood Plan 2017-2032 (Ref 6.35)	The air quality assessment will consider Policy P5: Given the high levels of air pollution in the area, development proposals must show how they contribute to the improvement of air quality in South Bank and Waterloo.
	Kennington Oval and Vauxhall Neighbourhood Plan 2035 (Ref 6.36)	The air quality assessment will consider Policy KOV2: Development proposals must set out the measures they are taking to contribute to the improvement of air quality in the KOV Neighbourhood Area.
London Borough of Barking and Dagenham (LBBD)	Barking and Dagenham Local Plan 2020 – 2037 (Ref 6.37)	The air quality assessment will consider Strategic Policy SP7: Improve the borough's air quality in line with the

Local Authority	Relevant Local Policy	Relevance to the Assessment
		Council's Air Quality Action Plan, and Policy DMSI 4: Major development will be required to provide an Air Quality Assessment.
London Borough of Tower Hamlets (LBTH)	Tower Hamlets Local Plan 2031 (Ref 6.38)	The air quality assessment will consider Policy D.SG4: During construction, major development is required to minimise levels of air quality, fumes or dust pollution. Major development must consider the cumulative impact of other major development occurring in the vicinity, and Policy D.ES2: Air quality impact assessment, based on current best practice, is required as part of the planning application.
City of London (CoL)	City of London Local Plan 2015 (Ref 6.39)	The air quality assessment will consider Core Strategic Policy CS15: Sustainable Development address local air quality and Policy DM15.6: Consider the impact of their proposals on air quality and, where appropriate, provide an Air Quality Impact Assessment.
	City Plan 2040 (Ref 6.40)	The air quality assessment will consider Policy HL2: Developers to manage the impact of their proposals on air quality.
City of Westminster (CoW)	City Plan 2019 – 2040 (Ref 6.41)	The air quality assessment will consider Objective 7: on improving air quality by minimising detrimental impacts from development and

Local Authority	Relevant Local Policy	Relevance to the Assessment
		Policy 36: improving air quality.
	Victoria Neighbourhood Plan 2025 - 2040 (Ref 6.42)	No policies from this Neighbourhood Plan are relevant to the assessment in this Scoping Chapter.
Royal Borough of Kensington & Chelsea (RBKC)	New Local Plan Review 2024 (Ref 6.43)	The air quality assessment will consider Policy GB6: Developments are required to have an Air Quality Assessment. Emissions to be mitigated where required. Measures to improve air quality should be implemented on site, or off-site measures to improve local air quality may be acceptable.

Relevant Guidance

National Planning Practice Guidance

- 6.3.27 National Planning Practice Guidance (NPPG) (Ref 6.44) provides more in-depth guidance on the NPPF. The most recent update to the Air Quality NPPG (Ref 6.45) was published on the 1 November 2019 to provide more in-depth guidance to the NPPF.
- 6.3.28 When deciding whether air quality is relevant to a planning application the NPPG states that the following criteria may be required to be taken into consideration, noting that the latter item is not relevant to the Proposed Scheme:
- “the ‘baseline’ local air quality, including what would happen to air quality in the absence of the development;*
 - whether the proposed development could significantly change air quality during the construction and operational phases (and the consequences of this for public health and biodiversity); and*
 - whether occupiers or users of the development could experience poor living conditions or health due to poor air quality.”*
- 6.3.29 This scoping assessment provides a summary of baseline air quality conditions within and around the EIA Scoping Boundary. Baseline air quality will be reviewed and described in more detail within the ES.

6.3.30 The outcome of this scoping assessment will determine whether further air quality assessment is necessary. Should it be concluded that such an assessment is required to be reported in the ES, that assessment will determine the control measures required to mitigate adverse impacts to the extent that a significant effect on air quality will not occur.

6.3.31 On how detailed an air quality assessment needs to be, the NPPG states:

- a. *“Assessments should be proportionate to the nature and scale of the development proposed and the level of concern about air quality... Mitigation options where necessary will be locationally specific, will depend on the proposed development and should be proportionate to the likely impact. It is important therefore that local planning authorities work with applicants to consider appropriate mitigation so as to ensure the new development is appropriate for its location and unacceptable risks are prevented.”*

PM_{2.5} Targets: Interim Planning Guidance

6.3.32 PM_{2.5} Targets: Interim Planning Guidance (Ref 6.46) was published in October 2024, pending the publication of updated guidance, which has not yet been issued. The guidance moves away from an exceedance-based approach towards an approach focussed on minimising pollution. It recommends that key sources of air pollution associated with schemes submitted for planning applications are identified, and that appropriate measures to minimise emissions of PM_{2.5} and its precursors are implemented as far as is reasonably practicable. Where quantitative evidence is not available, a qualitative approach can be taken.

6.3.33 The guidance confirms that:

- a. *“pending publication of the new guidance, applicants are advised to provide evidence in their planning applications that they have identified key sources of air pollution within their schemes and taken appropriate action to minimise emissions of PM_{2.5} and its precursors as far as is reasonably practicable”.*

6.3.34 The Proposed Scheme will be required to consider exposure to PM_{2.5} during design development and construction by implementing best practice control measures to reduce emissions. These measures will be set out within the ES.

London Local Air Quality Management (LLAQM) Technical Guidance 2019 (LLAQM.TG (19))

6.3.35 The London Local Air Quality Management (LLAQM) Technical Guidance 2019 (LLAQM.TG (19)) (Ref 6.44) provides guidance for governmental and private sectors to discharge their obligations under the LAQM regime.

6.3.36 It contains guidance on numerous areas that will inform the assessment of air quality within the ES, including, for example, screening tools and

methodologies, air quality monitoring, estimating emissions and dispersion modelling.

Local Air Quality Management (LAQM) Technical Guidance (TG22)

- 6.3.37 This guidance, published by Defra (Ref 6.47), supports local authorities in carrying out their duties under the Environment Act 1995 as amended by the Environment Act 2021, and subsequent regulations. LAQM is the statutory process by which local authorities monitor, assess and take action to improve local air quality.
- 6.3.38 It also contains guidance on numerous areas that will be relevant to the assessment of air quality within the ES, including guidance on the identification of air quality sensitive receptors, monitoring locations and data, and dispersion modelling requirements.

IAQM Land-Use Planning & Development Control: Planning for Air Quality

- 6.3.39 This IAQM guidance provides a procedure for screening potential air quality effects of new development and a procedure for assessing the significance of air quality effects in planning applications (Ref 6.1).
- 6.3.40 Should the assessment of construction phase traffic emissions be required in the ES, the assessment will refer to this guidance when determining if the air quality effects are significant or not.

IAQM Guidance on the Assessment of Dust from Demolition and Construction

- 6.3.41 This guidance provides a four-step process for evaluating the risk associated with dust emissions from construction sites on different types of receptors with respect to dust soiling, health effects and ecological effects (Ref 6.2).
- 6.3.42 This guidance informs the consideration of mitigation described in Section 6.7 (of this chapter). Should the assessment of construction phase site emissions be required in the ES, this guidance will be used to determine the level of control measures required to mitigate impacts.

IAQM Guide to the Assessment of Air Quality Impacts on Designated Nature Conservation

- 6.3.43 This document provides guidance on the air quality impacts of development on designated nature conservation sites and establishes that the assessment of effects on habitats and species should be undertaken by a suitability qualified and experienced ecologist.
- 6.3.44 This guidance will only be referred to if there are nature conservation sites within 200m of a section of the road network which exceeds the air quality assessment screening criteria set out in paragraph 6.2.5 (of this chapter).

Standards for Highways DMRB LA105

- 6.3.45 These standards provide the requirements for assessing and reporting the effects of highway projects on air quality, and relevant to this Proposed Scheme, the screening criteria for ecological receptors.
- 6.3.46 The standards will only be referred to if there are nature conservation sites within 200m of a section of the road network which exceeds the screening criteria set out in paragraph 6.2.5.

Greater London Authority the Control of Dust and Emissions during Construction and Demolition Supplementary Planning Guidance (SPG)

- 6.3.47 The guidance provides emission control standards, particularly for NRMM and construction mitigation (Ref 6.48).
- 6.3.48 This guidance informs the consideration of mitigation described in Section 6.7. Should the assessment of construction phase site emissions be required in the ES, this guidance will be used to determine the level of control measures required to mitigate impacts.

6.4 Baseline Conditions and Future Baseline

Data Sources

- 6.4.1 The following data sources have been used to inform the air quality baseline:
- a. London Borough of Bexley 2023 Annual Status Report (Ref 6.49);
 - b. The Royal Borough of Greenwich 2025 Annual Status Report (Ref 6.50);
 - c. London Borough of Lewisham 2025 Annual Status Report (Ref 6.51);
 - d. London Borough of Southwark 2025 Annual Status Report (Ref 6.52);
 - e. London Borough of Lambeth 2025 Annual Status Report (Ref 6.53);
 - f. London Borough of Barking and Dagenham 2025 Annual Status Report (Ref 6.54);
 - g. London Borough of Tower Hamlets 2025 Annual Status Report (Ref 6.55);
 - h. City of London 2025 Annual Status Report (Ref 6.56);
 - i. City of Westminster 2025 Annual Status Report (Ref 6.57); and
 - j. The Royal Borough of Kensington and Chelsea 2025 Annual Status Report (Ref 6.58);

Overview of Baseline Conditions

Dust Deposition

- 6.4.2 A background level of dust exists in all urban and rural locations in the UK. Dust can be generated on a local scale, from sources including agricultural activity and the resuspension of deposited dust on public roads by vehicle movements, and from the action of wind on exposed soils and surfaces. Dust levels are also affected by long range transport of dust from distant sources into the local vicinity. The concentrations of dust can vary depending on a range of parameters, such as meteorological conditions at any given time and the time of year.
- 6.4.3 Ambient dust deposition rates are not monitored extensively in the UK. Monitoring that is undertaken is usually connected with specific activities such as mining and mineral extraction operations or specific large-scale construction projects. Dust monitoring may also be undertaken to investigate specific complaints received by local authorities, who are then required to investigate dust nuisance under the Environmental Protection Act 1990 (Ref 6.59). Therefore, there is not any quantitative baseline information for dust deposition available in the Study Area.

Pollutant Concentrations

- 6.4.4 The AQMA within each local authority area within which the EIA Scoping Boundary is located are shown in **Table 6-5**.
- 6.4.5 As part of their LAQM duties, local authorities are required to monitor pollutant concentrations within their administrative area. There are 33 monitoring locations within the EIA Scoping Boundary.
- 6.4.6 The highest annual mean NO₂ concentration recorded within the EIA Scoping Boundary in 2024 was 46.2 µg/m³, at diffusion tube site WW (4) in the City of London, making it an exceedance of the annual mean AQO of 40 µg/m³.
- 6.4.7 The highest annual mean PM₁₀ concentration recorded within the EIA Scoping Boundary in 2024 was 16.3 µg/m³, at automatic monitor site G5, in Greenwich. This is significantly lower than the AQO of 40 µg/m³.
- 6.4.8 The highest annual mean PM_{2.5} concentration recorded within the EIA Scoping Boundary in 2024 was 8.3 µg/m³, at automatic monitor site SKA, in Southwark. This is below the annual mean AQO of 10 µg/m³.
- 6.4.9 The UK-Air website⁵ provides data for background concentrations of a range of pollutants including NO₂, PM₁₀ and PM_{2.5}. These background concentrations represent 1km² grid squares. The maximum, minimum and average background pollutant concentrations for 2024 across all 10 local

⁵UK-Air website. Available at: <https://uk-air.defra.gov.uk/> [Accessed 05/05/2026]

authority areas are summarised in **Table 6-4** (to be consistent with the year for which monitoring data is available).

- 6.4.10 Background NO₂ and PM₁₀ concentrations across the 10 local authority areas are below the AQO for the respective pollutants. The maximum background concentration of PM_{2.5} is 9.9 µg/m³, making it at risk of exceeding the annual mean Target Value for that pollutant (10 µg/m³). However, across the area covered by the EIA Scoping Boundary, the average concentration is less at risk (8.4 µg/m³).

Table 6-4: 2024 Background Pollutant Concentrations

Pollutant	Level	Concentration (µg/m ³)
NO₂	Maximum	32.3
	Minimum	11.8
	Average	18.5
PM₁₀	Maximum	18.3
	Minimum	11.8
	Average	14.9
PM_{2.5}	Maximum	9.9
	Minimum	7.1
	Average	8.4

Table 6-5: Air Quality Management Areas Declared Within Each Local Authority Area

Local Authority Area	AQMA Name	Date Declared	Pollutants and Air Quality Objectives	One Line Description
London Borough of Bexley	Bexley AQMA	01/03/2007	Annual mean NO ₂ Annual mean PM ₁₀ Daily mean PM ₁₀	Encompasses the whole borough
Royal Borough of Greenwich	Greenwich AQMA	01/07/2001	Annual mean NO ₂ Daily mean PM ₁₀	Encompasses the whole borough
London Borough of Lewisham	Lewisham AQMA	01/07/2001	Annual mean NO ₂ Daily mean PM ₁₀	Consists of four large AQMA and a series of ribbon roads
	Crofton Park and Honor Oak Park AQMA	30/08/2013	Annual mean NO ₂	Consists of the area north of A205 Road
London Borough of Southwark	Southwark AQMA	01/06/2023	Annual mean NO ₂ Daily mean PM ₁₀	Encompasses the entire northern part of the borough, extending from Rotherhithe to Walworth and Camberwell and up to the boundary on the River Thames

Local Authority Area	AQMA Name	Date Declared	Pollutants and Air Quality Objectives	One Line Description
	Southwark AQMA 2023	Amended 08/06/2023	Annual mean NO ₂ Daily mean PM ₁₀	Encompasses the entire borough
London Borough of Lambeth	Lambeth AQMA	01/09/2007	Hourly mean NO ₂ Annual mean NO ₂ Daily mean PM ₁₀ Annual mean PM ₁₀	Encompasses the whole borough
London Borough of Barking & Dagenham	Barking & Dagenham AQMA	16/12/2008	Hourly mean NO ₂ Annual mean NO ₂ Daily mean PM ₁₀	Encompasses the whole borough
London Borough of Tower Hamlets	Tower Hamlets AQMA	06/12/2000	Annual mean NO ₂ Daily mean PM ₁₀	Encompasses the entire borough
City of London	City of London AQMA	26/01/2001	Annual mean NO ₂ Daily mean PM ₁₀	Encompasses the whole borough
City of Westminster	City of Westminster AQMA	09/03/1999	Hourly mean NO ₂ Annual mean NO ₂ Daily mean PM ₁₀	Encompasses the entire borough
Royal Borough of Kensington & Chelsea	Kensington & Chelsea AQMA	01/11/2000	Hourly mean NO ₂ Annual mean NO ₂ Daily mean PM ₁₀	Encompasses the whole borough

Future Baseline

- 6.4.11 Trends in measured air quality over the past decade have seen a gradual improvement in the concentration of pollutants relevant to this assessment. This has especially been the case for NO₂, with PM₁₀ and PM_{2.5} experiencing a slower rate of improvement. This improvement is attributed to several reasons including, the evolution of the vehicle fleet and other emissions sources, with improved emissions performance of newer vehicles and energy plant, and the implementation of Air Quality Action Plans (Ref 6.60).
- 6.4.12 There is no reason why this trend would not continue in future years due to the decarbonisation of the transport fleet and the energy sector. It is expected there the gradual decline in ambient pollutant concentrations and an overall improvement in air quality will continue, resulting in improved future baseline conditions within the air quality Study Area..

Proposed Baseline Studies

- 6.4.13 It is anticipated that the construction of the Proposed Scheme will generate traffic impacts greater than the air quality screening criteria presented in paragraph 6.2.4 (of this chapter). Given the standard of baseline air quality in the Study Area, with annual mean concentrations in excess of the AQO at some locations and close to an exceedance at others, a baseline NO₂ survey will likely be required. This survey will be used to verify the dispersion modelling assessment of construction phase road traffic emissions. The survey will focus on air quality adjacent to the construction phase traffic routes. These locations will be confirmed when details of construction traffic routes become available and agreed with the relevant Environmental Health Officers.

6.5 Potential for Likely Significant Effects

Construction Phase

- 6.5.1 The Proposed Scheme is in close proximity to densely populated communities, meaning that there will be a high number of dust and air quality sensitive receptors close to the route corridor that could be adversely impacted by the construction of the Proposed Scheme.
- 6.5.2 The key air quality constraints that will require attention within the ES are:
- Construction dust associated with the construction of the Maintenance and Access Points (MAP), storage and handling of input material and output material from slurry plant, the operation of construction compounds and the generation of dust from vehicles leaving the Site.
 - Vehicle exhaust emissions associated with the movement of construction materials and tunnel arisings, particularly on the

approach to and from construction compounds, where the number of vehicle movements are likely to be most concentrated.

- c. Plant emissions from the construction phase site plant, energy generation plant, and non-road mobile machinery (NRMM).

- 6.5.3 An assessment of construction phase dust and PM₁₀ emissions will be undertaken in line with the appropriate IAQM dust from demolition and construction guidance (Ref 6.2). The assessment will identify the likelihood of dust and PM₁₀ impacts occurring, based on the scale of the works and the activities to be undertaken, and the sensitivity of the area to dust and PM₁₀ impacts, based on the number and proximity of sensitive receptors (including those susceptible to amenity, human health and ecological impacts) and baseline PM₁₀ concentrations. From this work, the assessment will recommend the level of dust control measures required to mitigate impacts to the extent that any effect would be not significant.
- 6.5.4 The same guidance will also be referred to for the consideration of site plant (where the thermal capacity of the plant does not trigger the need for modelling) and NRMM emissions, which will be dealt with in a qualitative manner based on the number of plant, the likely duration of their operation at any one area, the number and proximity of sensitive receptors and the baseline pollutant concentrations experienced there.
- 6.5.5 Subject to the energy demand required for the Tunnel Boring Machine (TBM), there is the potential that the construction of the Proposed Scheme will require energy generation plant with a greater capacity that is typical of standard construction generator plant. Should the construction of the Proposed Scheme require energy plant with a thermal capacity of 1MW or more, then a more detailed assessment of energy plant emissions is likely to be required.
- 6.5.6 At this time, specific information about construction vehicle movements is not available. However, based on professional judgement of similar infrastructure projects, as well as liaison with the transport specialists for the Proposed Scheme, it is considered likely that a detailed air quality assessment will be required based on the screening criteria provided in paragraph 6.2.4. This is due to the removal of spoil resulting from the tunnelling works.
- 6.5.7 Should it be determined that a detailed air quality assessment is required, incremental changes to concentrations of NO_x, NO₂, PM₁₀ and PM_{2.5} associated with construction phase road traffic movements will be predicted at receptors within 200m of affected roads using the ADMS-Roads dispersion model and the latest emission factors from Defra's Emissions Factor Toolkit (EFT) that are available at the time of the assessment. The output from the model will be verified using the results from roadside diffusion tube monitoring,

either undertaken by local authorities in the vicinity of the Proposed Scheme, or through a programme of project specific monitoring.

Operation Phase

- 6.5.8 During operation, the Proposed Scheme will have a beneficial impact on local air quality. The heat provided by the Proposed Scheme will replace heat generated by local energy plant in the future baseline scenario. The reduced reliance on local energy plant will reduce combustion emissions associated with their operation.
- 6.5.9 The operation of the Proposed Scheme will introduce some new emission sources, but these will be restricted to those associated with road traffic movements during inspection and maintenance activities. The number of additional traffic movements generated by these activities will not exceed the air quality assessment screening criteria set out in IAQM guidance (Ref 6.1). It is not expected any further assessment will be required in terms of air quality based on the information available at the scoping stage, knowledge of similar projects and professional judgement. An estimate of traffic movements associated with the operational maintenance works will be provided in the ES to confirm that operational road traffic assessment can be scoped out based on the screening criteria provided in paragraph 6.2.4.

Decommissioning

- 6.5.10 The Proposed Scheme is intended to become part of London's long term critical infrastructure with no decommissioning proposed. However, if decommissioning were to be required, it is likely that minor works would be needed to remove above ground infrastructure. Underground infrastructure, such as pipelines, are expected to be left in-situ to minimise adverse environmental effects. Standard good practice dust management measures would be expected to avoid any likely significant effects, considering the small scale of works required.
- 6.5.11 Similarly, it is not expected that decommissioning would require vehicle movements of a scale sufficient to trigger a detailed air quality assessment as set out in **Table 6-6**, or large-scale earthworks of demolition. As such, a detailed assessment of decommissioning stage is proposed to be scoped out.

6.6 Assessment Methodology

Impact Assessment Methodology

Qualitative assessment of dust and NRMM emissions

- 6.6.1 A qualitative construction phase impact assessment will use the approach and criteria proposed by the IAQM Guidance (Ref 6.2). The approach considers the potential magnitude of 'possible' emissions for works based on the scale,

duration and nature of the required activities and the properties of the materials involved. The distance between the location of works, represented by the EIA Scoping Boundary, and potentially sensitive receptors is established for human health, public amenity and designated ecological site type receptors. This information is combined to estimate the risk of adverse impacts and the good practice control measures that should be adopted as embedded measure, prior to considering the likely effects and the need for site-specific mitigation measures.

- 6.6.2 Where scoped into the assessment, the dust risk assessment considers the likely significant effects on human health and public amenity within 250m of the EIA Scoping Boundary and ecological sites with sensitive features located within 50m of the EIA Scoping Boundary. Likely significant effects of dusty material tracked out onto the public highway will be considered for all receptor types within 50 m of the roadside, for a distance of up to 250m from the EIA Scoping Boundary access/egress points (i.e. the Study Area).

Quantitative assessment of TBM site plant emissions

- 6.6.3 Where the thermal capacity of site plant is greater than 1MW, emissions from the plant will be assessed in line with industry standard guidance, including that published by the Environment Agency (Ref 6.61). Whilst this guidance is intended to inform assessment for environmental permitting⁶, it is also a useful document to inform the assessment of point source emissions for planning purposes, in the absence of planning specific guidance on such sources.
- 6.6.4 The assessment will likely utilise dispersion modelling software to predict the dispersion of emissions from relevant generator stacks, using emissions data provided by the plant vendor and hourly sequential meteorological data from a representative monitoring site.
- 6.6.5 The model output will provide the contribution of generator stack emissions to total pollutant concentrations at the selected air quality sensitive receptors.

Quantitative construction traffic emissions

- 6.6.6 Where the Proposed Scheme's traffic is expected to exceed the criteria set out in paragraph 6.2.4, these road links will be scoped into the assessment and modelled using the dispersion model software 'ADMS-Roads'. The assessment will follow guidance published by the IAQM (Ref 6.1) and the Mayor of London (Ref 6.44)
- 6.6.7 The following assessment scenarios will be modelled:

⁶ Under the Environmental Permitting (England and Wales) Regulations 2016, environmental permitting is the legal framework by which operators obtain official permission from the Environment Agency before conducting activities that could cause pollution or damage the environment.

- a. an existing baseline scenario for model verification (2025);
 - b. a future baseline scenario to represent the peak year of construction without the Proposed Scheme (2030); and
 - c. a future construction scenario to represent the peak year of construction with the Proposed Scheme (2030).
- 6.6.8 The verified model output will provide the contribution of construction traffic emissions to total pollutant concentrations at the selected air quality sensitive receptors.

Assessment Criteria

Sensitivity of receptors

Construction dust emissions

- 6.6.9 The sensitivity of receptors will be defined by the guidance applicable to each element of the assessment.
- 6.6.10 For construction dust, the sensitivity for dust soiling impacts is determined by the level of amenity expected and/or the aesthetic value of a given land use. For example, a high level of amenity is reasonably expected at a residential property and a museum or art gallery would have a high level of aesthetic value. A lesser level of amenity is reasonably expected at a place of work or commercial premises. Overall sensitivity is then determined by the number and proximity of receptors to the construction site boundary.
- 6.6.11 The sensitivity for human health impacts from construction dust is determined by the likely exposure of the public at a given land use to short-term concentrations of PM₁₀. For example, members of the public at their residential properties are considered to have a higher level of sensitivity than those at places of work or a place of leisure, as exposure at the latter is likely to be for durations shorter than the averaging period of the short-term PM₁₀ AQO. Again, overall sensitivity is then determined by the number and proximity of receptors to the construction site boundary.
- 6.6.12 The sensitivity for nature conservation impacts from construction dust is determined by the level of designation. For example, an internationally designated site, such as a Special Area of Conservation, would have high sensitivity to dust impacts. A nationally designated site, such as a SSSI, would have a medium sensitivity and a locally designated site, such as a LNR, would have a low sensitivity. Again, overall sensitivity is then determined by the number and proximity of receptors to the construction site boundary.

TBM site plant emissions and construction traffic emissions

- 6.6.13 The sensitivity to emissions from TBM site plant and construction traffic is considered to be high for all relevant receptors. This is because the sensitivity

of members of the public to pollutant concentrations was taken into account in the setting of the AQO, which are intended to protect the most vulnerable members of society. The AQO are intended to apply to members of the public who are present at a location for a duration of time comparable to the averaging periods of the AQO.

Air quality impact descriptors

- 6.6.14 For the assessment of local air quality impacts, the IAQM guidance (Ref 6.1) provides impact descriptors for individual receptors to help inform the determination of the overall impact of a scheme or development. The impact descriptors are defined by the relationship between the magnitude of impact of a scheme or development, relative to the AQO, and the total pollutant concentrations experienced with a scheme or development in operation, relative to the AQO.
- 6.6.15 This relationship means that a smaller impact magnitude at a location where total concentrations are close to or exceeding an AQO can have a bigger impact than a larger impact magnitude at a location where total concentrations are well below the AQO.

Significance of Effect

- 6.6.16 In line with methodologies set out in guidance (Ref 6.1 and Ref 6.2), whether the effect of the air quality impacts identified are significant or not is based on professional judgment. It is likely that if a substantial adverse impact descriptor is identified, due to a greater than negligible impact magnitude at a location where total concentrations with a scheme or development are above the AQO, the effect of a scheme or development will be significant, and additional mitigation will be required.
- 6.6.17 The effect of the scheme or development may also be significant where a moderate adverse impact descriptor is identified, particularly if that impact descriptor occurs at receptors that represent numerous other locations and/or if the impact descriptor is at the high end of that bracket and close to being substantial adverse. A moderate adverse impact descriptor can also occur when the overall effect of a scheme or project is not considered to be significant. This can be the case where the moderate adverse impact descriptor is identified for a limited number of isolated receptors and/or if the impact descriptor is at the low end of that bracket and close to being slight adverse.
- 6.6.18 The effect of a scheme or development is unlikely to be significant where impact descriptors are either slight adverse or negligible, either because the impact magnitude is imperceptible from the normal bounds of interannual variation, or because total concentrations are such that there is not risk of an AQO being exceeded.

6.7 Design, Mitigation and Enhancement Measures

Design Mitigation Measures

- 6.7.1 Air quality specific design mitigation measures are not anticipated to be required. However, air quality is likely to benefit from design mitigation measures included for the primary benefit of other environmental impacts, such as the screening of some construction activities and the siting of construction activities away from receptors, for example due to potential noise impacts.

Construction Mitigation Measures

- 6.7.2 The qualitative construction dust risk assessment will determine the level of mitigation required to ensure there are no likely significant effects. The mitigation measures will include those quoted in IAQM guidance (Ref 6.2) that are proportionate to the risk of impacts and practical for the site. Mitigation will be coordinated on a scheme-wide basis and set out within a Framework Construction Environmental Management Plan (CEMP) to be submitted with the DCO Application.
- 6.7.3 The CEMP to be submitted with the DCO Application will include mitigation measures identified during the air quality assessment. The Framework CEMP will also detail any commitment regarding air quality monitoring during the construction works, which will be agreed with stakeholders and may include dust monitoring prior to and during construction.
- 6.7.4 The quantitative assessment of construction phase traffic emissions that is likely to be required will identify if mitigation measures to control emissions from that source are needed. Such measures will focus on the routes taken by construction traffic and the timings of those movements.

6.8 Assumptions, Limitations and Uncertainties

- 6.8.1 The scoping assessment is based on information available at the time. This focuses on the EIA Scoping Boundary. At this time, there are no confirmed locations for the MAP or construction compounds. There is also no information available on the construction traffic routes. This information will be available for assessment in the ES.
- 6.8.2 The assessment that will be reported in the ES will have its own assumptions, limitations and uncertainties associated with factors including traffic data, dispersion model bias and the representativeness of meteorological data. These will be set out in detail in the ES.

6.9 Summary of Elements Scoped In or Scoped Out

- 6.9.1 A summary of the air quality items scoped in or out of the ES is provided in **Table 6-6**.

Table 6-6: Summary of Scope for Air Quality Assessment

Element	Phase	Scoped In	Scoped Out	Justification
Construction dust associated with the construction of the Proposed Scheme.	Construction	✓		Required to identify the appropriate level of mitigation needed, due to the presence of inhabited areas within 250m of the EIA Scoping Boundary.
Road traffic emissions associated with the movement of construction materials, particularly on the approach to and from construction compounds, where the number of vehicle movements are likely to be greatest.	Construction	✓		This is subject to a review of construction vehicle routing and data (when available), but it is considered likely that the thresholds for detailed assessment of impacts on air quality from construction vehicles using dispersion modelling will be exceeded.
Plant emissions from construction phase site plant, energy generation plant, and non-road mobile machinery.	Construction	✓		Required to identify the appropriate level of mitigation needed, due to the presence of inhabited areas within 250m of the EIA Scoping Boundary. Modelling may be required of energy plant emissions associated with the TBM, subject to the thermal capacity of that plant.
All effects relating to operation of the Proposed Scheme.	Operation		✓	Emissions would be restricted to those associated with road traffic movements during occasional inspection and maintenance activities. The expected number of operational traffic movements will be confirmed in the ES to

Element	Phase	Scoped In	Scoped Out	Justification
				validate scoping out of this emissions source.
All effects relating to the decommissioning of the Proposed Scheme.	Decommissioning		✓	Would not require extensive ground works or vehicle movements of a scale sufficient to trigger a detailed air quality assessment.

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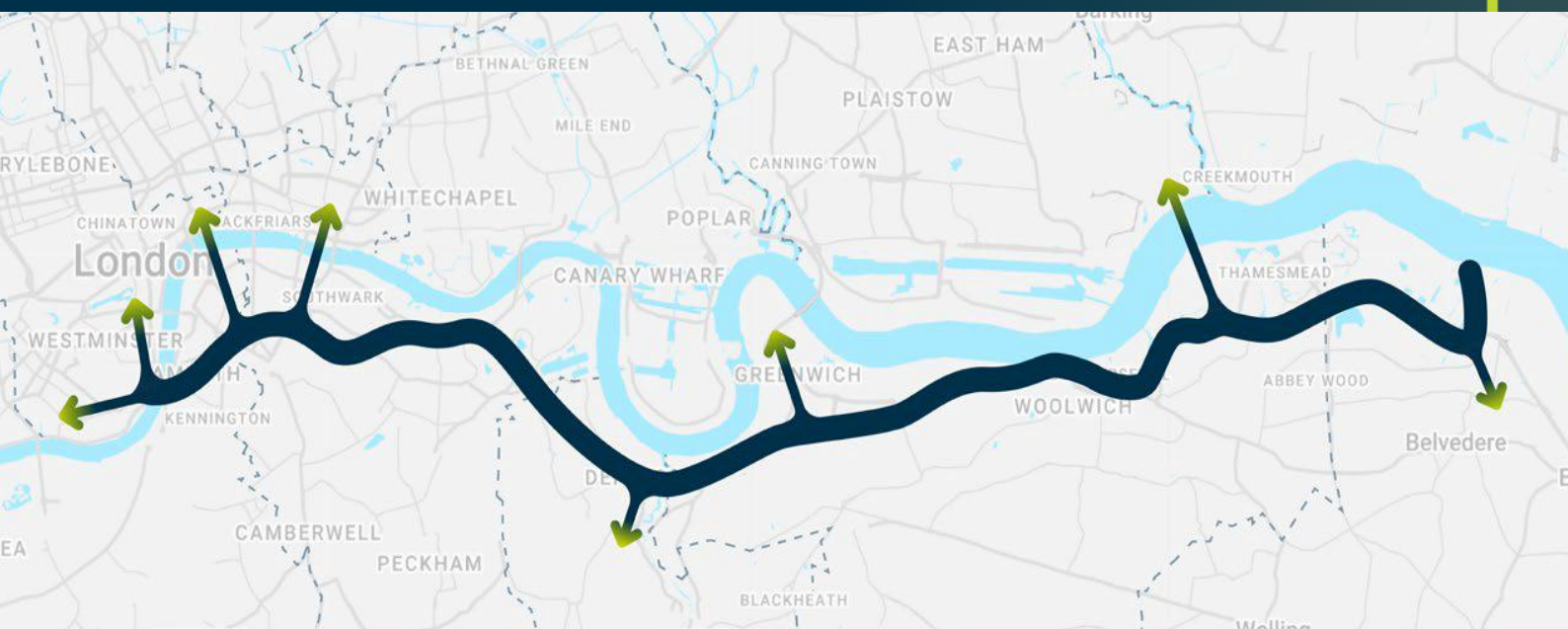
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Environmental Impact Assessment Scoping Report Volume 1: Main Report Chapter 7: Climate



Cory Environmental Holdings Limited

July 2026

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7. Climate

7.1 Introduction

- 7.1.1 This chapter identifies the potential for likely significant effects of the Proposed Scheme on climate which may give rise to significant effects, including greenhouse gas (GHG) emissions, as well as the potential likely significant effects of climate change on the Proposed Scheme and in-combination with the Proposed Scheme on the receiving environment. The chapter sets out the proposed methodology for the climate chapter of the Environmental Statement (ES) and identifies those effects that can be scoped into or out of the assessment.
- 7.1.2 To align with the requirements of the EIA Regulations (Ref 7.1) and the Institute of Sustainable and Environmental Professionals¹ (ISEP) Guidance on Assessing Greenhouse Gas Emissions (Ref 7.2) and Climate Change Resilience and Adaptation (Ref 7.3), this EIA Scoping chapter has considered whether the Proposed Scheme has the potential to result in significant effects in relation to the below aspects:
- a. Lifecycle GHG impact assessment - Impact of GHG emissions arising from the Proposed Scheme on the climate, including how it will affect the UK meeting its national carbon budgets.
 - b. Climate change risk (CCR) assessment - The resilience of the Proposed Scheme to climate change effects, including how the design will consider projected effects of climate change.
 - c. In-combination climate change impact (ICCI) assessment - The combined impact of the Proposed Scheme and potential climate change on receptors in the receiving environment.

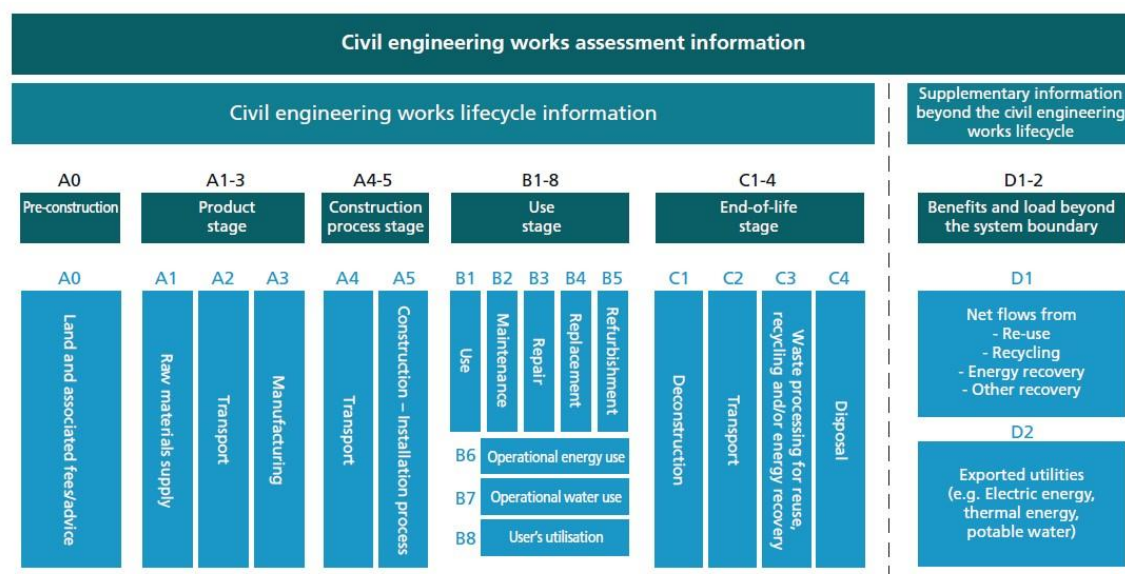
7.2 Study Area

Lifecycle GHG Impact Assessment

- 7.2.1 The Study Area of the lifecycle GHG impact assessment covers direct emissions in line with BS EN 17462:2022 arising from pre-construction, product, construction, use (e.g. operation) and end of life cycle stages within the boundary of the Proposed Scheme as shown in Plate 7-1 (Ref 7.4). It also encompasses indirect GHG emissions occurring off-site that are linked to the Proposed Scheme. The linked emissions are expected to include carbon savings and carbon impacts associated with end heat users and consideration

¹ Formerly Institute of Environmental Management and Assessment (IEMA)

of the relationship of the Proposed Scheme to the energy from waste facilities from which the anchor heat supply for the Proposed Scheme will be sourced. A full strategy to calculate linked emissions (including consideration of whether there is information available, or a calculation methodology that can be deployed for the specific emission being considered) will be developed as part of the ES. These include embodied carbon in materials, transportation, upstream and downstream activities (such as relevant well-to-tank processes and transmission and distribution losses), as well as emissions from waste processing, waste disposal, and operational transport.



Source: BS EN 17472:2022

Plate 7-1: Display of modular information for the different stages of civil engineering works' assessment – BS EN 17472:2022 (Ref 7.4)

CCR Assessment

- 7.2.2 The Study Area of the CCR assessment is the land within the EIA Scoping Boundary² where activities associated with the Proposed Scheme would take place.

ICCI Assessment

- 7.2.3 The Study Area for the ICCI assessment is as defined in the relevant environmental assessments within the ES and includes all environmental receptors that could be impacted by changing climate, as identified within the assessments undertaken by the environmental disciplines for the purposes of this Environmental Impact Assessment (EIA).

² All references to 'EIA Scoping Boundary', correspond to the area shown in **Volume 2, Figure 1-1**

7.3 Relevant Legislation, Planning Policy and Guidance

7.3.1 Legislation, planning policy and guidance relating to climate change assessment outlined below.

Legislation

7.3.2 The following legislation is relevant to the lifecycle GHG impact assessment:

- a. United Nations Framework Convention on Climate Change (UNFCCC) Paris Agreement (2015) (Ref 7.5);
- b. Climate Change Act 2008 (as amended) (Ref 7.6);
- c. Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (Ref 7.7);
- d. Carbon Budget Order 2009 (Ref 7.8);
- e. Carbon Budget Order 2011 (Ref 7.9);
- f. Carbon Budget Order 2016 (Ref 7.10); and
- g. Carbon Budget Order 2021 (Ref 7.11).

7.3.3 Although not currently legislation, it is expected that the Climate Change Committee's (CCC) Seventh Carbon Budget (Ref 7.12) recommendations will be converted into legislation following Parliamentary debate. However, the final budget will require agreement with the UK Government and so the CCC published budget may be subject to change. The ES will take account of the latest position in respect of the CCC's guidance and any Government response as part of the assessment.

7.3.4 The assessment will take into account of recent case law judgements regarding lifecycle GHG accounting and indirect assessments including the Finch v Surrey County Council judgement (Ref 7.13).

7.3.5 The following legislation is relevant to the CCR and ICCI assessment:

- a. United Nations Framework Convention on Climate Change (UNFCCC) Paris Agreement (2015) (Ref 7.5);
- b. Climate Change Act 2008 (as amended) (Ref 7.14); and
- c. Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (Ref 7.7).

National Planning Policy

Overarching National Policy Statement for Energy (NPS EN-1)

7.3.6 The relevant national policies from NPS EN-1 for climate change are summarised within **Table 7-1**. These documents have informed the

assessment methodology and the identification of sensitive receptors. The national policies are relevant to all elements of the assessments covered in this chapter.

Table 7-1: Overarching National Policy Statement for Energy – Climate Change

National Policy	Relevant Requirements	Relevance to the Assessment
National Policy Statement for Energy (NPS EN-1) (Ref 7.15)	Paragraphs 3.3.75 and 4.3.1 in relation to impacts on climate and adaptation; Paragraphs 4.1.5 to 4.1.7 in relation to adverse effects and benefits; Paragraph 4.2.13 in relation to ES requirements; Paragraphs 4.10.13 and 4.10.16 to 4.10.19 in relation to adaptation measures in response to climate projections; and section 5.8 in relation to climate projections, flood risk and the importance of relevant mitigation	Paragraphs establish: All energy infrastructure must be assessed for its contribution to climate change. Hence, direct and indirect GHG emissions resulting from the Proposed Scheme should be identified. Infrastructure must be designed to remain effective in a changing climate, and so the Proposed Scheme should demonstrate its resilience in a changing climate. These elements will be further addressed in the Environmental Statement.

National Planning Policy Framework

7.3.7 The following sections of the National Planning Policy Framework (NPPF) (Ref 7.16) are considered relevant to all assessments of likely significant effects presented in this chapter:

- a. Section 14. Meeting the challenge of climate change, flooding and coastal change.
- b. Paragraph 8 relation to adaptation, mitigation and climate change resilience.

Emerging National Planning Policy Framework (2025)

7.3.8 The Emerging NPPF (Ref 7.17) is currently under consultation and until ratified is subject to change. Regardless, the following sections are currently

considered relevant to all assessments of likely significant effects presented in this chapter:

- a. Section 5. Meeting the challenge of climate change.
- b. Section 10. Securing clean energy and water.
- c. Section 18. Managing flood risk and coastal change.
- d. Paragraph 16. Regarding the one of the planning system's three overarching objectives of *"An environmental objective – to support efforts to mitigate and adapt to climate change..."*

Our Green Future: Our 25-year plan to Improve the Environment (Ref 7.18)

7.3.9 Sets out government action to help the natural world regain and retain good health.

7.3.10 This policy establishes government policy support for infrastructure that facilitates carbon reduction.

Carbon Budget and Growth Delivery Plan (Ref 7.19)

7.3.11 Outlines the Government's plan to achieve net zero emissions by 2050. Addresses the relevance/importance of decarbonisation of heat. Additionally, provides the estimated funding and decarbonisation expected through various government schemes, including those specifically aimed at heat networks.

Local and Neighbourhood Planning Policy

7.3.12 The local and neighbourhood planning policy documents listed in **Table 7-2** are considered relevant to all assessments of likely significant effects presented in this chapter.

Table 7-2: List of Relevant Local and Neighbourhood Policy – Climate Change

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
London Environment Strategy (Ref 7.20)	Sets the climate strategy for London and Greater London Authority (GLA) carbon budgets, covering both climate change mitigation and adaptation strategy.	This policy frames the assessment in terms of GLA's carbon budgets. Supports a whole life assessment approach.
The London Plan (Ref 7.21)	Sets out a framework for how London will develop over the next 20-25 years and the Mayor of	Establishes general support for expansion of

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	London's vision for Good Growth. Policy SI2 Minimising greenhouse gas emissions	heat networks across London. Directs borough energy masterplans to identify waste heat sources.
GLA Climate Budget (Ref 7.22)	The GLA Climate Budget is a system of five-year carbon budgets from 2018-2032, to create an emissions pathway to 2050.	The GLA Climate Budget will be used where relevant to help contextualise emissions from the Proposed Scheme but not to define the significance of the Proposed Scheme's impacts.
London Borough of Bexley - Bexley Local Plan (2023) (Ref 7.23)	The Bexley Local Plan 2023-2038 that mandates specific evaluations and setting sustainability standards for all new developments in the Borough. SP14: Mitigating and adapting to climate change DP3: Mitigating climate change	The document will be used to ensure all planning requirements within Bexley pertaining to climate assessments and adaptations are met for the Proposed Scheme within Bexley. For example, the requirement for all major developments to calculate its whole life-cycle carbon emissions.
Royal Borough of Greenwich - Royal Greenwich Local Plan: Core Strategy with Detailed Policies (2014) (Ref 7.24)	The Royal Greenwich Local Plan: Core Strategy with Detailed Policies is the primary planning document of the Royal Greenwich Local Plan. The document sets out the Borough's policies for climate mitigation and support for decentralised energy provision.	The document will be used to ensure all planning requirements pertaining to climate assessments and adaptations within Greenwich are met for the Proposed Scheme.

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	Policy E1 Carbon Emissions	
Royal Borough of Greenwich - Royal Borough of Greenwich Draft Local Plan (Ref 7.25)	Policy CE1 Climate resilient and Net Zero design principles Policy CE2 Operational carbon and energy balance	The document will be used to ensure all planning requirements pertaining to climate assessments and adaptations within Greenwich are met for the Proposed Scheme.
London Borough of Lewisham - New Lewisham Local Plan 2020-2040 (2025) (Ref 7.26)	The Lewisham Local Plan 2020-2040 is the central regulatory document that defines how developments within the Borough must respond to the climate emergency, establishing a framework for mandatory environmental, carbon, and resilience assessments. Policy SD1 Responding to the climate emergency Policy SD3 Minimising greenhouse gas emissions	The document will be used to ensure all planning requirements pertaining to climate assessments and adaptations within Lewisham are met for the Proposed Scheme.
London Borough of Southwark - The Southwark Plan (2022) (Ref 7.27)	The Southwark Plan 2022 mandates a wide array of technical evaluations designed to mitigate carbon emissions, manage flood risks, and ensure sustainable construction in response to a declared Climate Emergency.	The document will be used to ensure all planning requirements pertaining to climate assessments and adaptations within Southwark are met for the Proposed Scheme

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	Strategic Policy SP6 Climate Emergency	
London Borough of Lambeth - Lambeth Local Plan 2020-2035 (2021) (Ref 7.28)	The Lambeth Local Plan 2021 establishes the Borough's planning framework for the period, setting out spatial strategies, policies and objectives for climate change adaptation and sustainable green infrastructure across the Borough. Policy EN3: Decentralised energy Policy EN4: Sustainable design and construction	The document will be used to ensure all planning requirements pertaining to climate assessments and adaptations within Lambeth are met for the Proposed Scheme
London Borough of Lambeth -South Bank & Waterloo Neighbourhood Plan 2017 - 2032 (Ref 7.29)	This document details the community driven plan for the South bank and Waterloo Neighbourhood. Policies P1, P2, P3, P4, P5, P6 : Green infrastructure, open space & air quality	The plan provides guidelines for the development of green infrastructure, including meeting the challenge of climate change, which will be referenced when assessing CCR.
London Borough of Lambeth - Kennington Oval and Vauxhall Neighbourhood Plan 2035 (Ref 7.30)	KOV 1: Local Green Spaces KOV 2: Improving Air Quality	The document will be used to ensure the Proposed Scheme is consistent with the Neighbourhood Plan regarding climate change.
London Borough of Barking and Dagenham - London Borough of Barking and Dagenham Local Plan	The Barking and Dagenham Local Plan 2020-2037 sets out the Borough's strategic policies to 2037, placing sustainability, energy	The document will be used to ensure all planning requirements pertaining to climate assessments and adaptations within Barking

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
2020-2037 (2024) (Ref 7.31)	decarbonisation, and sustainable infrastructure at the forefront of the growth strategy. Strategic Policy SP7: Securing a clean, green and sustainable borough Policy DMSI 2: Energy, heat and carbon emissions	and Dagenham are met for the Proposed Scheme
London Borough of Tower Hamlets - Tower Hamlets Local Plan 2031: Managing Growth and Sharing Benefits (2020) (Ref 7.32)	The Tower Hamlets Local Plan 2031 provides the spatial and development management policy framework for the Borough, setting out carbon dioxide emission reduction standards, and climate emergency design compliance for all major development. Policy D.ES7 A zero carbon borough	The document will be used to ensure all planning requirements pertaining to climate assessments and adaptations within Tower Hamlets are met for the Proposed Scheme
City of London - City of London Local Plan (2015) (Ref 7.33)	The City of London Local Plan 2015 sets the statutory planning framework, requiring major developments to demonstrate climate resilience, reduce carbon emissions on-site, and contribute to carbon offsetting where on-site targets cannot be met. Policy CS15 Sustainable Development and Climate Change, Policy	The document will be used to ensure all planning requirements pertaining to climate assessments and adaptations within the City of London are met for the Proposed Scheme.

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	DM 15.2 Energy and CO2 emissions assessments, Policy DM 15.4 Offsetting of carbon emissions, Policy DM 15.5 Climate change resilience and adaptation	
City of London - City Plan 2040 (Ref 7.34)	Strategic Policy S15: Climate Resilience and Flood Risk	The document will be used to ensure all planning requirements pertaining to climate assessments and adaptations within the City of London are met for the Proposed Scheme.
City of Westminster - City of Westminster: City Plan 2019-2040 (2026) (Ref 7.35)	The Westminster City Plan 2019–2040 mandates detailed carbon, energy, and flood risk evaluations to achieve the city's goal of becoming net zero by 2040. Policy 40. Energy	The document will be used to ensure all planning requirements pertaining to climate assessments and adaptations within the City of Westminster are met for the Proposed Scheme.
City of Westminster - Victoria Neighbourhood Plan 2025 - 2040 (Ref 7.36)	VNG-01 Biodiversity and urban greening Policy VND-07: Climate Change, Design and Indoor Air Quality	The document will be used to ensure the Proposed Scheme is consistent with the Neighbourhood Plan regarding climate change
Royal Borough of Kensington and Chelsea - Royal Borough Kensington and Chelsea Local Plan (2024) (Ref 7.37)	The Kensington and Chelsea Local Plan 2024 sets out the Borough's policy on the circular economy; whole life-cycle carbon; energy and net zero carbon, requiring major development proposals	The document will be used to ensure all planning requirements pertaining to climate assessments and adaptations within Kensington and Chelsea are met for the Proposed Scheme

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	to assess whole life-cycle carbon emissions and demonstrate actions taken to reduce emissions and ensure climate change impact resilience. Policy GB4: Energy and Net Zero Carbon	

Relevant guidance

- 7.3.13 Guidance relating to the identification of suitable mitigation and adaptations measures to address the impacts of climate change is found in Planning Practice Guidance (PPG), Climate Change (Ref 7.38). This guidance is relevant to all elements of the assessments covered in this chapter.

Standards and Guidance

- 7.3.14 The following standards and guidance are relevant to the lifecycle GHG impact assessment:
- RICS Whole life carbon assessment for the built environment (2nd Edition) (Ref 7.39);
 - Appendix H.5: Treatment of district heating networks;
 - British Standards Institution (BSI), BS EN ISO 14064-1:2019 Greenhouse gases — Part 1: Specification with guidance at the organisation level for quantification and reporting of greenhouse gas emissions and removals (Ref 7.40);
 - BSI, BS EN ISO 14064-2:2019 Greenhouse gases — Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements (Ref 7.41);
 - BSI, BS EN 15978:2011 Sustainability of construction works — Assessment of environmental performance of buildings — Calculation method (Ref 7.42);
 - ISEP, Environmental Impact Assessment Guide to Assessing Greenhouse Gas Emissions and Evaluating Their Significance (Edition 2.1 edition, 2026) (Ref 7.2);

- g. World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD), Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised edition, 2004) (Ref 7.43); and
- h. BSI, PAS 2080:2023 Carbon Management in Buildings and Infrastructure (Ref 7.44).

7.3.15 The following standards and guidance are relevant to the CCR and ICCI assessments:

- a. ISEP (2020), Environmental Impact Assessment Guide to: Climate Change Resilience and Adaptation (Ref 7.3);
- b. ISEP (2022), ISEP Climate Change Adaptation Practitioner Guidance (Ref 7.45); and
- c. European Commission (2021), Technical Guidance on the climate proofing of infrastructure in the period 2021-2027 (Ref 7.46).

7.4 Baseline Conditions and Future Baseline

Lifecycle GHG Impact Assessment

- 7.4.1 For the lifecycle GHG impact assessment, the baseline is a 'business as usual' scenario where the Proposed Scheme does not progress. The baseline for the lifecycle GHG impact assessment will include the GHG emissions associated with activities that the Proposed Scheme will impact on or displace.
- 7.4.2 The existing baseline will be defined as the current scenario where the Proposed Scheme is not progressed, and existing activities continue as normal in line with ISEP GHG guidance. This currently represents the areas of London that would be served by the Proposed Scheme. The existing baseline will include operational emissions from the existing buildings and emissions arising from their heating. This will be based on the availability of data and assumptions regarding the proportion of buildings that are electrically heated and the proportion heated by gas fired boilers.
- 7.4.3 If the Proposed Scheme does not progress, the Riverside 1 (in operation) and Riverside 2 (operational in 2026) energy from waste (EfW) facilities are assumed to continue operating in electricity only mode. In this configuration, all available steam is utilised for power generation, maximising electrical output. By contrast, Combined Heat and Power (CHP) operation (i.e. with the Proposed Scheme in operation) would require steam extraction for heat supply, resulting in a modest reduction in electrical output. The effect of the reduced energy output on National Grid's carbon emissions will not be evaluated. This is because decisions on generator dispatch to replace any

reduced output from Riverside 1 or 2 would be made by the National Energy System Operator (NESO); therefore, any assumptions by the Applicant on how this energy would be replaced would be speculative. The baseline scenario therefore assumes higher electricity generation and no heat recovery at either EfW facilities.

- 7.4.4 The future baseline represents a projected ‘business as usual’ scenario in which the Proposed Scheme is not brought forward, with the EIA Scoping Boundary, and energy supply arrangements remaining broadly unchanged over time. As mentioned in **Volume 1, Chapter 1: Introduction**, consideration of the Cory Decarbonisation Project is anticipated to form part of the Proposed Scheme future baseline, the implications of this for the GHG assessment will be considered in the ES.
- 7.4.5 Consideration of the future baseline will be informed through a desk-based assessment of existing conditions relevant policy and decarbonisation trajectories, and consideration of the implications from introducing the Cory Decarbonisation Project.

CCR Assessment

- 7.4.6 The existing baseline for the assessment of climate change risks to the Proposed Scheme (the CCR assessment) will be based on historical climate data obtained from the Met Office recorded by the meteorological station close to the Proposed Scheme (Greenwich Park, 14km northeast of the Proposed Scheme), as summarised in **Table 7-3** below. To understand the baseline climate, historic weather data is obtained from the Greenwich Park meteorological station. The data from the location is considered representative of baseline climate condition of the area within EIA Scoping Boundary. This baseline utilises the climate average data for the period 1981-2010.

Table 7-3 Baseline Climate Data (Greenwich Park, 14km northeast of the Proposed Scheme)

Climate Variable	Baseline Data (1981-2010)
Mean annual maximum temperature (°C)	14.6
Mean summer maximum temperature (°C)	21.6
Mean winter minimum temperature (°C)	2.5
Hottest month on average (°C)	July (20.3)
Coldest month on average (°C)	February (1.8)
Number of frost days per annum (nr)	34
Mean annual rainfall (mm)	535.2

Climate Variable	Baseline Data (1981-2010)
Mean summer rainfall (mm)	128.4
Mean winter rainfall (mm)	111.8
Wettest month on average (mm)	May (57.5)
Mean annual maximum temperature (°C)	14.6

7.4.7 Examples of extreme weather events near the Proposed Scheme that will inform the baseline include:

- July 2022 Heatwave – London experienced its highest ever recorded temperatures, reaching over 40°C;
- February 2022 Storm Eunice – This storm was accompanied by heavy rainfall and wind speeds exceeding 100 mph, resulting in fallen trees, power outages and transport disruption; and
- February 2020 Storms Ciara and Dennis – Back to back named storms in February 2020 brought heavy rains and strong winds to London, with resultant flooding, power outages and travel disruptions.

7.4.8 The future climatic baseline for the design life of the Proposed Scheme will be determined through the Met Office's United Kingdom Climate Projections 2018 (UKCP18). **Table 7-4** presents the changes to climate, relative to the 1981-2010 baseline expected under the Representative Concentration Pathway (RCP) 8.5, up until the period of 2071-2100. These future projections are presented in **Table 7-4** for the 50th percentile of projection probabilities.

Table 7-4: Future Climate Baseline

Climate Variable	Baseline Data (1981-2010)	Projected Anomaly RCP 8.5 (2071-2100)
Mean annual maximum temperature	14.6 (°C)	+5.72 (°C)
Mean summer maximum temperature	21.6 (°C)	+7.61 (°C)
Mean winter minimum temperature	2.5 (°C)	+4.06 (°C)
Mean annual rainfall	535.2 (mm)	-11.2 (%)
Mean summer rainfall	128.4 (mm)	-54.5 (%)
Mean winter rainfall	111.8 (mm)	+18.6 (%)

7.4.9 A summary of the projected changes to the climate at the location of the Proposed Scheme over the design life of the Proposed Scheme are listed below:

- a. mean temperatures are expected to increase in both summer and winter;
- b. mean daily maximum and minimum temperatures are expected to increase across the UK in both summer and winter;
- c. winter precipitation is expected to increase, while summer precipitation is expected to decrease; and
- d. increased frequency and intensity of extreme storm events.

ICCI Assessment

7.4.10 The existing and future baseline for the ICCI assessment will be the same as described for the CCR assessment based on historical climate data obtained from the Met Office.

7.5 Potential for Likely Significant Effects

Lifecycle GHG Impact Assessment

- 7.5.1 The Proposed Scheme will result in a net change in GHG emissions to the global atmosphere. Where GHG emissions are increased, they contribute to global warming and global climate change. Conversely, where GHG emissions are reduced, they contribute to mitigating climate change and limiting further disruption to the global climate. Disruption to the global climate is already having diverse and wide-ranging impacts on the environment, society, economy and natural resources. Known impacts of climate change include increased frequency and duration of extreme weather events, temperature changes, rainfall and flooding, sea level rise and ocean acidification. These impacts are largely accepted to be negative, profound, global, long-term to permanent, and are transboundary and cumulative from many global actions.
- 7.5.2 To assess the likely significant effects to GHG emissions as a result of the Proposed Scheme, activities which could have an effect on GHG emissions will be identified with their associated impact to GHG emissions estimated and compared to the forecasted net zero trajectory, as well as GLA and UK carbon budgets.
- 7.5.3 Potential activities related to the Proposed Scheme that could impact on GHG emissions for each lifecycle stage are outlined in **Table 7-5**, together with comments as to whether activities are to be scoped in or out of the assessment presented in the ES. The lifecycle stages included in **Table 7-5** are aligned

with those set out in the PAS 2080:2023 Carbon Management in Infrastructure and Built Environment standard.

Table 7-5 Potential Sources of GHG Emissions

Lifecycle Stage	PAS 2080:2023 Module	Scoped In or Out	Activity	Primary Emissions Sources
Pre-construction	A0	Out	Land purchase and associated fees/advice for the Proposed Scheme.	Emissions associated with energy use and transportation demands from preliminary studies and work. These emissions are considered to provide a de minimis contribution to the overall GHG impact of the Proposed Scheme.
Product stage	A1-A3	In	Raw material extraction and manufacturing of products required to build the Proposed Scheme. Transportation of materials for such processes/ manufacturing (where available).	Embodied GHG emissions from energy use in the extraction of materials and manufacture of components and equipment. GHG emissions from the transportation of products and materials during their processing and manufacture.
	A4	In	Transportation of construction materials to the Proposed Scheme.	Transport of products and materials to and from the Proposed Scheme is included under the construction process

Lifecycle Stage	PAS 2080:2023 Module	Scoped In or Out	Activity	Primary Emissions Sources
				stage, where these are not included in embodied GHG emissions.
	A5	In	On-site pre-construction activity (i.e. temporary construction works, enabling works, tree removal, land remediation and reclamation, etc.).	Earthworks and excavation required for the Proposed Scheme.
		In	On-site construction activity, including emissions from construction compounds. Transportation of construction workers to and from the Proposed Scheme. Disposal of any waste generated by the construction processes. Land use change. Water use.	Energy (e.g. electricity, fuel) consumption from plant and vehicles, generators on-site and construction worker commuting. GHG emissions from disposal and transportation of waste. Provision of potable water and treatment of wastewater.

Lifecycle Stage	PAS 2080:2023 Module	Scoped In or Out	Activity	Primary Emissions Sources
Operation stage	B1-B8	In	Operation of the Proposed Scheme. Maintenance of the Proposed Scheme.	GHG emissions from energy consumption, the provision of potable water, and the treatment of water. GHG emissions from energy consumption, user transport, material use and waste generation as a result of the Proposed Scheme's maintenance and use. Estimated GHG emissions arising from the users of the Proposed Scheme

7.5.4 As shown in **Table 7-5**, modules A1 to B8 are scoped in to the assessment. A0 has been scoped out, as the emissions are not anticipated to be material to the overall assessment. The decommissioning stage C1-4 has also been scoped out. This is due to the assumption that the Proposed Scheme is intended to become part of London's long term critical infrastructure with no decommissioning proposed. However, if decommissioning were to be required, it is likely that minor works would be needed to remove above ground infrastructure. Underground pipelines and MAP are expected to be left in-situ to minimise adverse environmental effects. Given this, a detailed assessment of the decommissioning stage is proposed to be scoped out.

7.5.5 In line with PAS 2080:2023 Carbon Management in Infrastructure and Built Environment standard, Module D is reported as two separate sub-modules:

- a. D1 - Potential benefits and loads from reuse, recycling and energy recovery from the net output flows of materials exiting the system boundary and/ or from other recovery; and
- b. D2 - Potential benefits and loads from exported utilities exiting the system boundary.

- 7.5.6 Module D covers potential benefits and loads beyond the system boundary. Module D is estimated separately to ensure that impacts, particularly for recovery and use of recovered material are not double counted.
- 7.5.7 Module D is a supplementary indicator of the potential avoided GHG emissions beyond the boundary; however, it has limitations as a metric for quantifying circularity or resource efficiency, as the results are dependent on multiple assumptions regarding substitution and future system conditions. The methodology for assessing the Module D emissions for the Proposed Scheme will be formulated as part of the EIA, which will also include considerations as to if any indirect emissions pathways are in fact able to be assessed (in line with case law).

CCR Assessment

- 7.5.8 The Proposed Scheme, both underground and above ground components, may be vulnerable to impacts from various climatic parameters such as extreme weather events and temperature change leading to flood risk, overheating or other damage during its construction and operation. To understand the vulnerability of the Proposed Scheme to climate change, the CCR assessment will identify any potential climate change risks and the likelihood and consequence of their impact. Where necessary appropriate adaptation measures will be identified.
- 7.5.9 The CCR assessment will consider two phases of the Proposed Scheme (construction and operation). The potential climate change impact will be determined based on the United Kingdom Climate Projections 2018 (UKCP18) projections for the parameters described in **Table 7-6**.

Table 7-6: Climate Parameters Scoping – CCR assessment

Consequence	Proposed to be Scoped In or Out of the ES	Description
Extreme Weather Events (storms, wildfires and drought)	In	The Proposed Scheme may be vulnerable to extreme weather events such as storm damage, wildfires and drought. It is considered that the main underground components of the Proposed Scheme may be less vulnerable to the consequences. The effects of extreme weather events will be

Consequence	Proposed to be Scoped In or Out of the ES	Description
		considered qualitatively in the CCR assessment.
Precipitation Change	In	The Proposed Scheme may be vulnerable to changes in precipitation, for example, pressure on water supply during periods of reduced rainfall, and damage to structures and drainage systems during periods of heavy precipitation. The main underground components may be less vulnerable to the consequences. The effects of precipitation change will be considered in the CCR assessment.
Temperature Change	In	Increased temperatures may increase cooling requirements, alter the power efficiency of the Proposed Scheme, and could impact on the structural integrity of buildings and materials. The effects of temperature change will be considered in the CCR assessment.
Sea Level Rise	In	The Proposed Scheme may be susceptible to sea level rise in the event of the breach of the River Thames flood defences, with rising sea levels having the potential to alter flood conditions at the Site. It is considered that the main underground components of the Proposed Scheme may be less vulnerable to the consequences. The effects of sea level rises will be considered in the CCR assessment.
Sea Temperature Rise	Out	The Proposed Scheme comprises predominantly underground infrastructure with no direct operational dependency on seawater temperature. While rising sea temperatures may contribute to broader climate events such as storm surge, no direct impact to the Proposed Scheme is anticipated.

Consequence	Proposed to be Scoped In or Out of the ES	Description
Wind Conditions	In	From 1969 to 2022, the UK annual mean wind speed demonstrates a downward trend, consistent with that observed globally ³ . However, the effects of increased wind strength will be considered qualitatively in the CCR assessment as wind can be linked to extreme weather events such as storms. The main underground components of the Proposed Scheme may be less vulnerable to the consequences.

ICCI Assessment

- 7.5.10 Changes to the climate over the lifetime of the Proposed Scheme have the potential to impact the environmental receptors in the surrounding area, which in combination with the Proposed Scheme impacts, may result in significant effects.
- 7.5.11 The ICCI assessment identifies how climate change may impact the risks to surrounding environmental and social receptors. The potential climate change parameters (which are based on the UKCP18 projections) and the rationale for scoping are described in **Table 7-7**.

Table 7-7: Climate Parameters Scoping – ICCI assessment

Consequence	Proposed to be Scoped In or Out of the ES	Description
Extreme Weather Events (storms, wildfires and drought)	Out	The impacts of extreme weather events on receptors in the surrounding environment will be taken into account in other standalone technical reports to the ES, such as the Flood Risk Assessment, and submitted as part

³ Kendon, M. et al, 2022. State of the UK Climate 2022. Available at: <https://rmets.onlinelibrary.wiley.com/doi/10.1002/joc.8167>

Consequence	Proposed to be Scoped In or Out of the ES	Description
		of the DCO Application. Therefore, a separate ICCI assessment for extreme weather events is not proposed.
Precipitation Change	Out	Climate change may lead to both an increase in substantial precipitation and drought events. The impact of projected changes in precipitation on identified water receptors will be taken into account as part of the Flood Risk Assessment to be submitted with the DCO Application. Therefore, a separate ICCI assessment for precipitation change is not proposed.
Temperature Change	Out	While impacts are expected as a result of projected temperature increases, contribution of the Proposed Scheme to cumulative thermal impact on receptors is considered negligible. Therefore, these temperature increases in combination with the Proposed Scheme are not expected to have a significant effect upon receptors identified by other environmental disciplines.
Sea Level Rise	Out	The Proposed Scheme may be susceptible to sea level rise, with rising sea levels having the potential to alter flood conditions at the Site. The potential flooding impact of sea level rise on identified water receptors will be taken into account as part of the Flood Risk Assessment to be submitted with the DCO Application. Therefore, a

Consequence	Proposed to be Scoped In or Out of the ES	Description
		separate ICCI assessment for sea level rise is not proposed.
Sea Temperature Rise	Out	The Proposed Scheme comprises predominantly underground infrastructure with minimal dependency on seawater temperature. This climate parameter will not be relevant to the construction or operation of the Proposed Scheme.
Wind Conditions	Out	Currently, there is no evidence of compelling trends when considering maximum gust speed in the UK wind network over the last five decades (Ref 7.47). The Proposed Scheme, in combination with projected changes in wind patterns, is not expected to have a significant effect upon receptors identified by other environmental disciplines.

7.5.12 An ICCI assessment is proposed to be scoped out of the climate assessment as the potential effects determined as part of the DCO Application are unlikely to be exacerbated by climate change impacts, as explained in **Table 7-7** above.

7.5.13 With ICCI assessment proposed to be scoped out of the ES, the following sections throughout this Scoping Report focus on the Lifecycle GHG Impact assessment and CCR assessment.

7.6 Assessment Methodology

Sensitive Receptors

Lifecycle GHG Impact Assessment

- 7.6.1 The sensitivity of the receptor (global climate) to increases in GHG emissions is always defined as high as any additional GHG impacts could compromise the UK's ability to reduce its GHG emissions and therefore meet its future 5-year carbon budgets. Also, the importance of limiting global warming to below 2°C this century is broadly asserted by the International Paris Agreement and the climate science community.

CCR Assessment

- 7.6.2 Sensitive receptors for the CCR assessment are those elements of the Proposed Scheme that are particularly vulnerable to the impacts of climate change.
- 7.6.3 Sensitive receptors for the assessment of climate change risk for the Proposed Scheme include:
- c. construction phase receptors e.g. workforce, materials, plant and machinery; and
 - d. the Proposed Scheme's operators, facilities, assets, and their operation, maintenance and refurbishment e.g. electrical equipment, facility pavements and structures, earthworks and drainage technology.

Impact Assessment Methodology

Lifecycle GHG Impact Assessment

Basis of Assessment

- 7.6.4 GHG emissions will be assessed using a calculation-based methodology as per the equation below:

$$\text{ACTIVITY DATA} \times \text{GHG EMISSIONS FACTOR} = \text{GHG EMISSIONS VALUE}$$

- 7.6.5 A set of standard data quality principles will be applied so that the results from the lifecycle GHG impact assessment are as accurate and representative as possible. This will include the selection of emission factors that are representative of the UK construction industry. GHG activity data will be gathered directly from the Proposed Scheme's engineering and design teams (where available) to enable consistency and completeness of data collection. Performing this quantitative GHG emissions approach will be facilitated by the use of the following information:

- e. Proposed Scheme design details (estimated construction material quantities/volumes and processes);
- f. Proposed Scheme design predicted operational energy use; and
- g. the application of industry standards and precedents as set out in the Guidance documents referred to above.

7.6.6 In line with applicable guidelines from the WBCSD/WRI Greenhouse Gas Protocol initiative (Ref 7.43), the lifecycle GHG impact assessment will be reported in tonnes of carbon dioxide equivalent (tCO₂e) or megatonnes of carbon dioxide equivalent (MtCO₂e) and will consider the seven Kyoto Protocol gases:

- a. Carbon-dioxide (CO₂);
- b. Methane (CH₄);
- c. Nitrous oxide (N₂O);
- d. Hydrofluorocarbons (HFCs);
- e. Perfluorocarbons (PFCs);
- f. Sulphur hexafluoride (SF₆); and
- g. Nitrogen Trifluoride (NF₃).

7.6.7 The heat recovered from Riverside 1 and 2 EfW facilities is intended to supply the Proposed Scheme; they are the primary (or anchor) heat source. Therefore, information from previous carbon assessments undertaken for the Riverside Campus, and where available, operational data (Ref 7.48), will both be used as information sources to help inform the carbon intensity of the Proposed Scheme in line with the RICS WLCA guidance (Ref 7.39). The methodology for the calculation of the upstream emissions from the EfW facilities will be determined as part of the ES process, which will incorporate the most recent available data from the two sites.

7.6.8 The methodology for calculating the Proposed Scheme's downstream emissions (e.g. savings for end users) will also be determined as part of the ES.

7.6.9 Should uncertainty remain at the stage of ES regarding specific GHG activity data for parts of the Proposed Scheme, the assessment may be qualitative and/or assumptions and estimations developed. Any assumptions, inclusions and exclusions that inform the GHG emissions calculation will be clearly described in the ES Chapter.

Magnitude of the Impact

- 7.6.10 The magnitude of impact considers the output of the GHG quantification process; i.e. the Proposed Scheme's GHG lifecycle footprint will be compared to the corresponding UK Carbon Budgets, with an additional contextual analysis also undertaken against GLA Carbon Budgets.
- 7.6.11 The ISEP guidance on assessing GHG emissions in EIA (Ref 7.2) states:
- a. *"GHG emissions have a combined environmental effect that is approaching a scientifically defined environmental limit, as such any GHG emissions or reductions from a Project might be considered to be significant."*
- 7.6.12 **Table 7-8** and **Table 7-9** will be used to assess the impact of the Proposed Scheme on a national scale. The UK is currently in the 4th Carbon Budget period, which runs from 2023 to 2027, as detailed in **Table 7-8**. The 3rd, 4th, and 5th Carbon Budgets reflect the previous 80% reduction target by 2050. The 6th Carbon Budget is the first to align with the legislated 2050 net zero commitment.
- 7.6.13 In order to illustrate the Proposed Scheme's trajectory towards net zero by 2050, the CCC's Balanced Net Zero Pathway (Ref 7.12) will be used post-2037 in the absence of any nationally legally binding carbon budgets following the 6th Carbon Budget. The CCC released its recommended 7th Carbon Budget in February 2025 and advised the UK Carbon Budget to be set at 535 MtCO_{2e}, which is due to be debated in Parliament and set into UK law. However, this depends on agreement with the UK Government and is therefore subject to change. Additionally, the CCC's feedback may evolve based on input from the UK Government.
- 7.6.14 The Balanced Net Zero Pathway is recommended to be divided into five-year periods post-2037 to match the previous six legally binding UK national carbon budgets. The proposed carbon budget periods derived from Balanced Net Zero Pathway encompass the 7th, 8th, and 9th indicative Carbon Budget periods up to 2050, in line with the UK's 1.5°C trajectory as detailed **Table 7-8**.

Table 7-8 UK Carbon Budgets

UK Carbon Budget	Total Budget (MtCO _{2e})	Indicative Carbon Budgets based upon the CCC's Balanced Net Zero Pathway (MtCO _{2e})
3rd (2018-2022)	2,544	-
4th (2023-2027)	1,950	-

UK Carbon Budget	Total Budget (MtCO ₂ e)	Indicative Carbon Budgets based upon the CCC's Balanced Net Zero Pathway (MtCO ₂ e)
5th (2028-2032)	1,725	-
6th (2033-2037)	965	-
7th (2038-2042)	-	535
8th (2043-2047)	-	220
9th (2048-2050)	-	22

- 7.6.15 It is noted that the supplementary carbon budgets beyond 2037 have not been formally adopted by the UK Government or ratified by Parliament and can only be used as an indicative measure to contextualise the Proposed Scheme's progress toward the national net zero trajectory.
- 7.6.16 Carbon budgets are available for Greater London through to 2032. The GLA's Carbon Budgets are in place to track London's progress to carbon neutrality by 2050. Progress against these budgets is reviewed annually, and future budgets are set 10 years in advance; the GLA's budgeting period aligns with the UK national budgets. Given that the Proposed Scheme is in Greater London, the ES will consider the Proposed Scheme's performance against these budgets, providing additional context.
- 7.6.17 The construction phase for the Proposed Scheme is likely to fall into the 5th GLA Carbon Budget and the 5th UK Carbon Budget (see **Table 7-8** above, and **Table 7-9** below). As GLA Carbon Budgets do not currently extend beyond 2032, the UK Carbon Budgets (as discussed above), and any relevant local sectoral budgets, will be used to contextualise GHG emissions impact beyond 2032.

Table 7-9 GLA Carbon Budgets

GLA Carbon Budget	Total Budget (MtCO ₂ e)
4th (2023-2027)	22.4
5th (2028-2032)	18.0

Scale and Significance of Effects

- 7.6.18 As per ISEP guidance, all GHG emissions are considered capable of being significant. To contextualise the level of significance, these emissions will be

compared to the corresponding UK Carbon Budget. A further perspective will be provided by considering the emissions in the context of the relevant GLA Carbon Budget. The method proposed to determine the significance of GHG emissions is summarised in **Table 7-10**.

- 7.6.19 A 'minor adverse' or 'negligible' non-significant effect conclusion does not necessarily refer to the magnitude of GHG emissions being carbon neutral (i.e. zero on balance) but refers to the likelihood of avoiding severe climate change, aligning project emissions with a science-based 1.5°C compatible trajectory and achieving net zero by 2050.
- 7.6.20 A project's impact can shift from significant adverse to non-significant effects by incorporating mitigation measures that substantially improve on the business-as-usual approach and meet or exceed the science-based emissions trajectory of ongoing but declining emissions towards net zero.

Table 7-10: ISEP Criteria Used to Determine the Significance of GHG Emissions.

Effects Significance Level	Effects	Description	Example in the guidance
Significant	Major Adverse	A project that follows a 'business-as-usual' or 'do minimum' approach and is not compatible with the UK's net zero trajectory or accepted aligned practice or area-based transition targets. It is down to the practitioner to differentiate between the 'level' of significant adverse effects e.g. 'Moderate' or 'Major' adverse effects.	The project's GHG impacts are not mitigated or are only compliant with do-minimum standards set through regulation, and do not provide further reductions required by existing local and national policy for projects of this type. A project with major adverse effects is locking in emissions and does not make a meaningful contribution to the

Effects Significance Level	Effects	Description	Example in the guidance
			UK's trajectory towards net zero.
	Moderate Adverse		The project's GHG impacts are partially mitigated and may partially meet the applicable existing and emerging policy requirements but would not fully contribute to decarbonisation in line with local and national policy goals for projects of this type. A project with moderate adverse effects falls short of fully contributing to the UK's trajectory towards net zero
Not Significant	Minor Adverse	A project that is compatible with the budgeted, science based 1.5°C trajectory (in terms of rate of emissions reduction) and which complies with up-to-date policy and 'good practice' reduction measures to achieve that. It may have residual	The project's GHG impacts would be fully consistent with applicable existing and emerging policy requirements and good practice design standards for projects of this type. A project with minor adverse effects is fully in line with

Effects Significance Level	Effects	Description	Example in the guidance
		emissions but is doing enough to align with and contribute to the relevant transition scenario, keeping the UK on track towards net zero by 2050 with at least a 78% reduction by 2035 and thereby potentially avoiding significant adverse effects.	measures necessary to achieve the UK's trajectory towards net zero.
Significant	Beneficial	A project that achieves emissions mitigation that goes substantially beyond the reduction trajectory, or substantially beyond existing and emerging policy compatible with that trajectory and has minimal residual emissions. This project is playing a part in achieving the rate of transition required by nationally set policy commitments.	The project's GHG impacts would be reduced through measures that go well beyond existing and emerging policy and design standards for projects of this type, such that radical decarbonisation or net zero is achieved well before 2050. A project with negligible effects provides GHG performance that is well 'ahead of the curve' for the trajectory towards net zero and has

Effects Significance Level	Effects	Description	Example in the guidance
			minimal residual emissions.

CCR Assessment

Basis of Assessment

- 7.6.21 An assessment of the resilience of the Proposed Scheme to climate change will be undertaken to identify potential climate change hazards and then consider their potential consequence and likelihood of impact occurrence. Measures to increase the climate resilience of the Proposed Scheme that have been confirmed as embedded into the design will be considered (referred to as embedded mitigation).
- 7.6.22 The CCR assessment will provide commentary on how the Proposed Scheme will be resilient to the predicted future climate impacts identified using UKCP18 data. UKCP18 projections for the 12km grid cell where the key above ground infrastructure of the Proposed Scheme is located will be used to examine future climate parameters. This climate projection data provides a probabilistic indication of how global climate change is likely to affect the Proposed Scheme using defined climate variables and time periods.

Magnitude of the Impact

- 7.6.23 The proposed approach is aligned with existing guidance, provided by ISEP (Ref 7.3). Climate parameters that will be considered in the CCR assessment across all lifecycle stages include the following:
- extreme weather events (storms, wildfire and drought);
 - precipitation change (flooding);
 - temperature change;
 - sea level rise;
 - sea temperature rise; and
 - wind conditions.
- 7.6.24 The following key terms and definitions relating to the CCR assessment will be used:
- Climate hazard – a weather or climate related event, which has potential to do harm to environmental or community receptors or assets, for example, extreme storm events.

- b. Climate change impact – an impact from a climate hazard which affects the ability of the receptor or asset to maintain its function or purpose, for example, surface water flooding.
- c. Consequence – any effect on the receptor or asset resulting from the climate impact, for example, prevention of access to site due to flooded access tracks.

7.6.25 The likelihood of a climate change impact occurring is based on the likelihood of the hazard occurring combined with the vulnerability of the Proposed Scheme, using professional judgement and in discussion with the design team for the Proposed Scheme. Embedded mitigation measures will also be taken into account and a likelihood rating will be assigned as described in **Table 7-11**.

Table 7-11: Likelihood Descriptions

Likelihood	Qualitative	Quantitative
Negligible	Highly unlikely to occur	5%
Low	Unlikely to occur	20%
Moderate	As likely as not to occur	50%
High	Likely to occur	80%
Almost Certain	Very likely to occur	95%

7.6.26 Following the identification of climate hazards, the potential consequences will be assessed according to categories and descriptions adapted from the EU Technical note on Climate Proofing Infrastructure (Ref 7.46) as presented in **Table 7-12**.

Table 7-12: Consequence Descriptions

Consequence	Qualitative
Insignificant	Impact can be absorbed through normal activity
Minor	An adverse event that can be absorbed by taking business continuity actions
Moderate	A serious event that requires additional emergency business continuity actions
Major	A critical event that requires extraordinary / emergency business continuity actions
Catastrophic	Disaster with the potential to lead to shut down or collapse or loss of the asset / network

- 7.6.27 The rating of consequence will also consider wider likely significant effects on health and safety, environment and social impacts, financial damage, and reputational risks.

Scale and Significance of Effects

- 7.6.28 The scale and nature of the CCR assessment will be determined as a function of the likelihood of a climate change impact occurring and the consequence to the receptor if the impact occurs. The scale is detailed in **Table 7-13**. The assessment will take into account embedded mitigation.

Table 7-13: Climate Change Risk Significance Matrix

		Level of Consequence of a Climate Change Risk Occurring				
		Insignificant	Minor	Moderate	Major	Catastrophic
Likelihood of Climate Change Impact Occurring	Negligible	Low (NS)	Low (NS)	Medium (NS)	Medium (NS)	Medium (NS)
	Low	Low (NS)	Low (NS)	Medium (NS)	High (S)	High (S)
	Moderate	Low (NS)	Medium (NS)	High (S)	High (S)	Extreme (S)
	High	Medium (NS)	High (S)	High (S)	Extreme (S)	Extreme (S)
	Almost Certain	Medium (NS)	High (S)	Extreme (S)	Extreme (S)	Extreme (S)
Notes: NS = Not Significant; S = Significant						

7.7 Design, Mitigation and Enhancement Measures

Lifecycle GHG Impact Assessment

- 7.7.1 The scope for mitigating climate change effects as a result of the Proposed Scheme will be determined during the completion of the lifecycle GHG impact assessment. Mitigation will focus on measures to reduce GHG emissions from the construction and operation phases. Mitigation of emissions will be considered in terms of how they align with the Government's target to achieve net-zero emissions by 2050 and remain so thereafter (any emissions beyond this date should thus be balanced by removals). For example, this may include defining design principles with the purpose of reducing embodied carbon associated with materials.

CCR Assessment

- 7.7.2 The scope for including mitigating measures for the CCR assessment will be informed by the project design team and other relevant technical disciplines. These will focus on measures to increase the resilience of the Proposed Scheme to climate change impacts and will be informed by the design team and other relevant technical assessments. For example, this may include designing surface water drainage systems to make sure flows up to the 1 in 100-year return period can be contained and managed within the Site.

7.8 Assumptions, Limitations and Uncertainties

- 7.8.1 The construction phase of the Proposed Scheme is expected to commence in 2030 and be completed in 2034, a duration of 4 years. The operation phase is expected to run from 2034. The Proposed Scheme is likely to be operated indefinitely and to be refurbished and replaced as required as part of London's critical infrastructure. Accordingly, the temporal scope of the CCR assessment extends to 2100, in line with standard practice for long-term infrastructure and consistent with the climate projections available through the UKCP18 dataset.
- 7.8.2 Where detailed information is not available regarding energy use, types and quantities of materials used, or the embodied carbon of key features of the assets, assumptions will be made based on industry approximations and professional best practice.
- 7.8.3 All assumptions and limitations, including any exclusions, together with assumptions for choices and criteria leading to exclusion of input and output data will be documented as part of the assessment.

7.9 Summary of Elements Scoped In or Scoped Out

- 7.9.1 A summary of the climate change items scoped in or out of the ES is provided in **Table 7-14**.

Table 7-14: Elements Scoped In or Scoped Out

Elements	Phase	Scoped In	Scoped Out	Justification
Lifecycle GHG Impact assessment	Construction and Operation	✓		Lifecycle GHG Impact assessment is scoped in. As detailed in Table 7-5, modules A1 to B8 are scoped in. Module A0 has been scoped out, as the emissions are not anticipated to be material to the overall assessment. The decommissioning stage C1-4 has also been scoped out.
CCR assessment	Construction and Operation	✓		CCR assessment is scoped in and climate change parameters detailed in Table 7-6 are scoped in except for sea temperature rise. Sea temperature rise will not be relevant to the construction or operation of the Proposed Scheme.
ICCI assessment	Construction and Operation		✓	The environmental effects of the Proposed Scheme assessed across the technical topics are not predicted to be exacerbated by climate change to a degree that would result in a significant in-combination effect on the identified receptors. Therefore, ICCI assessment is proposed to be scoped out.
Cumulative assessment	Construction and Operation		✓	The global atmosphere is the receptor for climate change impacts. As noted in the ISEP GHG assessment guidance, “<i>Effects of GHG emissions from specific cumulative projects therefore, in general should not be individually assessed, as there is no basis for selecting any particular (or more than one) cumulative project that has GHG emissions for assessment over any other.</i>” Given this, it is not possible to define a geographically constrained study area for the assessment of cumulative effects of GHG emissions,

Elements	Phase	Scoped In	Scoped Out	Justification
				nor to undertake a conventional cumulative effects assessment, as the identified receptor is the global climate and effects are inherently global in nature. Consequently, consideration of the combined effects of the Proposed Scheme with other developments on GHG emissions is not considered applicable in the traditional EIA context. Instead, relevant carbon and sectoral budgets are used as a proxy to provide context, inherently reflecting the cumulative nature of emissions at a regional, national and global scale. It should also be noted that other major projects subject to the EIA Regulations will need to consider climate change assessment in their own applications for development consent. As the CCRA and ICCI assessment are focused solely on the assets of the Proposed Scheme and a broader consideration of existing interdependent infrastructure, a cumulative assessment is not required, in line with the ISEP GHG assessment guidance. Consequently, in terms of climate change, the Proposed Scheme operates independently with no significant interdependencies that would necessitate a cumulative climate impact assessment.

7.10 References

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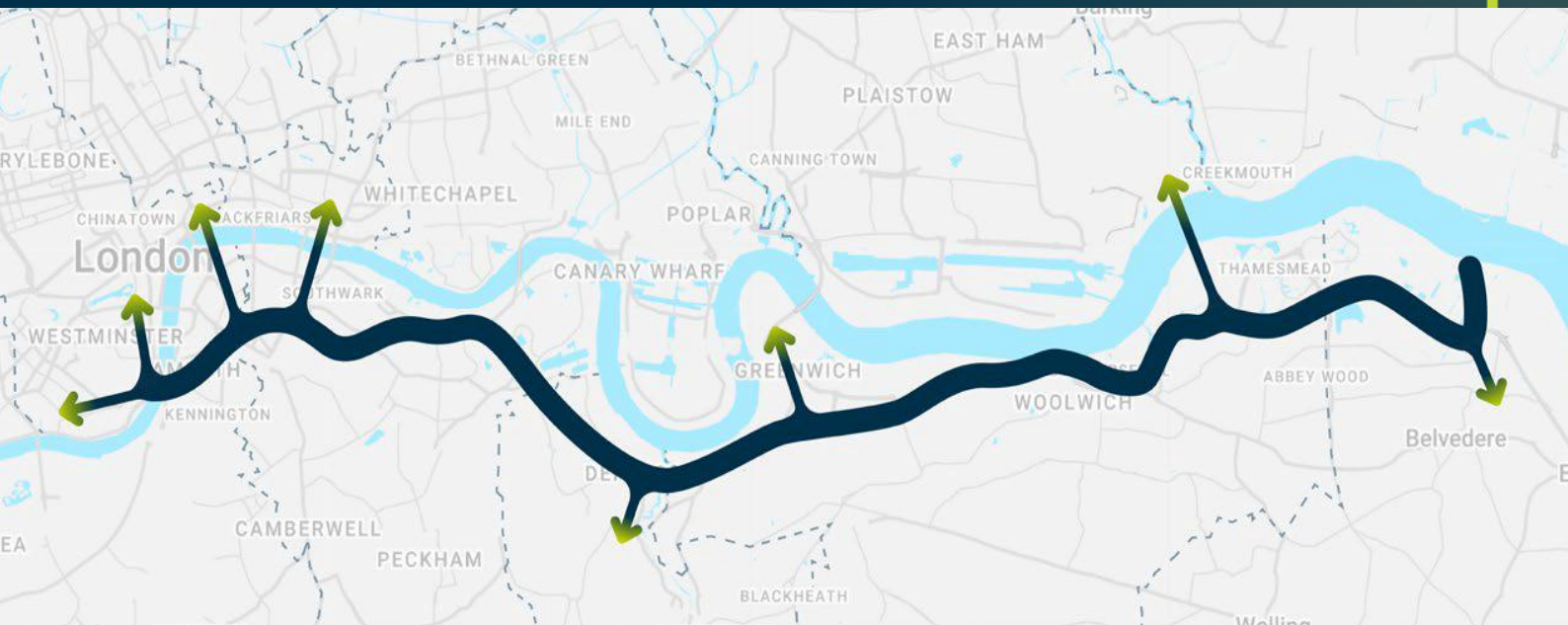
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Environmental Impact Assessment Scoping Report

Volume 1: Main Report

Chapter 8: Ecology



Cory Environmental Holdings Limited

July 2026

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8. Ecology

8.1 Introduction

- 8.1.1 This chapter identifies the potential for likely significant effects of the Proposed Scheme on ecology. It sets out the proposed methodology for the ecology assessment in the Environmental Statement (ES) and identifies those effects that can be scoped into or out of the assessment of likely significant effects.
- 8.1.2 This chapter should be read in conjunction with **Volume 1, Chapter 6: Air Quality** and **Volume 1, Chapter 13: Marine Environment** of this Scoping Report.

8.2 Study Area

- 8.2.1 The assessment will consider the potential for the Proposed Scheme to result in likely significant effects on ecological features (i.e. designated sites, habitats, ecosystems, species populations or assemblages).
- 8.2.2 The EIA Scoping Boundary¹ is shown in **Volume 2, Figure 1-1 EIA Scoping Boundary**. The overall Study Area for Ecology has been derived by applying buffer zones to the EIA Scoping Boundary, so creating Study Areas for each appropriate grouping of ecological features (e.g. statutory designated sites). Based on the location of the Proposed Scheme, and its predominately below ground nature, the potential for likely significant effects upon the following ecological features has been considered as part of the scoping assessment:
- a. National Site Network sites (i.e. Special Protection Areas (SPA), Special Areas of Conservation (SAC), Candidate Special Protection Areas (cSPA) and Candidate Special Areas of Conservation (cSAC) and those treated of equal status under UK Government policy (i.e. Ramsar sites, proposed SAC, potential SPA)² within 10km of the EIA Scoping Boundary (hereafter collectively termed 'Habitats Sites');
 - b. Other statutory designated sites for nature conservation (i.e. Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), and Local Nature Reserves (LNR)) within 5km of the EIA Scoping Boundary; and
 - c. Non-statutory designated sites for nature conservation (e.g. Local Wildlife Sites (LoWS), previously known as Sites of Importance for Nature Conservation (SINC) or County Wildlife Sites), protected and/or notable habitats and species within 2km of the EIA Scoping Boundary

¹ All references to 'EIA Scoping Boundary', correspond to the area shown in **Volume 2, Figure 1-1**.

² It is noted that prior to the UK's withdrawal from the European Union these site designations were previously collectively termed 'Internationally designated' or 'European sites' and are still commonly referred to as such.

(extended to 5km for bats and sites, habitats and species of importance for aquatic ecology).

- 8.2.3 The extent of the Ecology Study Areas are shown in **Volume 2, Figure 9-1 Ecology Designated Sites and Search Area**. Ecological features outside of these Study Areas are unlikely to be affected by the Proposed Scheme and, therefore, are not considered in this report.
- 8.2.4 This chapter considers potential for likely significant effects on aquatic ecology features for watercourses (excluding the River Thames and its tidal tributaries). Designated sites, habitats and species related to the marine environment, (including the River Thames, its tidal tributaries and hydrologically linked habitats) are further considered within **Volume 1, Chapter 13: Marine Environment** of this Scoping Report.
- 8.2.5 No likely significant effects on ecological features are expected in areas where the London Strategic Heat Main is 5 to 40m below ground and therefore these, subterranean, areas will be excluded from the Study Area of the ES. As stated in **Volume 1, Chapter 19: Water Environment and Flood Risk** of this Scoping Report there are no Groundwater Dependent Terrestrial Ecosystems (GDTE) within the EIA Scoping Boundary and likely significant effects on the closest areas of GDTE at Inner Thames Marshes SSSI approximately 1.7km to the east of the EIA Scoping Boundary have been scoped out.
- 8.2.6 The potential for likely significant effects on features of geological interest is further considered within **Volume 1, Chapter 9: Ground Conditions** of this Scoping Report.

8.3 Relevant Legislation, Planning Policy and Guidance

- 8.3.1 **Volume 1, Chapter 4: Legislative and Planning Policy Context** provides an overview of all relevant legislation and planning policy context.
- 8.3.2 Legislation, planning policy and guidance relating to the ecology assessment is outlined below.

Legislation

- 8.3.3 The applicable legalisation includes:
- a. The Conservation of Habitats and Species Regulations 2017 (as amended) (Ref 8.1);
 - b. Environment Act 2021 (Ref 8.2);
 - c. Wildlife and Countryside Act 1981 (as amended) (Ref 8.3);
 - d. Natural Environment and Communities Act 2006 (Ref 8.4);
 - e. Countryside and Rights of Way Act 2000 (Ref 8.5);

- f. Animal Welfare Act 2006 (Ref 8.6);
- g. Protection of Badgers Act 1992 (Ref 8.7);
- h. The Wild Mammals (Protection) Act 1996 (Ref 8.8);
- i. The Hedgerows Regulations 1997 (Ref 8.9);
- j. The Invasive Alien Species (Enforcement and Permitting) Order 2019 (as amended) (Ref 8.10);
- k. Salmon and Freshwater Fisheries Act 1975 (Ref 8.11);
- l. The Eels (England and Wales) Regulations 2009 (Ref 8.12); and
- m. The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (Ref 8.13).

National Planning Policy

Overarching National Policy Statement for Energy

- 8.3.4 The relevant policies from the Overarching National Policy Statement for Energy (NPS EN-1) for ecology are summarised below and within **Table 8-1**. These documents have informed the assessment methodology, identification of sensitive receptors and Study Area for the ecology assessment.

Table 8-1: National Policy Statement - Ecology

National Policy	Summary of Requirements	Relevance to the Assessment
National Policy Statement for Energy (EN-1) (Ref 8.14) Section 4.6 Environmental and Biodiversity Net Gain	Sets out the Government's policy for delivery of major energy infrastructure and will be the primary basis for decision making. NPS EN-1 includes the following policy statements which are of key relevance for the assessment of likely significant effects on ecological receptors: • Paragraph 4.6.1; • Paragraph 4.6.6; • Paragraph 4.6.10; • Paragraph 4.6.11; and • Paragraph 4.6.12.	Projects are expected to follow the mitigation hierarchy (avoid; reduce/mitigate; compensate) but also consider opportunities for enhancement. Biodiversity net gain (BNG) should be targeted with a preference for 'on-site' delivery, and habitat creation that aligns with the goals of the relevant LNR.
National Policy Statement for Energy (EN-1) (Ref 8.14) Section 5.4 Environmental and Biodiversity Net Gain	Paragraph 5.4.4; and Paragraph 5.4.5.	An Habitat Regulation Assessment (HRA) should be undertaken to consider the likely significant effects of the Proposed Scheme on Habitats Sites³. An HRA Stage 1 (Likely Significant Effects Test) report has been prepared as a stand-alone document and will be submitted to Natural England for consideration.

³ Formerly referred to as European Sites. Consisting of Special Areas of Conservation; Special Protection Areas; Ramsar sites and respective potential/candidate sites.

National Policy	Summary of Requirements	Relevance to the Assessment
	Paragraph 5.4.8	Mitigation hierarchy should be implemented with the aim of avoiding effects on SSSI. Where this is not practicable it should only be permitted where benefits will clearly outweigh the adverse effects.
	Paragraph 5.4.13 Paragraph 5.4.14	The assessment should include consideration of likely significant effects on non-statutory designated sites.
	Paragraph 5.4.16	The assessment should clearly identify if likely significant effects on areas of irreplaceable habitat are expected. None are expected at this stage.
	Paragraph 5.4.18	The assessment should consider designated sites, habitats and species.
	Paragraph 5.4.22	The Proposed Scheme should target BNG whilst taking account of the type, scale and location of the project.
	Paragraph 5.4.23	Requirement to consider effects upon migratory species.
	Paragraph 5.4.26; and Paragraph 5.4.27.	Requirement to consider effects on Habitat Sites and provide information for Natural England to consider potential for adverse effects. An HRA Stage 1 (Likely Significant Effects Test) report has been prepared as a stand-alone document and will be submitted to Natural England for consideration.

National Policy	Summary of Requirements	Relevance to the Assessment
	Paragraph 5.4.35; and Paragraph 5.4.36.	In delivering biodiversity gains the Proposed Scheme should seek reasonable opportunities to realise other environmental benefits as integral elements of the project.
	Paragraph 5.4.51	No significant adverse effects on National Site Network site are expected. An HRA Stage 1 (Likely Significant Effects Test) report has been prepared as a stand-alone document and will be submitted to Natural England for consideration.
	Paragraph 5.4.52	Planning obligations may be used to secure mitigation and enhancement.
	Paragraph 5.4.54	Effects on non-statutory sites will be considered but it is noted that these should not alone be a reason for refusal of consent.
	Paragraph 5.4.56; and Paragraph 5.4.57.	The assessment will include all necessary information to demonstrate favourable conservation status of impacted species populations can be maintained.

National Planning Policy Framework (NPPF)

- 8.3.5 The following paragraphs from the NPPF (Ref 8.14) are considered relevant to the assessment of the likely significant effects on ecological features and will be considered in the assessment:
- a. Paragraph 187; and
 - b. Paragraph 195.
- 8.3.6 The following policies from the draft NPPF (Ref 8.15) issued for consultation in December 2025 are considered relevant to the assessment of the likely significant effects on ecological features and will be considered in the assessment:
- a. N2: Improving the Natural Environment; and
 - b. N6: Areas of Particular Importance for Biodiversity.

Local and Neighbourhood Planning Policy

- 8.3.7 The local planning and neighbourhood policy listed in **Table 8-2** are considered relevant to the assessment of likely significant effects presented in this chapter.

Table 8-2: List of Relevant Local and Neighbourhood Policy - Ecology

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
Greater London Authority (GLA)	London Plan (2021) (Ref 8.16) • Policy G5 Urban Greening • Policy G6 Biodiversity and access to nature • Policy G7 Trees and woodlands	Major development proposals should contribute to the greening of London by including urban greening as a fundamental element of site and building design. SINC should be protected and where harm to a SINC is unavoidable, the mitigation hierarchy should be applied.
London Borough of Bexley (LBB)	Bexley Local Plan (2023) (Ref 8.17) • Policy SP8 Green infrastructure including designated green belt • Policy SP9 Protecting and enhancing biodiversity and geological assets • Policy DP20 Biodiversity and geodiversity in developments	Bexley's green infrastructure including sites of biodiversity interest should be protected, enhanced, restored and promoted as valuable resources. The mitigation hierarchy should be followed and biodiversity enhancement incorporated where practicable.
Royal Borough of Greenwich (RBG)	Royal Greenwich Local Plan: Core Strategy with Detailed Policies (2014) (Ref 8.18) • Policy OS4 Biodiversity • Policy OF(f) Ecological factors • Policy OS(g) Green and river corridors	Presumption against development of SSSI, SINC LNR. Biodiversity enhancements encouraged in particular in areas deficient in accessible wildlife areas.

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	Royal Borough of Greenwich Draft Local Plan: Regulation 18 Consultation Version December 2025 (2025) (Ref 8.19) • Policy EN3 Biodiversity	Developments on SINC ancient woodland, or other sensitive habitats, will not be supported. All developments must maximise BNG wherever possible, going beyond the statutory minimum of 10% where feasible and appropriate, taking into account site context, scale, and viability.
London Borough of Lewisham (LBLe)	New Lewisham Local Plan 2020-2040 (2025) (Ref 8.20) • Policy GR3 Biodiversity and Access to Nature • Policy GR5 Urban greening and trees	LBLe SINC should be safeguarded. Major development proposals adjacent to a SINC should consult the Lewisham Biodiversity Partnership to assist with the assessment of likely significant effects on the site
London Borough of Southwark (LBS)	The Southwark Plan (2022) (Ref 8.21) • Policy 59 Green infrastructure • Policy P60 Biodiversity • Policy P61 Trees	Development must contribute net gains in biodiversity through avoidance, enhancing the existing site network and incorporating green infrastructure. Any shortfalls must be secured off site.
London Borough of Lambeth (LBLa)	Lambeth Local Plan 2020-2035 (2021) (Ref 8.22) • Policy EN1 Open space, green infrastructure and biodiversity • Policy Q10 Trees	Policy reinforces the protections for non-statutory designated site network including proposed sites. Unless adequate mitigation or compensatory measures of equivalent or better biodiversity value are included, appropriate to the nature conservation value of the assets involved.

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
		In the case of SINC, the mitigation hierarchy in London Plan policy G6C will apply. In areas of access to nature deficiency provide access to nature improvements or where not practicable on-site a payment in lieu.
	South Bank & Waterloo Neighbourhood Plan 2017 - 2032 (Ref 8.23) Policy P1 and Policy P3 Green infrastructure, open space and air quality	Green roofs and green walls are encouraged where appropriate. However, opportunities for green roofs and green walls are likely to be limited within the Proposed Scheme.
	Kennington, Oval and Vauxhall Neighbourhood Plan 2035 (Ref 8.24) Policy KOV1 Local green spaces	Promotes the value of local open spaces for biodiversity.
London Borough of Barking and Dagenham (LBBD)	London Borough of Barking and Dagenham Local Plan 2020-2037 (2024) (Ref 8.25) - Policy DMNE 2: Urban greening - Policy DMNE 3 Nature Conservation and Biodiversity	Development should not lead to adverse effects on the integrity of Epping Forest SAC or loss or degradation of SINC. Major development proposals are required to contribute to the strategic network of green and blue spaces; contribute to improving local access to nature; submit an ecology assessment

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	Policy DMNE 5 Trees	demonstrating biodiversity enhancements that contribute to the objectives of the Council's strategies.
London Borough of Tower Hamlets (LBTH)	Tower Hamlets Local Plan 2031: Managing Growth and Sharing Benefits (2020) (Ref 8.26) - Policy S.ES1 Protecting and enhancing our environment - Policy D.ES3 Urban greening and biodiversity	Proposals should protect and enhance the natural environment with the aim of meeting the objectives of the latest Tower Hamlets Local Biodiversity Action Plan and Thames River Basin Management Plan and improving opportunities to experience nature, in particular in deficient areas Major development is required to submit an ecology assessment demonstrating biodiversity enhancements that contribute to the objectives of the latest Tower Hamlets Local Biodiversity Action Plan (Ref 8.27) and the Thames River Basin Management Plan (Ref 8.28).
City of London (CoL)	City of London Local Plan (2015) (Ref 8.29) - Policy DM10.2 Design of green roofs and walls - Policy DM15.7 Noise and light pollution - Policy DM 19.2 Biodiversity and urban greening	The maximum practicable coverage of green roof should be achieved. Extensive green roofs are preferred. Installation of green walls in appropriate locations is encouraged. However, opportunities for green roofs and green walls are likely to be limited within the Proposed Scheme. Developers to consider effects of development on noise and light.

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	Emerging Draft London Plan - City Plan 2040 (Ref 8.30) • Policy OS2 Urban Greening • Policy OS3 Biodiversity • Policy OS4 Biodiversity Net Gain • Policy OS5 Trees	Development proposals should incorporate measures to enhance biodiversity. Major developments are required to delivery BNG to protect and enhance biodiversity.
City of Westminster (CoW)	City of Westminster: City Plan 2019-2040 (2026) (Ref 8.31) • Policy 38. Green infrastructure	SINC, priority habitats and other ecological features outside of the SINC network will be protected. Developments should achieve BNG, wherever feasible and appropriate.
	Victoria Neighbourhood Plan 2025-2040 (Ref 8.32) • Policy VNG-01: Biodiversity and urban greening	Development proposals should when meeting BNG requirements take opportunities to provide and enhance biodiversity on-site in the first instance and where this is not feasible should be delivered as close to the site as feasible and within the Neighbourhood Plan area.
Royal Borough of Kensington and Chelsea (RBKC)	Royal Borough Kensington and Chelsea Local Plan (2024) (Ref 8.33) • Policy GB14 Green and Blue Infrastructure	Development proposals are required to maximise opportunities to incorporate green infrastructure with arrangements in place for its long-term maintenance.

Local Authority	Relevant Local Neighbourhood Policy	and Relevance to the Assessment
	• Policy GB16 Trees	Green infrastructure and landscaping must be designed to optimise the benefit to wildlife habitat including BNG.

Relevant Guidance

- 8.3.8 The following guidance documents are considered relevant to the assessment of the likely significant effects on ecological features and will be considered in the assessment:
- a. Natural Environment Planning Practice Guidance (Ref 8.34);
 - b. Biodiversity Net Gain (BNG) Planning Practice Guidance (Ref 8.35);
 - c. A Green Future: Our 25-year Plan to Improve the Environment (Ref 8.36);
 - d. UK Biodiversity Framework 2024 (Ref 8.37);
 - e. Natural England and Department for Environment, Food and Rural Affairs (DEFRA) Standing Advice (protected species) (Ref 8.38);
 - f. Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment (EclA) in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. (Ref 8.39);
 - g. Biodiversity Net Gain: Good Practice Principles for Development (Ref 8.40);
 - h. Statutory Biodiversity Metric (SBM) Tools and Guides (Ref 8.41); and
 - i. Bat Surveys for Professional Ecologists: Good Practice Guidelines (Ref 8.42).

8.4 Baseline Conditions and Future Baseline

Data Sources

- 8.4.1 An initial review of baseline conditions to inform this Scoping Report has involved reference to the following external data sources:
- a. Multi-Agency Geographic Information for the Countryside (MAGIC) website (Ref 8.43);
 - b. Greenspace Information of Greater London - Discover London Online Data Portal (Ref 8.44);
 - c. Natural England Designated Sites View website (Ref 8.45);
 - d. Joint Nature Conservation Committee (JNCC) Special Protection Areas (SPAs): List of Sites (Ref 8.46);
 - e. JNCC Special Areas of Conservation (Ref 8.47);
 - f. Local Nature Recovery Strategy for London (Ref 8.48); and
 - g. Publicly available aerial photography.

8.4.2 No field survey work has been undertaken to date.

Designated Sites

Internationally Designated Sites

- 8.4.3 Internationally designated sites located within 10km of the EIA Scoping Boundary are shown in **Table 8-3** and displayed within **Volume 2, Figure 9-1: Ecological Designated Sites**.
- 8.4.4 There are three SAC, one SPA and one Ramsar site within 10km of the EIA Scoping Boundary. However, the closest site is 6.3 kilometres distant.
- 8.4.5 There are no known functional linkages (including hydrological) between the habitats and species that the internationally designated sites support and the ecological features that may be affected by the Proposed Scheme.

Table 8-3: Internationally Designated Sites within 10km of the EIA Scoping Boundary

Site name and designation	Reason for designation	Distance and orientation from EIA Scoping Boundary
Wimbledon Common SAC	Mosaic of habitats including broadleaved woodland, acid grassland, dry and wet heath, scrub and mire. Stronghold for the stag beetle (<i>Lucanus cervus</i>) and supports small important areas of heathland a scarce habitat in the London Area.	6.30km to the southwest
Lee Valley SPA and Ramsar	Overwintering populations of bittern (<i>Botaurus stellaris</i>), northern shoveller (<i>Anas clyptera</i>) and gadwall (<i>Anas strepera</i>).	6.56km to the north
Richmond Park SAC	Mosaic of habitats including acid grassland, marshy grassland and neutral grassland as well as open parkland and wood pasture. The area of unimproved acid grassland within the park is the largest in Greater London. The parkland supports many ancient and veteran trees, and the	7.25km to the southwest

Site name and designation	Reason for designation	Distance and orientation from EIA Scoping Boundary
	SAC is one of four primary sites in England for the stag beetle.	
Epping Forest SAC	Mosaic of habitats of high nature conservation value characteristic of ancient wood pasture including ancient semi-natural woodland, old grassland plains, wet and dry heathland and scattered wetlands, including rivers, streams and bogs.	9.17km to the northeast

Nationally Designated Sites

- 8.4.6 Nationally designated sites located within a 5km radius of the EIA Scoping Boundary are shown in **Table 8-4** and displayed within **Volume 2, Figure 9-1: Ecological Designated Sites**.
- 8.4.7 There are five SSSI within the Study Area. However, two of these (Gilbert's Pit SSSI and Abbey Wood SSSI) are designated on the basis of features of geological interest. Therefore, they are not considered further and are scoped out of this assessment.
- 8.4.8 The closest SSSI to the EIA Scoping Boundary is Inner Thames Marshes SSSI, located 1.67km to the east. This SSSI is designated on the basis of its grazing marsh with lagoons and brackish drains which support a diverse ornithological interest, and a range of plant species.
- 8.4.9 Parts of the EIA Scoping Boundary where Maintenance and Access Points (MAP) could be located are adjacent to the River Thames and within 2km of the Inner Marshes SSSI. Foreshore habitats in proximity to these worksites have the potential to provide supporting habitat to the breeding and wintering bird populations that are a reason for designation of the SSSI. Wetland Bird Survey (WeBS) data available for relevant sections of the River Thames will be reviewed to inform the ecological assessment.
- 8.4.10 The requirement for further bird surveys of sections of the foreshore where MAP are adjacent to the River Thames will be discussed and agreed with Natural England. Where necessary, further bird surveys will be undertaken to

confirm if disturbance during construction is likely to result in adverse likely significant effects upon species for which the SSSI is designated. Details of further surveys proposed (one year of data in each case) are as follows:

- a. Monthly breeding bird surveys visits will be undertaken with monthly visits between March and July in accordance with the breeding bird survey methodology detailed in Bibby *et al.* (Ref 8.49) and Gilbert *et al.* (Ref 8.50).
- b. Wintering bird surveys will be undertaken between October and March, incorporating monthly high water and low water counts.

8.4.11 There is a total of 34 Local Nature Reserves (LNR) located within the 5km of the Study Area. The EIA Scoping Boundary currently includes the Crossness LNR which is designated on the basis of its network of ditches, open water, scrub and rough grassland. These habitats support notable populations of water vole, birds and invertebrates. However, the depth of the underground pipeline network associated with the Proposed Scheme will be between 5 to 40m below ground and therefore no effects due to the underground pipeline network of the Proposed Scheme are expected.

8.4.12 A further four LNR are located within 500m of the Scoping Boundary (Maryon Wilson Park & Gilbert's Pit LNR; Godfrey's Nature Park LNR; Battersea Park LNR; and Lesnes Abbey Woods LNR).

Table 8-4: Nationally Designated Sites within 10km of the EIA Scoping Boundary

Site name and designation	Reasons for designation	Distance and orientation from EIA Scoping Boundary
Crossness Local Nature Reserve (LNR)	Network of ditches and open water, scrub and rough grassland. The reserve is a water vole stronghold, and over 130 different species of bird have been recorded at Crossness LNR. A number of rare aquatic and terrestrial invertebrates are present, as well as some important plant species.	The Proposed Scheme will pass below the LNR, working areas above ground may be located within and/or adjacent to the LNR.
Maryon Wilson Park & Gilbert's Pit LNR	Areas of scrub, woodland and grassland. A small stream and associated areas of wet grassland	25m to the south

Site name and designation	Reasons for designation	Distance and orientation from EIA Scoping Boundary
	support a number of locally rare plants, including bristle club-rush and bog stitchwort, both very rare in London.	
Gilbert's Pit SSSI	Gilbert's Pit is a geological SSSI, with an excellent exposure of the Lower Tertiary Sequence.	35m to the south
Godfrey Nature Park LNR	A mixture of rough grassland, scrub and ruderal vegetation occupy the site.	130m to south
Battersea Park Nature Areas LNR	Supports a range of woodland bird species including blackcap and bullfinch. Invertebrates include 20 species of butterfly including white letter hairstreak, stag beetles and lesser stag beetles.	320m to the south
Lesnes Abbey Woods LNR	Ancient woodland and coppice. Site supports stag beetles, song thrush, bats and newts as well as a wide range of other woodland and parkland birds, animals and insects.	480m to the south
Russia Dock Woodland LNR	Mixture of habitats, including ponds and woodland. Created on site of former Surrey Docks in the 1980's.	500m northeast
Abbey Wood SSSI	Geological SSSI Abbey Wood containing remains of a diverse mammal assemblage of early Tertiary age.	750m to the south
Ripple LNR	Birch woodland, scrub and grassland supporting species including pyramidal and southern marsh orchids, grey club rush and wild basil.	750m to the south

Site name and designation	Reasons for designation	Distance and orientation from EIA Scoping Boundary
Stave Hill Ecology Park LNR	Mixture of habitats including ponds and woodland in an urban setting.	770m to the northeast
Scratton's Ecopark and Extension LNR	Former marshland and allotments with small areas of recently planted woodland areas of open grass, leaving blocks of bramble and preserving existing shrubs and trees.	990m to the north
Mudchute Park Farm LNR	Grazing pastures, wildflower banks, woodland, hedgerows, ponds and a nature trail.	1.03km to the north
Brookmill Road LNR	Habitats include woodland, grassland and ponds. Flowers include cowslip and wild marjoram. Frogs and smooth newts are found in the ponds. Birds include blackcap, long-tailed tit and lesser whitethroat.	1.34km to south
Beam Valley (Environment Agency) LNR	Consists of neutral grassland, scrub and the former Romford Canal.	1.45km to the northeast
Beam Valley LNR	Consists of former derelict land, woodland and scrub, neutral and acid grasslands, former gravel pits and River Beam and Wantz Stream.	1.61km to the northeast
Inner Thames Marshes SSSI	Grazing marsh with lagoons and brackish drains supporting diverse range of plant species and diverse ornithological interest including both breeding birds and wintering wildfowl of international importance.	1.67km to the east

Site name and designation	Reasons for designation	Distance and orientation from EIA Scoping Boundary
Rainham Marshes LNR	The grasslands, fringing reedbeds and network of ditches here support a number of rare plants, insects and birds and support a large population of water vole.	1.67km to the east
St John's Wood Church Grounds LNR	Compost, log piles, wildlife hedge, wildflower glade, thistle meadow and mixed woodland.	1.87km to the north
Camley Nature Park LNR	The reserve provides natural habitat for birds, butterflies, amphibians and a rich variety of plant life.	2.02km to the north
Oxleas/Shooter Hill Woodland LNR	The woods have large areas of oak and hazel. A number of plants of restricted distribution are present including wild service tree (<i>Sorbus torminalis</i>), guelder rose (<i>Viburnum opulus</i>), southern woodrush (<i>Luzula forsteri</i>) and buckthorn (<i>Rhamnus cathartica</i>). There is a wide variety of fungi and a rich invertebrate fauna. Ponds contain a population of palmate newt, now the rarest native amphibian in London.	2.32km to the south
Ingrebourne Marshes SSSI	Largest and one of the most diverse coherent areas of freshwater marshland in Greater London. Also supporting a rich assemblage of associated invertebrates and breeding birds.	2.52km to the east
Nunhead Cemetery LNR	Nature reserve supporting a diverse range of both native and exotic plants.	2.53km to the southwest

Site name and designation	Reasons for designation	Distance and orientation from EIA Scoping Boundary
Mayesbrook Park, South LNR	Nature reserve and a newly restored river landscape. Habitats include adjacent recently planted woodland and rough grassland.	2.57km to the south
Ackroyd Drive LNR	Site forms a green corridor between Cemetery Park LNR and Mile End Park LNR.	2.66km to northeast
Ingrebourne Valley LNR	Local nature reserve supporting secondary woodland, rough grassland, acid grassland, river, marshes, wetland grazing, and reedbeds. Important for a wide range of plants, animals and birds.	2.78km to the east
Parsloes's Park Squatts LNR	Neutral and small pockets of acid grassland with historic hedge (part of Parsloes Manor).	2.81km to the south
Clapham Common LNR	Mosaic of woodland, meadow grasslands, ponds with marginal reedbeds, and species-rich hedges. Diverse populations of birds and bats.	2.9km to the south
Tower Hamlets Cemetery Park LNR	Ancient broadleaved woods and created glades sown with wildflowers.	2.93km to northeast
Barnsbury Wood LNR	Originally a garden that has developed to woodland.	3.10km to northeast
Adelaide LNR	Meadow, pond, areas of scrub and small woodland.	3.15km to north
Sutcliffe Park LNR	Large, tree-lined park in the western part of Eltham comprising areas of open grassland, meadow and wetland.	3.43km to the south

Site name and designation	Reasons for designation	Distance and orientation from EIA Scoping Boundary
East Brookend Country Park LNR	Formerly land filled derelict land capped and sown with wildflower grassland mixes and more than 50,000 small trees (whips).	3.55km to the northeast
One Tree Hill LNR	Site with many ancient trees.	3.59km to the southwest
The Chase – Barking LNR	Diverse mix of habitats. Shallow wetlands, woodland, grassland and the River Rom.	3.87km to the northeast
Barn Elms Wetland Centre SSSI	A mosaic of different wetland habitats created on site of redundant artificial reservoir basins, supporting a diverse assemblage of breeding birds.	3.87km to the west
Belsize Wood LNR	Woodland supporting diverse range of invertebrates and birds.	4.16km to north
Danson Park Bog Garden LNR	A large lake with a bog garden at its western end which is part of the lake.	4.52km to the south
Wormwood Scrubs LNR	Habitats include woodland (plantation), scrub and grassland. Animals include common lizards, over 100 species of bird and 20 species of butterfly.	4.75km to the northwest
Leg of Mutton Reservoir LNR	Former reservoir used by ducks and other water birds for breeding.	4.98km to the west

Non-Statutory Designated Sites

- 8.4.13 Based on publicly available data, the EIA Scoping Boundary intersects with the SINC identified in **Table 8-5**, and displayed within **Volume 2, Figure 9-1: Ecological Designated Sites**. The location of above ground works is yet to be determined, and it is likely that in many cases no above ground works would be required.

Table 8-5: Non-Statutory Designated Sites within or adjoining the EIA Scoping Boundary

Site name and designation	Proximity to Scoping Boundary	
	EIA Scoping Boundary within SINC	EIA Scoping Boundary adjacent or in close proximity to SINC
River Thames and Tidal Tributaries Site of Metropolitan Importance for Nature Conservation (SMINC)	✓	
Archbishops Park Site of Local Importance for Nature Conservation (SLINC)	✓	
Geraldine Mary Harmsworth Park SINC	✓	
Waterloo Millenium Green SLINC	✓	
Southmere Park & Yarnton Way/Viridion Way Sites of Importance to Nature Conservation – Borough Importance Grade 2 (SBINC-G2)	✓	
Erith Marshes SMINC	✓	
The Ridgeway SINC		
Thamesview Golf Course Site of Importance to Nature Conservation – Borough Importance Grade 1 (SBINC-G1)	✓	
Belvedere Dykes SBINC–G1		✓
Southwark Park SINC	✓	
King Stairs Gardens SINC	✓	
St Mary Magdalane Churchyard SINC		✓
Christchurch Gardens SINC		✓

Site name and designation	Proximity to Scoping Boundary	
	EIA Scoping Boundary within SINC	EIA Scoping Boundary adjacent or in close proximity to SINC
Crossness Sewage Treatment Works Pond SBINC-G2		✓

- 8.4.14 The closest area of ancient woodland to the EIA Scoping Boundary is Lesnes Abbey Woods, located approximately 550m to the south of the EIA Scoping Boundary.
- 8.4.15 A full desk study search for non-statutory designated sites will be completed in support of the ES.
- 8.4.16 Where MAP sites or other above ground infrastructure are located either within a SINC or near a SINC (within 50m) there is potential for habitat degradation or displacement/disturbance of species. These sites will be scoped in for further assessment in relation to likely significant effects arising from for all habitat degradation or displacement/disturbance of species impacts.
- 8.4.17 The potential for effects on the River Thames and Tributaries SMINC is considered within **Volume 1, Chapter 13: Marine Environment**. No significant adverse effects are expected.
- 8.4.18 Remaining SINC that are located within the surrounding 2km of the Study Area will be scoped out of the assessment, as works will be undertaken at a depth of approximately 5 to 40m below ground with any above ground works at a sufficient distance to ensure that no indirect effects occur (e.g. through heat transfer, noise or vibration).

Habitats

- 8.4.19 The majority of works for the Proposed Scheme will be located within, or near, the existing buildings and road network within areas of existing hardstanding and/or roadside landscape planting. In a small number of locations, construction sites for the MAP may support areas of semi-natural habitat, including areas within or adjacent to sites designated based on their value for nature conservation.

- 8.4.20 There are a range of Habitats of Principal Importance⁴ located within the vicinity of the Proposed Scheme and field survey will seek to confirm the accuracy of available on-line datasets.

Species

Bats

- 8.4.21 The London SHM is likely to pass below existing buildings with bat roosting potential. However, as the pipeline will maintain a depth below ground of a minimum of 5m, no significant effects are expected on buildings located above the London SHM.
- 8.4.22 Currently no above ground works to existing buildings/structure are expected. However, construction sites for MAP will be in proximity to existing buildings and mature trees that are likely to have the potential to support roosting bats. Further survey will be required to confirm the bat roosting potential of these trees/buildings (see **Table 8-6**).
- 8.4.23 The majority of the EIA Scoping Boundary comprises areas dominated by hardstanding that are likely to be of negligible importance to foraging/commuting bats.
- 8.4.24 However, some areas of the EIA Scoping Boundary contain, or are in close proximity to, adjoining areas of more suitable habitat such as those sites within/adjoining Crossness LNR and Erith Marshes SMINC, and there is the potential for any nighttime works to result in disturbance. The requirement for further survey at these locations will be considered and bat activity survey undertaken, where required, in accordance with Bat Conservation Trust guidance (Ref 8.51).

Birds

- 8.4.25 Areas of the EIA Scoping Boundary and therefore potential MAP locations are located adjacent to the River Thames and within 2km of the Inner Marshes SSSI. As a result, wintering and breeding bird surveys may be required at these locations to inform the assessment of likely significant effects on the Inner Thames Marshes SSSI.
- 8.4.26 Above ground works in the remainder of the EIA Scoping Boundary would generally be in highly urbanised areas which support limited semi-natural habitats and are likely to support common bird species of no more than local importance.

⁴ A Habitat of Principal Importance in England as listed under Section 41 of the Natural Environment and Rural Communities Act, 2006.

- 8.4.27 The LNR and SINC that contain areas of land within the EIA Scoping Boundary and those located adjacent to the River Thames are considered to have the potential to support more notable bird species. The requirement for further surveys will be reviewed following the completion of an extended UK Habitat Classification survey of any areas subject to above ground works.

Great Crested Newt

- 8.4.28 The EIA Scoping Boundary is located within areas of London that are not known to support great crested newt. Therefore, they are considered to be absent and are scoped out.

Water Vole/Otter

- 8.4.29 The Crossness LNR and Erith Marshes SMINC, sections of which are within the EIA Scoping Boundary, are known to support notable water vole populations and suitable habitat for otter. Currently it is expected that a buffer zone extending a minimum of 5m from the toe of the bank will be retained at existing ditches with potential to support water voles. Therefore, no effects on water vole or otter are expected, and no further survey is required.

Invasive Non-Native Plant Species (INNPS)

- 8.4.30 Habitats within the EIA Scoping Boundary have the potential to support INNPS. The extended UK Habitat Classification survey will include a targeted search for INNPS. Where stands are identified during these surveys, further species-specific surveys will be undertaken to confirm extent of INNPS stands and inform any required management during construction.

Terrestrial Invertebrates

- 8.4.31 Once areas of land have been identified for the siting of MAP, the suitability for terrestrial invertebrates will be assessed during the extended UK Habitat Classification survey. However, it is anticipated that most of the sites will be within areas of hardstanding and therefore it is expected that most sites will be of negligible importance.

Reptiles

- 8.4.32 Areas of land to be identified for the MAP and other above ground construction areas may support habitat suitable for common reptiles. The requirement for further surveys will be considered following initial habitat appraisal during the extended UK Habitat Classification survey. For small areas of suitable habitat, active displacement to adjoining areas of suitable habitat may be appropriate.

Badger

- 8.4.33 The areas of land to be identified for MAP and other above ground construction areas may support habitat suitable for badger. Further surveys

will be required to confirm the presence or likely absence of setts in those locations where the extended UK Habitat Classification survey identifies suitable habitat is present.

Future Baseline

- 8.4.34 The future baseline relates to known or anticipated changes to the existing ecological baseline prior to the proposed commencement of construction and operation in the absence of the Proposed Scheme.
- 8.4.35 Separately from the Proposed Scheme, Cory is developing a carbon capture and storage (CCS) project at Riverside Campus under the Cory Decarbonisation Project Order 2025 (SI2025/1227) (the 'Cory Decarbonisation Project'). The Cory Decarbonisation Project was granted development consent under the Planning Act 2008 in November 2025. The consented development will result in the loss of approximately 2ha of coastal and floodplain grazing marsh habitat located within the Crossness LNR and Erith Marshes SIN. The consented development will also involve works within the River Thames and Tidal Tributaries SMINC. While significant adverse residual effects arising from changes in lighting and noise are not expected, the consented development will alter the existing baseline. These changes in baseline conditions will be considered in the ecological assessment.
- 8.4.36 Most of the remaining land within the EIA Scoping Boundary is already developed, and those areas of greenspace currently present are predominately afforded formal nature conservation designations, with some management already actively incorporating nature conservation. Within these areas it is unlikely there will be any notable changes in management regimes and therefore it is reasonable to assume that if the Proposed Scheme does not proceed, the importance and distribution of ecological features identified in the existing baseline is unlikely to change significantly.
- 8.4.37 Trends in measured air quality over the past decade have seen a gradual improvement in the concentration of Nitrogen Dioxide (NO₂) (Ref 8.52), due to improvements in the emissions performance of new vehicles. It is expected that in the absence of the Proposed Scheme there will be a gradual ongoing reduction in NO₂ emissions, resulting in slightly improved future baseline conditions. This will be considered in the assessment of potential air quality impacts on ecological features.

8.5 Potential for Likely Significant Effects

Consideration of Habitats Sites

- 8.5.1 The Lee Valley SPA/Ramsar is designated for mobile bird species. However, the Proposed Scheme falls beyond the Impact Risk Zones (IRZ) for the qualifying species of the Lee Valley SPA/Ramsar.
- 8.5.2 Stag beetle is a reason for designation of the Wimbledon Common SAC; Richmond Park SAC and Epping Forest SAC. However, all are more than 6km from the Proposed Scheme and given the relatively limited dispersal capacity of stage beetle, loss of functionally linked land can be excluded.
- 8.5.3 With a Construction Environmental Management Plan (CEMP) in place no adverse effects on Habitats Sites through pollution (noise, visual, and water quality) or spread of invasive species are expected.
- 8.5.4 The potential increase in deposition of NO_x generated by increased traffic movements during construction of the Proposed Scheme on all Habitats Sites within the zone of influence has been considered, and based on the following factors no likely significant effects are expected:
- a. Construction works for the Proposed Scheme will be undertaken at distances that are remote from the Habitats Sites sensitive to atmospheric pollution, the nearest of which are Wimbledon Common SAC (approximately 6.3km to the southwest of the Proposed Scheme at its closest) and Epping Forest SAC (approximately 9.2km north of the Proposed Scheme at its closest). In both cases the Habitats Site is on the opposite side of the River Thames from the closest part of the Proposed Scheme.
 - b. The IRZ of most qualifying bird species in the Lee Valley SPA/Ramsar, South West London Waterbodies SPA/Ramsar, and Thames Estuary & Marshes SPA/Ramsar do not overlap with the extent of the Proposed Scheme, such that atmospheric pollution impacts in adjoining functionally linked habitats will not be an issue.
 - c. The Affected Road Network (ARN) associated with the Proposed Scheme is not close to any SAC designated for air quality sensitive habitats or plant species (e.g. the Richmond Park SAC, Wimbledon Common SAC and Epping Forest SAC). Given the location of the Proposed Scheme, construction traffic can reasonably be expected to access the site from the M25 to the east of London, or from the M25 then A10, M11 and/or A406 from the north of London, all of which are routes remote from Habitats Sites.

- d. Preliminary data on the anticipated construction traffic volumes indicate that these will be small, amounting to 44 Annual Average Daily Traffic (AADT) movements, only 75% of which will comprise Heavy Goods Vehicles (HGVs). This is far below the screening threshold requiring air quality modelling (HGV AADT of 200).

8.5.5 Based on the above considerations, the potential for likely significant effects on Habitats Sites during construction and operation has been scoped out and will not be considered further in the Ecology chapter of the ES.

Construction Phase

8.5.6 There is the potential for the following impacts on Important Ecological Features (IEF) during the construction phase:

- a. Land take that leads to habitat loss: permanent and/or temporary habitat loss.
- b. Construction impacts that lead to habitat degradation or alteration: fragmentation and/or habitat severance during site clearance/construction; shading; changes in water quality (e.g. pollution, sedimentation) or drainage; dust deposition or changes in air quality (excluding Habitats Sites).
- c. Direct mortality and harm to species during site clearance/construction.
- d. Disturbance or displacement of species: through noise and vibration, visual disturbance or lighting of sensitive habitats.
- e. Spread of invasive species either from or onto the land within the Proposed Scheme.

Operation Phase

8.5.7 There is the potential for the following impacts on IEF during the operation phase:

- a. Disturbance or displacement of species because of lighting, operational noise or maintenance activities.

Decommissioning Phase

8.5.8 The Proposed Scheme is intended to become part of London's critical infrastructure with no decommissioning proposed. However, if decommissioning were to be required, it is likely that minor works would be needed to remove above ground infrastructure. Underground pipelines are expected to be left in-situ to reduce adverse environmental effects. Habitat loss is unlikely to occur as a result of any decommissioning activities and any potential effects from disturbance would be reduced in line with good practice

measures to avoid any likely significant effects, considering the small scale of works required.

8.6 Assessment Methodology

Baseline Ecological Surveys

- 8.6.1 The final scope of further surveys will be informed by the identification of MAP locations, the outcome of initial habitat appraisals, and discussion with Natural England and local authorities. However, the currently expected survey scope is set out within **Table 8-6**.

Table 8-6: Proposed Baseline Ecological Surveys

Survey Type	Survey Methodology	Survey Extent	Survey Period
Extended UK Habitat Classification Survey (incorporating Statutory Biodiversity Metric (SBM) Condition Assessment and INNPS walkover)	UK Habitat Classification Version 2.0 (Ref 8.52) extended to include search for potential to support protected and/or notable species SBM Condition Assessment Version 1.0.2 (Ref 8.53)	MAP locations and locations of all other above ground works + 30m surrounding buffer	April to September
Bat Ground Level Assessment	Bat Conservation Trust Good Practice Guidelines (Ref 8.42)	Trees within areas of above ground works or surrounding 20m radius	January to December (Optimum: November to March)
Bat Preliminary Roost Assessment (Structures)	Bat Conservation Trust Good Practice Guidelines (Ref 8.42)	Buildings/ structures within areas of above ground works or surrounding 20m radius	January to December
Bat: Nighttime Bat Walkover Surveys	Bat Conservation Trust Good Practice Guidelines (Ref 8.42)	As required based on outputs of	April to October

Survey Type	Survey Methodology	Survey Extent	Survey Period
and Automated Detector Surveys		Extended UK Habitat classification	
Birds (Breeding Birds)	Monthly visit between March to July in accordance with Bibby <i>et al.</i> (Ref 8.49) and Gilbert <i>et al.</i> (Ref 8.50).	Works locations within 50m of the River Thames + those located within/adjacent to LNR/SINC	March to July
Birds (Wintering Birds)	Monthly high and low water visits during October to March (1 year) inclusive in accordance with Bibby <i>et al.</i> (Ref 8.49) and Gilbert <i>et al.</i> (Ref 8.50)	Works locations within 50m of the River Thames	October to March
Terrestrial invertebrates	Walkover survey by a specialist entomologist incorporating specimen collection via a range of methods	As required based on outputs of Extended UK Habitat Classification	April to September
Reptiles	Presence/absence survey based on Froglife Advice Sheet 10 (Ref 8.54)	As required based on outputs of Extended UK Habitat classification	April/May or September
Badger	Survey for field signs in accordance with Harris <i>et al.</i> (Ref 8.55)	As required based on outputs of Extended UK Habitat classification	January to December

Consideration of Ecological Impacts of Changes in Air Quality

- 8.6.2 The ecology assessment will utilise modelling to be undertaken in support of **Volume 1, Chapter 6: Air Quality** to consider the air quality impacts of construction traffic on statutory and non-statutory sites designated on the basis of nature conservation located within 50m of public roads used by construction traffic and up to 250m from areas of above ground construction activity once identified. These distances are based on Institute of Air Quality and Management guidance on the assessment on construction phase emissions (Ref 8.56) and air quality impacts (Ref 8.57).

Impact Assessment Methodology

- 8.6.3 The ecological assessment will be undertaken in accordance with the CIEEM's Guidelines for EclA in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (Ref 8.39). The aims of the ecological assessment are to:
- Identify IEF (i.e. designated sites, habitats, species or ecosystems) which may be impacted by the Proposed Scheme;
 - Provide a scientifically rigorous and transparent assessment of the likely significant ecological effects of the Proposed Scheme (effects may be positive or negative);
 - Facilitate scientifically rigorous and transparent determination of the consequences of the Proposed Scheme in terms of national, regional and local policies relevant to biodiversity and biodiversity conservation, where the level of detail provided is proportionate to the scale of the development and the complexity of its likely significant effects; and
 - Set out what steps will be taken to adhere to legal requirements relating to the relevant ecological features concerned.
- 8.6.4 The principal steps involved in the CIEEM approach (Ref 8.39) can be summarised as:
- Ecological features that are both present and might be affected by the Proposed Scheme will be identified (both those likely to be present at the time works begin and those predicted to be present at the commencement of construction) through a combination of targeted desk-based study and field survey work to determine the relevant baseline conditions;
 - The importance of the identified ecological features will be evaluated, placing their relative biodiversity conservation importance into geographic context, which is then used to define the relevant biodiversity features that need to be considered further;

- c. The changes expected to result as a consequence of the Proposed Scheme (i.e. the likely significant effects to relevant ecological features) will be identified and described. Established best-practice, legislative requirements or other incorporated design measures to reduce or avoid impacts will also be described and taken into account;
- d. The likely effects (positive or negative) on relevant IEF will then be assessed, and where possible quantified;
- e. Measures to avoid or reduce any likely significant effects, if possible, will then be developed in conjunction with other elements of the design (including mitigation for other environmental disciplines) and if necessary, measures to compensate for effects on features of biodiversity conservation importance will be included where avoidance and/or mitigation cannot occur or they have failed;
- f. Any residual effects of the Proposed Scheme (i.e. those remaining after consideration of all avoidance, mitigation and compensation proposed) will be reported; and
- g. Scope for ecological enhancement to be delivered as part of the Proposed Scheme will be considered.

8.6.5 It is not necessary in the assessment to address all habitats and species with potential to occur in the relevant Study Area. Instead, the focus will be placed upon those that are relevant i.e. ecological features that are considered to be important and potentially affected by the Proposed Scheme. The CIEEM guidelines (Ref 8.39) makes clear that there is no need to “*carry out detailed assessment of ecological features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable*”. This does not mean that efforts should not be made to safeguard wider biodiversity and requirements for this have been considered. National and local planning policy documents emphasise the need to achieve net gains for nature and that a core principle for planning is that it should contribute to conserving and enhancing the natural environment and reducing pollution. These considerations will be applied in the ES, through only carrying forward to full assessment those ecological features that are identified in the baseline to be of greater than local importance, and therefore according to the methodology are capable of generating significant effects, alongside those that require mitigation provision purely on the basis of their legislative protection.

8.6.6 Following assessment utilising the CIEEM methodology (Ref 8.39), to enable the results of the ecological assessment to be compared with those from other chapters of the ES, the residual effects will be equated to the comparable significance criteria that are utilised within other chapters of the ES.

Determining Importance of Ecological Features

- 8.6.7 Data received through consultation, desk-based assessments and field-based investigations will be used to allow features of ecological importance (or potential importance) to be identified, and the main factors contributing to their importance described and related to available guidance. Each ecological feature or resource will be subject to evaluation to assign a level of importance (or potential importance) within a defined geographical context using the following geographic scales of reference:
- a. International (i.e. European);
 - b. National (i.e. England);
 - c. Regional (i.e. Greater London);
 - d. District/Borough (i.e. LBB, RBG, LBLe, LBS, LBLa, LBBD, LBTH, CoL, CoW and RBKC);
 - e. Local (i.e. has value at the 'Site' level); and
 - f. Negligible (used where the value is lower than the Site level).
- 8.6.8 For the purposes of the scoping exercise only ecological features of at least local importance are considered as IEF that require assessment for potential significant effects. Other ecological features may also continue to be considered as deemed necessary, in order to consider potential legislative or policy implications of the Proposed Scheme.

Characterising Ecological Impacts and Effects

- 8.6.9 In accordance with the CIEEM guidelines (Ref 8.39), the terminology used within the EclA will draw a clear distinction between the terms 'impact' and 'effect'. For the purposes of the EclA, these terms are defined as follows:
- a. **Impact** – Actions resulting in changes to an ecological feature. For example, construction activities leading to the removal of a tree utilised as a bat roost; and
 - b. **Effect** – Outcome resulting from an impact acting upon the conservation status or structure and function of an ecological feature. For example, killing/injury of bats and reducing the availability of breeding habitat as a result of the loss of a bat roost may lead to an adverse effect on the conservation status of the population concerned.
- 8.6.10 Potential impacts (and, where relevant, resultant effects) will be characterised as follows:
- a. **Beneficial/adverse** – is the impact likely to be positive or negative;

- b. Magnitude** – the ‘size’ or ‘amount’ of an impact – this is determined on a quantitative basis where possible;
- c. Spatial extent** – the area or distance over which the impact occurs;
- d. Duration** – the time over which an impact is expected to last prior to recovery or replacement of the resource or feature will be state as accurately as possible. For the purposes of this assessment the following categories are utilised where relevant: short-term (several weeks to a few months), medium-term (several months to a year), long term (more than 1 year) and permanent. The duration of an effect may be longer than the duration of an activity or impact;
- e. Reversibility** – is the impact temporary or permanent. A reversible (temporary) impact is one from which recovery is possible or for which effective mitigation is both possible and enforceable; and
- f. Timing and frequency** – consideration of the point at which the impact occurs in relation to critical life-stages or seasons.

Significance Criteria

8.6.11 For each ecological feature, only those characteristics relevant to understanding the ecological effect of the Proposed Scheme and determining the significance will be described. The determination of the significance of effects will be made based on the predicted effect on the structure and function, or conservation status, of relevant ecological features, as follows:

- a. Not significant** – no effect on structure and function, or conservation status; and
- b. Significant** – structure and function, or conservation status is affected.

8.6.12 The CIEEM guidelines (Ref 8.39) state that:

- a. ‘For the purposes of EcIA a ‘significant effect’ is an effect that either supports or undermines biodiversity conservation objectives for ‘important ecological features’ (i.e. relevant ecological features) or for biodiversity in general’.....*
- b. In broad terms, significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution)’.*

8.6.13 For designated sites, the assessment will consider how the Proposed Scheme is likely to affect the conservation objectives for the site and/or its interest/qualifying features (i.e. the integrity of the site). For ecosystems, consideration will be given to if the proposals are likely to result in a change in ecosystem structure and/or function.

- 8.6.14 For species and habitats, the effects on individual habitats and species will be considered in relation to 'conservation status' which is defined in the CIEEM guidelines as follows:
- a. For habitats: conservation status is determined by the sum of the influences acting on the habitat that may affect its extent, structure and functions as well as its distribution and its typical species within a given geographical area.
 - b. For species: conservation status is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area.
- 8.6.15 In considering effects on conservation status, reference will be made to relevant available guidance on the existing conservation status of the feature. Such judgements will be based, wherever possible, on quantitative evidence. However, where necessary the professional judgement of an experienced ecologist will be applied.
- 8.6.16 For those effects considered significant, the effect will be characterised as appropriate (e.g. adverse or beneficial), and qualified with reference to the geographic scale at which the effect is significant (e.g. an adverse effect significant at a national level). The output will be dependent on both the characteristics and magnitude of the impact and the value of the feature concerned. For example, an affected feature that, as a whole, is of national value may be subject to effects that only affect that feature at a local-scale, and do not affect it at a national level.
- 8.6.17 In order to provide consistency of terminology in the conclusions of the assessment, the residual effects will be translated to a significance level on a scale of negligible, minor, moderate and major comparable to that to be used in the other assessments which will be reported within the ES, as outlined in **Table 8-7**. These conclusions will be provided in each case in brackets following the equivalent CIEEM assessment conclusion.

Table 8-7: Relating CIEEM Assessment to Terminology Used in Other Chapters

Effects significance terminology used in other chapters		CIEEM assessment conclusion
Significant (Beneficial)	Major Beneficial	Beneficial effect on structure/function or conservation status at regional, national or international level.
	Moderate Beneficial	Beneficial effect on structure/function or conservation status at County or district level.
Not significant	Minor Beneficial	Beneficial effect on structure/function or conservation status at Site or local level.
	Negligible	No effect on structure/function or conservation status.
	Minor Adverse	Adverse effect on structure or conservation status at Site – local level
Significant (Adverse)	Moderate Adverse	Adverse effect on structure/function or conservation status at County or district level.
	Major Adverse	Adverse effect on structure/function or conservation status at regional, national or international level

8.7 Design, Mitigation and Enhancement Measures

- 8.7.1 A BNG calculation utilising the Statutory Biodiversity Metric (SBM) (Ref 8.41) will be undertaken and submitted as part of the DCO submission. Achieving a minimum 10% BNG is expected to be mandatory for DCO projects submitted from November 2026 onwards, therefore will apply for the Proposed Scheme.

The assessment will take account of the guidance for applying BNG For Nationally Significant Infrastructure Projects (NSIP) (Ref 8.58).

- 8.7.2 Compliance with planning policy requires that the Proposed Scheme considers and engages a mitigation hierarchy, requiring the highest level to be applied, where possible. The mitigation hierarchy is also fundamental to the achievement of BNG. There are four sequential steps that must be taken throughout the lifecycle of a project where there is potential for impacts on IEF:
- a. Avoidance – actions taken to avoid causing effects to the environment prior to beginning development (for example, altering the route alignment to avoid a feature of ecological importance);
 - b. Minimisation – measures taken to reduce the duration, intensity, extent and/or likelihood of the unavoidable environmental effects caused by development (for example, adapting the development design to reduce impacts);
 - c. Restoration or rehabilitation – actions taken to repair environmental degradation or damage following unavoidable effects caused by development; and
 - d. Offsets – measures taken to compensate for any adverse environmental effects caused by development which cannot be avoided, reduced and/or restored (e.g., including habitat creation to offset losses).

Construction Phase

- 8.7.3 Sensitive routing and position of MAP location will be used to avoid or reduce effects on semi-natural habitats wherever practicable. In addition, the footprint of temporary working areas will be designed to reduce the extent of habitat loss as far as is practicable.
- 8.7.4 Use of artificial lighting during construction will be reduced to the minimum required, ensuring that any lighting that cannot be avoided (e.g. due to health and safety considerations) limits light spill on any adjoining IEF to the minimum necessary.
- 8.7.5 Standard construction control measures will be implemented within the Construction Environmental Management Plan (CEMP) to reduce the potential for effects from pollution and dust deposition. A Framework CEMP will be submitted as part of the DCO Application.
- 8.7.6 The timing of specific elements of works will be sensitively timed to avoid or reduce effects (e.g. avoiding bird breeding season for vegetation clearance)

where practicable. In addition, where necessary to mitigate likely significant effects the use of visual screen and noise barriers will be considered.

- 8.7.7 Where semi-natural habitats are removed or disturbed for temporary works during construction of the Proposed Scheme, these areas will be reinstated following works, seeking to create habitats of equal or greater biodiversity value. This will contribute towards the overall aim of achieving a 10% gain in biodiversity units.
- 8.7.8 Where effects on important ecological features cannot be avoided or mitigated then compensation measures will be implemented.

Operation Phase

- 8.7.9 No external lighting is proposed for the MAP.
- 8.7.10 Any additional operational lighting at Riverside Campus and the thermal storage area(s) (i.e. above that already approved and implemented) will be carefully designed to reduce any increase on current lighting levels. Any lighting that cannot be avoided (e.g. for health and safety reasons) will be designed to limit light spill on IEF as far as practicable. Where feasible, use of motion detected lighting will be used in preference to permanent lighting.
- 8.7.11 Where maintenance works are required adjacent to IEF the works will seek wherever practicable to be sensitively timed to avoid or reduce the potential for likely significant effects.

8.8 Assumptions, Limitations and Uncertainties

- 8.8.1 The following limitations and assumptions have been identified:
- a. As set out in **Volume 1, Chapter 2: Proposed Scheme** the final alignment and location of the London SHM and associated MAP, and thermal storage area(s) is yet to be determined. Therefore, the EIA Scoping Boundary adopts a precautionary approach and assumes a precautionary area of impacts. Due to the precautionary approach adopted the likely effects are unlikely to exceed those outlined in this chapter.
 - b. Baseline surveys are yet to commence and therefore the assumed scope of survey will be subject to revisions as necessary based on the outcome of the extended UK Habitat Classification survey and refined design.
 - c. All removal of tunnelling arisings will be undertaken by road.

8.9 Summary of Elements Scoped In or Scoped Out

- 8.9.1 A summary of the ecology items to be scoped in or out of the ES is provided in **Table 8-8**.

Table 8-8: Summary of Scope of Ecology Assessment

Ecological Feature and (impact)	Phase	Scoped In	Scoped Out	Justification
Designated sites of International importance (SAC/SPA/Ramsar) – all impacts	Construction and Operation		✓	The closest site is located 6.3km from the Proposed Scheme. No functional linkage between sites and the Proposed Scheme. Limited potential for pollution, including changes in air quality (see paragraphs 8.5.4 to 8.5.5).
Inner Thames Marshes SSSI (disturbance of potential supporting habitat utilised by bird populations in proximity to any MAP locations adjoining Thames)	Construction	✓		Further bird surveys required to confirm status of foreshore habitats as potential supporting habitat for birds associated with the SSSI will be undertaken. Works during operation will be limited to minor maintenance and therefore no likely significant effects expected.
	Operation		✓	No likely significant effects expected. Small scale and short duration works only. Scoped out.
All statutory designated sites within 250m of above ground	Construction	✓		Potential for likely significant effects from adverse changes in

Ecological Feature and (impact)	Phase	Scoped In	Scoped Out	Justification
works and 50m of roads impacted by the construction traffic (air quality changes)				air quality during construction within 50m of public roads used by construction traffic and 250m from above ground construction areas when identified.
All other statutory designated sites (all other impacts)	Construction and Operation		✓	No impact pathways have been established during construction and based on underground nature of most works and minimal expected effects of maintenance requirements.
Non-Statutory designated sites within 50 m of above ground works (disturbance/ displacement/ degradation)	Construction	✓		Potential for habitat degradation, disturbance or displacement.
	Operation		✓	Small scale maintenance works predominately below ground unlikely to generate significant effects.
Habitats – Locations with above ground works (permanent and temporary habitat loss; habitat degradation/ alteration)	Construction	✓		Potential for permanent and temporary losses associated with MAP and other areas of construction (e.g. thermal storage area(s)). Includes potential for air quality effects on sensitive habitats.

Ecological Feature and (impact)	Phase	Scoped In	Scoped Out	Justification
Habitats - Locations with above ground works (permanent and temporary habitat loss; habitat degradation/ alteration)	Operation		✓	Maintenance activities will be small scale and short duration and associated with existing MAP. No additional habitat loss/alteration expected during operation.
Habitats – London SHM (i.e. below ground features) (all impacts)	Construction and Operation		✓	London SHM will be minimum depth of 5m; no likely significant effects expected.
Species (Habitat loss; habitat degradation/ alteration; disturbance/ displacement; spread of invasive species)	Construction	✓		Surveys yet to be undertaken. See Table 8-6 for proposed survey scope. It may be possible to scope out some species following completion of extended UK Habitat Classification survey.
Species (Direct mortality/harm)	Construction and Operation		✓	During construction, any effects would be controlled through compliance with existing legislation and implementation of the CEMP. During operation and maintenance works, the potential for direct harm or mortality of species is minimal.

Ecological Feature and (impact)	Phase	Scoped In	Scoped Out	Justification
Species – Bats (disturbance/ displacement; habitat degradation/ alteration)	Operation	✓		Scoped in on precautionary basis, but likely significant effects expected to be avoided through sensitive operational lighting.
Species – All other species (disturbance/ displacement; habitat degradation/ alteration)	Operation		✓	Scoped out based on small scale of ongoing maintenance and limited potential for significant effects.

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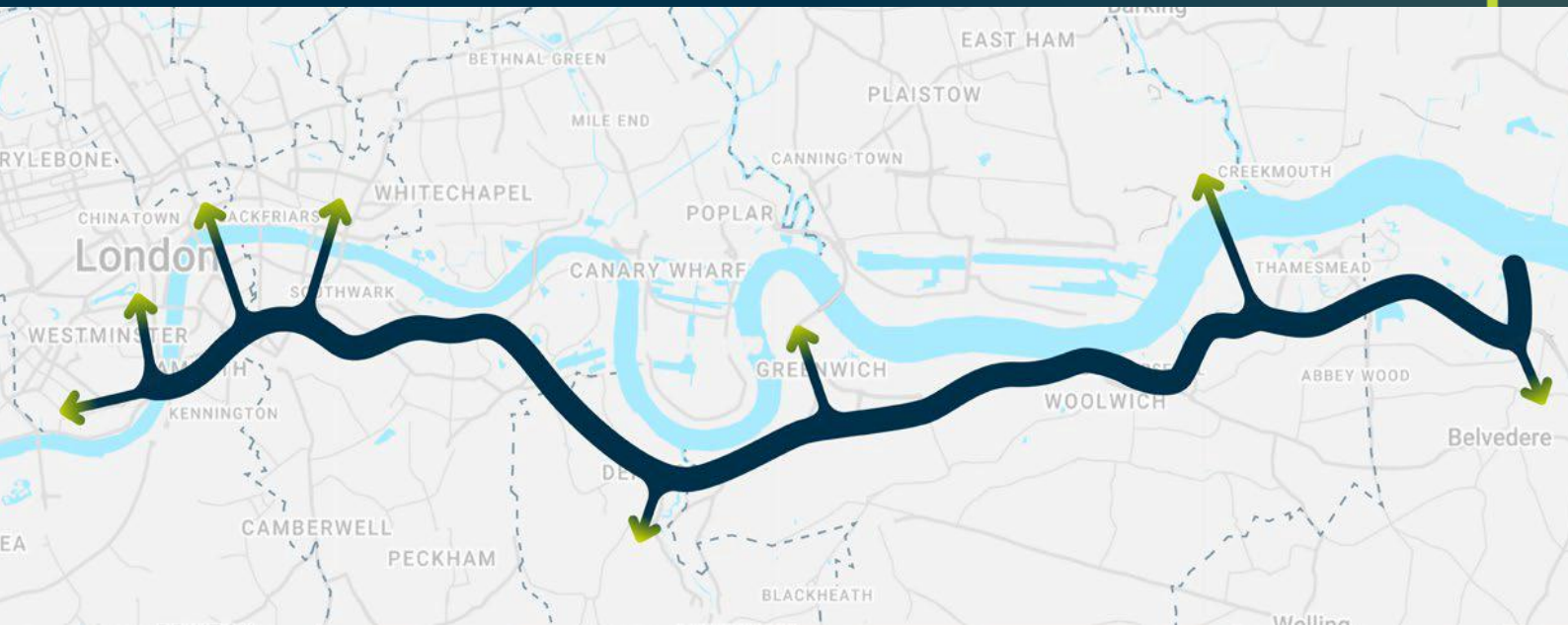
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Environmental Impact Assessment Scoping Report

Volume 1: Main Report

Chapter 9: Ground Conditions



Cory Environmental Holdings Limited

July 2026

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9. Ground Conditions

9.1 Introduction

- 9.1.1 This chapter identifies the potential for likely significant effects of the Proposed Scheme on ground conditions. It sets out the proposed methodology for the ground conditions assessment in the Environmental Statement (ES) and identifies those impacts which should be scoped into or out of the assessment of likely significant effects.
- 9.1.2 The ground conditions topic focuses on geological designated sites, mineral resources (including Mineral Safeguarding Areas (MSA)/Mineral Consultation Areas (MCA)), and receptors sensitive to land contamination. There are interrelationships between the potential effects on ground conditions and other environmental topics. Therefore, other chapters should also be referred to, as follows:
- a. Groundwater, surface water and ecological receptors are discussed within this chapter as they will be assessed as potential receptors to any land contamination. However, groundwater and surface water as strategic resources and/or discharge points, hydrogeological response to dewatering, and flooding are considered in **Volume 1, Chapter 19: Water Environment and Flood Risk**. Ecological receptors are considered in **Volume 1, Chapter 8: Ecology** and **Volume 1, Chapter 13: Marine Environment**.
 - b. The potential for the disturbance and redistribution of potentially contaminated sediments is addressed in **Volume 1, Chapter 19: Water Environment and Flood Risk** and **Volume 1, Chapter 13: Marine Environment**, and likely significant effects of such sediments on ecological receptors are discussed in **Volume 1, Chapter 8: Ecology**.
 - c. Air pollution related impacts from increased dust during construction are covered in **Volume 1, Chapter 6: Air Quality**.
 - d. Excavated materials and waste management are also covered in **Volume 1, Chapter 14: Materials and Waste**.

9.2 Study Area

- 9.2.1 For the purposes of determining the local baseline conditions with respect to ground conditions, a Study Area extending 250m from, and including, the EIA Scoping Boundary¹ has been adopted. This has been extended for

¹ All references to 'EIA Scoping Boundary' correspond to the area shown in Volume 2, Figure 1-1.

hydrogeology to 1km from the EIA Scoping Boundary. An equivalent Study Area will be measured from the Order Limits in the ES.

- 9.2.2 This Study Area is considered appropriate to assess the local geological and hydrogeological setting, and any influence that potential land contamination may have on the Proposed Scheme or local sensitive receptors.

9.3 Relevant Legislation, Planning Policy and Guidance

- 9.3.1 Legislation, planning policy and guidance relating to ground conditions is outlined below.

Legislation

- 9.3.2 The applicable legalisation includes:

- a. Environmental Protection Act 1990 (Ref 9.1);
- b. Water Act 2003 (Ref 9.2);
- c. Water Act 2014 (Ref 9.3);
- d. Water Resources Act 1991 (Ref 9.4);
- e. Building Act 1984 (Ref 9.5);
- f. Environment Act 1995 (Ref 9.6);
- g. Environment Act 2021 (Ref 9.7);
- h. Climate Change Act 2008 (Ref 9.8);
- i. Planning Act 2008 (Ref 9.9);
- j. Water Environment (Water Framework Directive (WFD)) (England and Wales) Regulations 2017 (Ref 9.10);
- k. Environmental Permitting (England and Wales) Regulations 2016 (Ref 9.11);
- l. Environmental Damage (Prevention and Remediation) (England) Regulations 2015 (Ref 9.12);
- m. Hazardous Waste (England and Wales) (Amendment) Regulations 2016 (Ref 9.13);
- n. Contaminated Land (England) Regulations 2006 (Ref 9.14);
- o. Building (Amendment) Regulations 2018 (Ref 9.15);
- p. Anti-Pollution Works Regulations 1999 (Ref 9.16);
- q. Construction (Design and Management) Regulations 2015 (Ref 9.17); and
- r. The Control of Asbestos Regulations 2012 (Ref 9.18).

National Planning Policy

Overarching National Policy Statement for Energy (NPS EN-1)

- 9.3.3 **Table 9-1** summarises the relevant national policies from NPS EN-1 that have been taken into account as part of identifying the assessment methodology, receptor selection/sensitivity, potential for likely significant environmental effects, and mitigation for ground conditions.

Table 9-1: Overarching National Policy Statement for Energy – Ground Conditions

National Policy	Summary of Requirements	Relevance to the Assessment
Overarching National Policy Statement for Energy (NPS EN-1) (Ref 9.19)	Paragraphs 5.4.18, 5.4.20, 5.4.39, and 5.4.43 relate to the assessment of geological sites. Paragraphs 5.11.19 and 5.11.28 relate to the mineral resources, including MSA/MCA. Paragraphs 5.11.4, 5.11.13, 5.11.14, 5.11.17 and 5.11.18 relate to the land contamination and ground stability.	Section 9.4 (Baseline Conditions) of this chapter addresses the following matters, which are related to ground conditions and covered in the NPS and NPPF: • geology and geological sites; • mineral resources (MSA and MCA); • potential sources of contaminated land; and • receptors to potentially contaminated land including soil, groundwater receptors (including aquifers and Source Protection Zones (SPZ)), surface water features, ecological sensitive sites and human health receptors. The approach to how these will be assessed is discussed in Section 9.6. Potential effects on the above are discussed in Section 9.5. The approach to mitigation is discussed in Section 9.7. In terms of ground stability, detailed geotechnical desk studies, a Ground Investigation Report (GIR) and a Geotechnical Design Report (GDR) will be undertaken as part of the detailed

National Policy	Summary of Requirements	Relevance to the Assessment
		design to address this issue. A summary of the information available at the time will be included in the ES chapter.

National Planning Policy Framework (NPPF)

9.3.4 Elements of the NPPF (Ref 9.20) that are considered relevant to the assessment of likely significant ground conditions effects are listed below:

- a. Paragraphs 187 to 191 set out the planning policies that contribute to and enhance the natural and local environment.
- b. Paragraphs 192 to 195 (Habitats and biodiversity) set out measures to enhance biodiversity and geodiversity including the identification of habitats and ecological networks and the promotion of their conservation, restoration and enhancement. The principles for evaluating planning applications that could result in harm to these areas are detailed in these sections.
- c. Paragraphs 196 to 201 (Ground conditions and pollution) provide guidance on planning policies around land contamination. In general, they define the responsibility of the owner and/or developer to secure a safe environment and state that planning policies and decisions should ensure that any new development is appropriate taking account of its likely effects on health and environment, including existing businesses and community facilities.

9.3.5 It should be noted that a draft NPPF was published for consultation in December 2025, however, it is not expected that this draft will significantly alter the policy context or policy compliance of the Proposed Scheme.

Local and Neighbourhood Planning Policy

9.3.6 The local and neighbourhood planning policy listed in **Table 9-2** is considered relevant to the assessment of likely significant ground conditions effects presented in this chapter. The policies of particular relevance are listed alongside the Local and Neighbourhood Plans.

Table 9-2: List of Relevant Local and Neighbourhood Policy – Ground Conditions

Local Authority	Relevant Local and Neighbourhood Policy	Policies relevant to the Assessment
Greater London Authority	London Plan 2021 (Ref 9.21)	• Policy G6: Biodiversity and access to nature • Policy G9: Geodiversity
	London Map Viewer (Ref 9.22)	• Interactive map indicating metropolitan policies and features
London Borough of Bexley (LBB)	Bexley Local Plan 2023 (Ref 9.23)	• Policy SP9: Protecting and enhancing

Local Authority	Relevant Local and Neighbourhood Policy	Policies relevant to the Assessment
		biodiversity and geological assets • Policy DP20: Biodiversity and geodiversity in developments • Policy DP27 Minerals and aggregates
Royal Borough of Greenwich (RBG)	Royal Greenwich Local Plan: Core Strategy with Detailed Policies (Ref 9.24)	• Policy OS4: Biodiversity • Policy E(e): Contaminated land
	Royal Borough of Greenwich Draft Local Plan (Ref 9.25)	• Policy EN3: Biodiversity • Policy EN5: Local environmental impacts
London Borough of Lewisham (LBLe)	Lewisham Local Plan 2020-2040 (Ref 9.26)	• Policy GR3: Biodiversity and access to nature • Policy GR7: Geodiversity • Policy SD11: Ground conditions
London Borough of Southwark (LBS)	The Southwark Plan 2022 (Ref 9.27)	• Policy P60: Biodiversity • Policy P64: Contaminated land and hazardous substances
London Borough of Lambeth (LBLa)	Lambeth Local Plan 2020-2035 (Ref 9.28)	• Policy EN1: Open space, green infrastructure and biodiversity
	South Bank & Waterloo Neighbourhood Plan 2017-2032 (Ref 9.29)	• No policies from this Neighbourhood Plan are relevant to the assessment in this Scoping Chapter
	Kennington Oval and Vauxhall Neighbourhood Plan 2035 (Ref 9.30)	• No policies from this Neighbourhood Plan are relevant to the assessment in this Scoping Chapter
London Borough of Barking and Dagenham (LBBD)	London Borough of Barking and Dagenham Local	• Policy DMNE 3: Nature conservation and biodiversity • Policy DMSI 5: Land contamination

Local Authority	Relevant Local and Neighbourhood Policy	Policies relevant to the Assessment
	Plan 2020-2037 (Ref 9.31)	
London Borough of Tower Hamlets (LBTH)	Tower Hamlets Local Plan 2031: Managing Growth and Sharing Benefits (Ref 9.32)	• Policy D.ES3: Urban greening and biodiversity • Policy E.ES8: Contaminated land and storage of hazardous substances
City of London (CoL)	City of London Local Plan 2015 (Ref 9.33)	• Policy DM 15.8: Contaminated land • Policy DM 19.2: Biodiversity and urban greening
	Emerging City Plan 2040 (Ref 9.34)	• Policy HL4: Contaminated land and water quality • Policy OS2: Urban Greening • Policy OS3: Biodiversity • Policy OS4: Biodiversity Net Gain
City of Westminster (CoW)	City of Westminster: City Plan 2019-2040 (Ref 9.35)	• Policy 37: Local environmental impacts • Policy 38: Green infrastructure
	Victoria Neighbourhood Plan 2025-2040 (Ref 9.36)	• Policy VNG-01: Biodiversity and urban greening
Royal Borough of Kensington and Chelsea (RBKC)	Royal Borough of Kensington and Chelsea Local Plan 2024 (Ref 9.37)	• Policy GB14: Green and blue infrastructure • Policy GB18: Contaminated land

Relevant Guidance

9.3.7 Relevant industry guidance includes:

- a. HM Government, Part 2A Contaminated Land Statutory Guidance, 2012 (Ref 9.38);

- b. Environment Agency's online guidance for the management of land contamination 'Land contamination: risk management' (LCRM) (2025) (Ref 9.39);
- c. BS 10175:2026 (2026), Investigation of Potentially Contaminated Sites - Code of Practice (Ref 9.40);
- d. BS 8576 (2013), Guidance on investigations for ground gas. Permanent gases and Volatile Organic Compounds (VOCs) (Ref 9.41);
- e. BS 8485 (2019), Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings (Ref 9.42);
- f. CIRIA C665, assessing risks posed by hazardous ground gases to buildings, 2007 (Ref 9.43);
- g. CIRIA C552 Contaminated Land Risk Assessment: A Guide to Good Practice (2001) (Ref 9.44);
- h. CIRIA C811 5th Edition 'Environmental Good Practice On Site' 2023 (Ref 9.45);
- i. Contaminated Land: Applications in Real Environments (CL:AIRE), Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention (2025) (Ref 9.46);
- j. BRE series 'Concrete in Aggressive Ground' (2005) (Ref 9.47);
- k. CL:AIRE, Framework for Assessing the Sustainability of Soil and Groundwater Remediation (2025) (Ref 9.48); and
- l. Waste Classification: Guidance on the classification and assessment of waste WM3 (2021) (Ref 9.49).

9.4 Baseline Conditions and Future Baseline

- 9.4.1 This section provides a high-level review of baseline environmental characteristics for the EIA Scoping Boundary (refer to **Volume 2, Figure 1-1**) and Study Area with specific reference to ground conditions.
- 9.4.2 Soils are not included in the assessment given the urban setting of the EIA Scoping Boundary.

Geology

Introduction

- 9.4.3 The British Geological Survey (BGS) provides a free online geological mapping tool (Ref 9.50) which indicates the geological setting of the Proposed Scheme. This has been summarised below.

Made Ground

- 9.4.4 The BGS mapping indicates the presence of artificial ground (Made Ground) on-site and within the wider Study Area, particularly in the eastern and central parts but also in some areas in the west. The Proposed Scheme is located in a predominantly urban setting and therefore even in the areas where it is not mapped, Made Ground will exist along roadways, railways and other developed areas.

Superficial Deposits

- 9.4.5 Superficial deposits are present across the majority of the Study Area as summarised in **Table 9-3**. The superficial deposits have been identified where they outcrop at the surface (or beneath the Made Ground, where present).
- 9.4.6 Note that the description within the 'Sections of the EIA Scoping Boundary' column covers the presence of the geological stratum directly underlying the EIA Scoping Boundary; however, these also extend into the 250m Study Area. Where the stratum is present only in the Study Area (not overlapping the EIA Scoping Boundary), this is specified.

Table 9-3: Superficial Deposits

Superficial Deposits	Sections of the EIA Scoping Boundary*
Alluvium – silt	• Trunk Main (eastern extent) • Transmission Branch Barking 1 • Transmission Branch Barking 2 • Transmission Branch Barking 3
Alluvium – clay, silt, sand and peat	• Transmission Branch Barking 3 • Trunk Main: majority of the extent • Transmission Branch Greenwich Peninsula 1 • Transmission Branch Greenwich Peninsula 2 • Transmission Branch Wapping • Transmission Branch Cannon Street • Transmission Branch City of London • Transmission Branch Blackfriars • Transmission Branch Embankment • Transmission Branch Paddington • Transmission Branch Victoria • Transmission Branch Kensington • Transmission Branch Chelsea
Tidal river or creek deposits – clay and silt	• Transmission Branch Barking 2
Head – clay, silt, sand and gravel	• Trunk Main (eastern to central extent)

Superficial Deposits	Sections of the EIA Scoping Boundary*
Maidenhead Formation: Kempton Park Gravel Member – sand and gravel	• Transmission Branch Greenwich Peninsula 1 • Transmission Branch Greenwich Peninsula 2 • Trunk Main (central to western extents) • Transmission Branch City of London • Transmission Branch Blackfriars • Transmission Branch Embankment • Transmission Branch Paddington • Transmission Branch Kensington • Transmission Branch Chelsea
Maidenhead Formation: Langley Silt Member – clay and silt	• Transmission Branch City of London • Transmission Branch Embankment
Maidenhead Formation: Lynch Hill Gravel Member – sand and gravel	• Transmission Branch Paddington
Maidenhead Formation: Hackney Gravel Member – sand and gravel	• Transmission Branch Paddington
Maidenhead Formation: Taplow Gravel Member – sand and gravel	• Transmission Branch City of London • Transmission Branch Paddington
Peat	Only present within the Study Area, outside the EIA Scoping Boundary, isolated area approximately 140 m south of western extent of Trunk Main.

*See **Volume 1, Chapter 2: Proposed Scheme** for details of the Sections.

Bedrock

- 9.4.7 The bedrock geology underlying the EIA Scoping Boundary and Study Area is summarised in **Table 9-4**. The bedrock geology has been identified where it subcrops beneath the superficial deposits.
- 9.4.8 Note that the description within the ‘Sections of the EIA Scoping Boundary’ column covers the presence of the geological stratum directly underlying the EIA Scoping Boundary; however, these also extend into the 250m Study Area. Where the stratum is present only in the Study Area (not overlapping the EIA Scoping Boundary), this is specified.

Table 9-4: Bedrock Geology

Bedrock	Sections of the EIA Scoping Boundary
London Clay Formation – clay, silt and sand	• Transmission Branch Barking 1 • Transmission Branch Barking 2 • Trunk Main (western, central and eastern-most extents) • Transmission Branch Cannon Street • Transmission Branch City of London • Transmission Branch Blackfriars • Transmission Branch Embankment • Transmission Branch Paddington • Transmission Branch Chelsea • Transmission Branch Kensington • Transmission Branch Victoria
Lambeth Group – sand, silt and clay	• Transmission Branch Barking 1 • Transmission Branch Barking 2 • Trunk Main (eastern and central extents) • Transmission Branch Wapping • Transmission Branch Greenwich Peninsula 1 • Transmission Branch Greenwich Peninsula 2
Thanet Formation – sand, silt and clay	• Transmission Branch Barking 1 • Transmission Branch Barking 2 • Transmission Branch Barking 3 • Transmission Branch Greenwich Peninsula 1 • Transmission Branch Greenwich Peninsula 2 • Trunk Main (eastern and central extent)
Lewes Nodular Chalk Formation, Seaford Chalk Formation And Newhaven Chalk Formation (Undifferentiated) – chalk	• Trunk Main (central extent) • Transmission Branch Greenwich Peninsula 1 • Transmission Branch Greenwich Peninsula 2
Harwich Formation - sand and gravel	Only present within the Study Area, outside the EIA Scoping Boundary, south of central extent of Trunk Main

Mining

- 9.4.9 According to the Mining Remediation Authority (Ref 9.51), the EIA Scoping Boundary and its Study Area are not located within a Coal Mining Reporting Area.

Geological Sites

- 9.4.10 According to the local policy maps of London Boroughs (Bexley (Ref 9.23), Lewisham (Ref 9.24), Southwark (Ref 9.27), Lambeth (Ref 9.28), Barking and Dagenham (Ref 9.31), Tower Hamlets (Ref 9.32), City of London (Ref 9.33), City of Westminster (Ref 9.35), Kensington and Chelsea (Ref 9.37)), there are no Local Geological Sites (LGS) within the Study Area. It is proposed that further consultation is undertaken during the development of a Preliminary Risk Assessment (PRA) to confirm the absence of LGS to inform the ES (further detail on this is provided in Section 9.6).
- 9.4.11 According to DEFRA's Magic mapping (Ref 9.52) and Royal Greenwich Local Plan (Ref 9.24), Gilbert's Pit (Charlton) is a geological Site of Special Scientific Interest (SSSI), located approximately 10m south of central extent of Trunk Main, within the Maryon Park. Given the proximity of this geological site to the EIA Scoping Boundary, it is recommended that the potential for likely significant effects is considered further (see Section 9.7).

Mineral Resources

- 9.4.12 According to the local policies of London Boroughs (Bexley (Ref 9.23), Lewisham (Ref 9.26), Southwark (Ref 9.27), Lambeth (Ref 9.28), Greenwich (Ref 9.24), Barking and Dagenham (Ref 9.31), Tower Hamlets (Ref 9.32), City of London (Ref 9.33), City of Westminster (Ref 9.35), Kensington and Chelsea (Ref 9.37)), the Study Area does not contain any MSA, and consequently no MCA. It is proposed that further consultation is undertaken during development of the PRA to confirm the absence of MSA to inform the ES.

Hydrogeology

- 9.4.13 According to DEFRA Magic mapping (Ref 9.52), the Environment Agency classifies the superficial deposits within the Study Area as the following aquifers:
- a. Alluvium – Secondary (undifferentiated);
 - b. Tidal river or creek deposits – Unproductive strata;
 - c. Head – Secondary (undifferentiated);
 - d. Kempton Park Gravel Member – Secondary A;
 - e. Langley Silt Member – Unproductive strata;
 - f. Lynch Hill Gravel Member – Secondary A;
 - g. Hackney Gravel Member – Secondary A;
 - h. Taplow Gravel Member – Secondary A; and
 - i. Peat – Unproductive strata (within the Study Area only).

9.4.14 According to DEFRA Magic mapping (Ref 9.52), the Environment Agency classifies the bedrock geology within in the 250m of the EIA Scoping Boundary as following aquifers:

- a. London Clay Formation – Unproductive strata;
- b. Lambeth Group – Secondary A;
- c. Thanet Formation – Secondary A;
- d. Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated) – Principal; and
- e. Harwich Formation – Secondary A (within the Study Area only).

9.4.15 There are multiple Source Protection Zones (SPZ) within 1km of the EIA Scoping Boundary, including:

- a. three Zone I areas –
 - i. overlapping the Transmission Branch Chelsea in the western extent;
 - ii. 40m north of the Transmission Branch Kensington in the western extent; and
 - iii. 430m south of Trunk Main in the central extent.
- b. three Zone II areas –
 - i. overlapping the Transmission Branch Kensington in the western extent;
 - ii. overlapping the Transmission Branch Chelsea, Transmission Branch Victoria, Transmission Branch Kensington and TM80 in the western extent; and
 - iii. 230m south of Trunk Main in the central extent.
- c. one Zone III area
 - i. adjacent south of Trunk Main in the central extent.

Hydrology

9.4.16 Multiple surface water features are present within 250m of the EIA Scoping Boundary. **Table 9-5** summarises the named surface water features intersecting the EIA Scoping Boundary.

9.4.17 Further details on surface water features are included in **Volume 1, Chapter 19: Water Environment and Flood Risk** (Figure 18-1 and Figure 18-3).

Table 9-5: Surface Water Features

Surface Water Feature	Sections of the EIA Scoping Boundary
River Thames	Crosses the EIA Scoping Boundary multiple times, including: • Transmission Branch Barking 1 • Transmission Branch Barking 2 • Transmission Branch Barking 3 • Transmission Branch Wapping • Transmission Branch Cannon Street • Transmission Branch Blackfriars • Transmission Branch Embankment • Trunk Main (western and central extents)
Marsh Dyke (Woolwich)	• Crosses the southeastern extents of the EIA Scoping Boundary and Transmission Branch – Barking 3
Great Breach Dyke	• Crosses Trunk Main (eastern extent)
Horse Head Dyke	• Crosses Trunk Main (eastern extent)
Crossness Nature Reserve (ponds, drains, marshes)	• Crosses Trunk Main (eastern extent) and Transmission Branch Barking 2
South Mere Lake	• Crosses Trunk Main (eastern extent)
Birchmere Lake	• Crosses Trunk Main (eastern extent)
Deptford Creek	• Crosses Trunk Main (central extent)

Designated Sites

- 9.4.18 According to DEFRA's Magic mapping (Ref 9.52), there are no Special Areas of Conservation (SAC), Special Protection Areas (SPA) or Ramsar sites within the 250m Study Area.
- 9.4.19 In addition, only one SSSI designated site is located within the Study Area - Gilbert's Pit SSSI, a geological SSSI, located within the Maryon Park, adjacent to the central extent of the Trunk Main.
- 9.4.20 According to DEFRA's Magic mapping (Ref 9.52) and Greater London Planning Map (Ref 9.22), the following Local Nature Reserves (LNR) have been identified within 250m of the EIA Scoping Boundary:
- a. Crossness LNR, intersected by Trunk Main (eastern extent), Transmission Branch Barking 2;
 - b. Maryon Wilson Park & Gilbert's Pit LNR, located 25m south of Trunk Main (central extent); and

- c. Godfrey Nature Park LNR located 130m south-east of Trunk Main (central extent).

9.4.21 The Proposed Scheme is expected to involve works within or below a number of Sites of Importance for Nature Conservation (SINC). Further details of these are presented in **Volume 1, Chapter 8: Ecology**.

Land Contamination

Potential Sources of Contamination

9.4.22 A high-level review of current and historical land uses has been undertaken using current mapping and publicly available Groundsure data (Ref 9.53). Current and historical land use has the potential to cause/have caused a legacy of contamination which may pose a risk to the Proposed Scheme or surrounding sensitive receptors during construction, operation and/or decommissioning. A detailed review will be required (see Section 9.7 for further details).

Current Land Uses

9.4.23 The EIA Scoping Boundary is located within a predominantly urban area, with the Trunk Main and various branches primarily following roads.

9.4.24 The EIA Scoping Boundary largely comprises hardstanding associated with roads and footpaths, including street trees and street furniture such as benches, utilities boxes, traffic lights and street lights.

9.4.25 The Study Area also intersects green open spaces, residential properties, industrial and commercial areas.

Landfill sites

9.4.26 According to Groundsure (Ref 9.53), multiple landfill sites are identified within the Study Area. **Table 9-6** summarises landfill records intersecting the EIA Scoping Boundary. Further details are provided in **Volume 1, Chapter 14: Materials and Waste**.

Table 9-6: Historical Landfills

Landfill name	Details	Sections of the EIA Scoping Boundary
Dagenham Dock Historical Landfill	License issued: 1990 First input: 1939 Last input: 1990	Transmission Branch Barking 1
Renwick Road Landfill Site	License issued: 1977 First input: 1977 Last input: 1993	Transmission Branch Barking 2

Landfill name	Details	Sections of the EIA Scoping Boundary
Riverside Golf Course Historical Landfill	License issued: 1992 First input: 1992 Last input: 1993	Transmission Branch Barking 2
Area 4J and 4K Thamesmead Historical Landfill	License issued: 1977 First input: 1967 Last input: 1982	Transmission Branch Barking 3
Greenwich Historical Landfill (Coalite Site)	License issued: 1994 First input: 1994 Last input: Not Provided	Transmission Branch Greenwich Peninsula 1
Old Canal Filling	License issued: Not Provided First input: Not Provided Last input: Not Provided	Trunk Main (central extent)

Unexploded Ordnance (UXO)

9.4.27 According to Zetica online risk mapping (Ref 9.54), the EIA Scoping Boundary is located in an area of high bombing density. A preliminary UXO Risk Assessment will be obtained and reviewed for the PRA.

Potential Receptors to Contamination

9.4.28 The following sensitive receptors in relation to the Proposed Scheme have been identified:

- a. Human health receptors including:
 - i. nearby residents, commercial and industrial workers;
 - ii. future commercial and industrial site users and future maintenance workers; and
 - iii. construction workers.
- b. Controlled water receptors including:
 - i. surface water features;
 - ii. groundwater aquifers; and
 - iii. SPZ.

- c. Current and future development infrastructure, including foundations, pipelines and services;
- d. geological sites; and
- e. ecological sensitive sites.

9.4.29 The assessment of the sensitive receptors will be undertaken during the PRA and presented in the ES.

Future Baseline

9.4.30 The ground conditions within the Study Area are unlikely to be altered over time without a significant change of land use having been consented.

9.4.31 With respect to land contamination, any future development within the Study Area is subject to the requirements of relevant planning policies and the conditions of planning consents, as summarised within Section 9.3 of this chapter. This requires consideration of the potential for contamination to be present and for the developer to implement mitigation, where required. Any changes arising from the implementation of such mitigation will be considered in the ES as necessary.

9.4.32 Furthermore, natural attenuation processes have the potential to mitigate risks over time from any existing sources of contaminants present within soil and groundwater.

9.4.33 Changes in groundwater abstractions could affect the groundwater flow regime and climate change could influence the future baseline conditions, due to changes on the rainfall regime, recharge, groundwater levels and flow. However, these changes are long-term and are not predictable at this stage.

9.5 Potential for Likely Significant Effects

9.5.1 This section sets out the potential likely significant effects of the Proposed Scheme on ground conditions.

Construction Phase

9.5.2 Potential effects during the construction phase of the Proposed Scheme include, but are not limited to:

- a. disturbance of geological features of interest (such as Gilbert's Pit (Charlton) geological SSSI, located approximately 10m south of central extent of Trunk Main, within Maryon Park);
- b. possible physical effects on the current ground profile, instability, or other effects associated with the construction works of the Proposed Scheme;

- c. introducing new sources of contamination such as fuels and oils used in construction plant;
- d. human exposure through direct contact/inhalation/dermal uptake of contaminants potentially present in soil and groundwater;
- e. mobilising potential existing contamination in soil and groundwater as a result of ground disturbance during construction;
- f. contamination of natural soils, driving of contamination into an aquifer during tunnelling techniques such as pipejacking or horizontal directional drilling (HDD);
- g. contamination of groundwater with concrete, paste or grout;
- h. pollution and degradation of water quality; infiltration and/or runoff into the surface water features – pollution of drainage and sewerage network and any surface water features;
- i. creating preferential pathways for the migration of soil contamination and gases, for example along any below ground services or pipelines, or as a result of potential dewatering of excavations;
- j. run-off and infiltration of contaminants from material stockpiles;
- k. risks to new infrastructure and services from any ground contamination or aggressive ground conditions; and
- l. spread of nuisance dusts and soils to the wider environment and local roads.

Operation Phase

- 9.5.3 Once the Proposed Scheme is operational, on-site activities will be limited to the maintenance and monitoring of the Proposed Scheme. During maintenance activities there may be the need to use oils, grease, fuels, lubricants or cleaning agents on-site. There is a small risk of chemical pollution arising from accidental spillages during these operations.
- 9.5.4 It is anticipated that there will be no significant effects during the operational and maintenance phase of the Proposed Scheme as maintenance and operation will be in accordance with environmental and health and safety legislation and good practice (details of which, and securing mechanisms, will be provided with the DCO Application). In addition, any contamination that is identified or arises during the construction phase would be remediated (to be secured in the Framework Construction Environment Management Plan (CEMP)).
- 9.5.5 Therefore, effects on ground conditions and those associated with land contamination during operation are proposed to be scoped out of the ES.

Decommissioning Phase

- 9.5.6 The Proposed Scheme is intended to become part of London's critical infrastructure with no decommissioning proposed. However, if decommissioning were to be required, it is likely that minor works would be needed to remove above ground infrastructure. Underground pipelines are expected to be left in-situ to minimise adverse environmental effects. Standard good practice management measures and compliance with the relevant legislation at the time would avoid any likely significant effects, considering the small scale of works required. Given this, effects on ground conditions during decommissioning are proposed to be scoped out.

9.6 Assessment Methodology

- 9.6.1 The assessment of likely significant effects as a result of the Proposed Scheme (construction, operation (including maintenance)) on ground conditions will be undertaken using the following methodology.

Phase 1 Preliminary Risk Assessment

- 9.6.2 A Phase 1 PRA (equivalent to a Stage 1, Tier 1 assessment as defined under the Environment Agency's LCRM guidance (Ref 9.39)) will be completed for the Study Area and form part of the submitted DCO Application. The objective of the PRA is to identify and evaluate potential land quality risks and development constraints associated with the Proposed Scheme and to construct an initial conceptual site model (CSM) that can be used to inform future decision making and the design of future ground investigation and or mitigation, should it be required.
- 9.6.3 The PRA report will be used to inform the ground conditions Chapter of the ES and include the following:
- a. details of land within the Study Area including development history, geology, hydrogeology, hydrology, ground stability, soil and groundwater quality and environmental setting;
 - b. a review of the environmental data report provided by a third party, i.e. Groundsure or Landmark Information Group;
 - c. details of geological sites (if present);
 - d. details of any available site investigation reports for land within the Study Area;
 - e. details from a site walkover documenting:
 - i. the existing layout, current operations and condition of land within the draft Order Limits, the property boundaries and immediately surrounding land;

- ii. the visual inspection of any potential indicators of any land contamination, for e.g., spillages, disturbed ground; and
 - iii. the visual inspection of any geohazards or ground conditions constraints.
 - f. an initial CSM that will identify the potential for land contamination and potential contaminant pathways to impact sensitive receptors and consider the mobilisation of contaminants associated with current and historical land use in the Study Area; and
 - g. conclusions and recommendations based on the findings.
- 9.6.4 The results of the Phase 1 PRA and initial CSM will include an assessment of data gaps and uncertainties and will include recommendations such as for ground investigation in order to quantitatively assess the levels of contamination. Ground investigation would be intended to confirm the ground model, quantitatively assess any potential land contamination risk to the Proposed Scheme, and could also be designed to support the detailed design. This tiered approach to assessment is consistent with the Environment Agency LCRM guidance.

Ground Conditions ES Chapter

- 9.6.5 The ground conditions ES Chapter will largely follow the methodology set out in **Volume 1, Chapter 5: EIA Approach and Methodology**. However, the criteria utilised for the ground conditions assessment will vary very slightly from the standard criteria discussed in **Volume 1, Chapter 5: EIA Approach and Methodology**; this is to make it appropriate for this particular discipline.
- 9.6.6 In terms of ground conditions, the criteria used for assessing receptor sensitivity or value are defined **Table 9-7**. In defining the criteria for receptor sensitivity, industry standards and best practice guidance have been taken into consideration where appropriate.

Table 9-7: Receptor Sensitivity

Sensitivity / Value	Description / Criteria
High	Geology • Very rare and of international importance with no potential for replacement (e.g. United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Sites, UNESCO Global Geoparks, SSSI and GCR sites where citations indicate features of international importance). • Geology meeting international designation citation criteria which is not designated as such. Mineral resources*

Sensitivity / Value	Description / Criteria
	• Presence of significant mineral resources and within a Mineral Safeguarding Area. Contamination <u>Human health:</u> • Very high sensitivity land use such as residential or allotments. <u>Surface water:</u> • Watercourse having a WFD classification shown in a River Basin Management Plan (RBMP) and Q95 $\geq 1.0 \text{ m}^3/\text{s}$. <u>Groundwater:</u> • Principal aquifer providing a regionally important resource and / or supporting a site protected and UK legislation for Ecology and Nature Conservation. • Groundwater locally supports GWDTE. • SPZ 1. <u>Ecology and Nature Conservation:</u> • Sites of international importance (e.g. SAC, SPA, Ramsar site, salmonid water) or of high sensitivity.
Medium	Geology • Rare and of national importance with little potential for replacement (e.g. geological SSSI, National Nature Reserves (NNR)). • Geology meeting national designation citation criteria which is not designated as such. Mineral resources* • Within a Mineral Safeguarding or Consultation Area. Contamination <u>Human health:</u> • High sensitivity land use such as public open space. <u>Surface water:</u> • Watercourse having a WFD classification shown in a RBMP and Q95 $< 1.0 \text{ m}^3/\text{s}$. <u>Groundwater:</u> • Principal aquifer providing locally important resource or supporting a river ecosystem.

Sensitivity / Value	Description / Criteria
	- Groundwater supports a GWDTE. - SPZ 2. <u>Ecology and Nature Conservation.</u> - Sites of national importance (e.g. SSSI, NNR) or of medium sensitivity.
Low	Geology - Of regional importance with limited potential for replacement (e.g. RIGS). - Geology meeting regional designation citation criteria which is not designated as such. Mineral resources* - Some mineral potential but not within a Mineral Safeguarding or Consultation Area. Contamination <u>Human health:</u> - Medium sensitivity land use such as commercial or industrial. <u>Surface water:</u> - Watercourses not having a WFD classification shown in a RBMP and Q95 >0.001 m³/s. <u>Groundwater:</u> - Aquifer providing water for agricultural or industrial use with limited connection to surface water. - SPZ 3. <u>Ecology and Nature Conservation.</u> - Sites of local importance (e.g. Local Wildlife Sites, Local Nature Reserves) or of low sensitivity.
Very low	Geology - Of local importance / little or low interest with potential for replacement (e.g. non-designated geological exposures, former quarries / mining sites). Mineral resources* - Limited potential for mineral resource and not within a Mineral Safeguarding or Consultation Area. Contamination <u>Human health:</u> - Low sensitivity land use such as highways and rail.

Sensitivity / Value	Description / Criteria
	<u>Surface water:</u> - Watercourses not having a WFD classification shown in a RBMP and $Q95 \leq 0.001 \text{ m}^3/\text{s}$. <u>Groundwater:</u> - Unproductive strata. <u>Ecology and Nature Conservation.</u> - Land with very low sensitivity and/or no designations.

* Sensitivity of mineral receptors is not described as part of the referenced DMRB guidance. Therefore, professional judgement will be used.

9.6.7 The magnitude of change, or how considerable the change to the ground conditions is from the baseline conditions as a result of an activity or action resultant from construction and operation phases of the Proposed Scheme, has been classified as being: high; medium; low; or very low/negligible. The criteria and their respective magnitude of change classification are detailed within **Table 9-8**.

Table 9-8: Example of Criteria for Assessing Magnitude of Change from Baseline Conditions

Magnitude of Change	Example Criteria
High	Construction phase: Activities result in a major pollution release (Category 1) or create/remove a pollutant linkage with a substantial pollutant source. Serious risk/improvement to human health/ life. Operation Phase: The development introduces or removes a large-scale source of potential contamination or a pollutant linkage for the same. Geology and Mineral Resources: Loss of geological feature or designation and/or quality and integrity, severe damage to key characteristics, features, or elements.
Medium	Construction phase: Activities result in a moderate pollution release (Category 2) or create/remove a pollutant linkage with moderate pollutant source.

Magnitude of Change	Example Criteria
	Moderate risk/improvement to human health/life. Operation Phase: The development introduces or removes a relatively small-scale source of potential contamination or a pollutant linkage for the same. Geology and Mineral Resources: Partial loss of geological feature or designation, potentially adversely affecting the integrity; partial loss of/damage to key characteristics, features, or elements.
Low	Construction phase: Activities result in a minor pollution release (Category 3) or create/remove a pollutant linkage with a minor pollutant source. Temporary pathway or receptor is introduced or removed during construction phase. Minor risk/improvement to human health/life. Operation Phase: The development introduces or removes a minor source of potential contamination or a pollutant linkage for the same. Geology and Mineral Resources: Minor measurable change in geological feature and designation attributes, quality, or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features, or elements.
Very Low / Negligible	An insignificant pollution release or creation/removal of a pathway with an insignificant pollutant source. No or readily reversible affect to human health. No foreseeable measurable change to the existing conditions. No appreciable impacts/reversible impacts. Geology and Mineral Resources: Minor measurable change in geological feature and designation attributes, quality, or vulnerability; minor loss of, or alteration to, one

Magnitude of Change	Example Criteria
	(maybe more) key characteristics, features, or elements.
Footnotes: A major pollution release corresponds to a Category 1 pollution incident, which is defined by the Environment Agency as having persistent and extensive impacts on water, land and air quality, major damage to all ecosystems, closure of a potable abstraction, major impact on land, property, major impact on amenity value, major damage to agriculture and/ or commerce and serious impact upon man. A moderate pollution release corresponds to a Category 2 pollution incident, which is defined by the Environment Agency as having a significant impact on water, land and air quality, significant damage to all ecosystems, non-routine notification of abstractions, significant impact on land, property, reduction in amenity value, significant damage to agriculture and/ or commerce and impact on man. A minor pollution release corresponds to a Category 3 pollution incident, which is defined by the Environment Agency as having a minimal impact on water, land and air quality, minor damage to local ecosystems, marginal impact on amenity value and minimal impact to agriculture and/ or commerce. An insignificant pollution release corresponds to a Category 4 pollution incident, which is defined by the Environment Agency as being a substantiated incident with no impact.	

9.6.8 The classification and likely significance of the effect resulting from the magnitude of impact and receptor sensitivity/value will be evaluated in accordance with the matrix shown in **Table 9-9** for ground conditions.

Table 9-9: Criteria for Assessing Effect Significance

Sensitivity or value of resource/ receptor	Magnitude of Impact			
	High	Medium	Low	Very Low/ Negligible
High	Major	Major	Moderate	Negligible
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Very Low	Minor	Minor	Negligible	Negligible

9.6.29 In accordance with the methodology set out within standard criteria discussed in **Volume 1, Chapter 5: EIA Approach and Methodology**; the following criteria have been applied:

- 'Moderate' or 'Major' effects are deemed to be 'significant';
- 'Minor' effects are considered to be 'not significant', although they may be a matter of local concern; and
- 'Negligible' effects are considered to be 'not significant'.

9.7 Design, Mitigation and Enhancement Measures

- 9.7.1 This section sets out the proposed ground conditions design, mitigation and enhancement measures.

Construction Environmental Management Plan (CEMP)

- 9.7.2 It is anticipated that potential environmental effects during construction will be effectively managed through the CEMP, the adoption of industry good practice and appropriate risk assessment to identify the use of personal protective equipment (PPE) measures required. A Framework CEMP will be prepared to accompany the DCO Application and describe the framework of mitigation measures, to be carried forward to a detailed CEMP that will be implemented during the construction phase.
- 9.7.3 Potential impacts that will be avoided, prevented, reduced or offset through the implementation of the mitigation measures detailed in the CEMP include:
- a. human exposure through direct contact/inhalation/dermal uptake of contaminants potentially present in soil and groundwater;
 - b. creation of preferential pathways and mobilisation of contamination;
 - c. contamination of natural soils, driving of contamination into an aquifer during piling, contamination of groundwater with concrete, paste or grout;
 - d. pollution and degradation of water quality of any underlying aquifer;
 - e. infiltration and / or runoff into the local drainage / sewerage network - pollution of drainage and sewerage network and any adjacent surface water features;
 - f. run-off and infiltration of contaminants from material stockpiles;
 - g. contamination of drainage and sewerage network and/or groundwater; and
 - h. spread of nuisance dusts and soils to the wider environment and local roads.
- 9.7.4 As noted above, the Framework CEMP would also secure the remediation of any contamination that is identified or arises during the construction phase.
- 9.7.5 Construction of the Proposed Scheme has the potential to affect geologically designated sites within or in close proximity to the Order Limits. Gilbert's Pit (Charlton) geological SSSI has been identified within Maryon Park, approximately 10m south of central extent of the Transmission Trunk Main. Engagement will be undertaken with relevant parties (including Royal Borough of Greenwich, relevant local geological groups and Natural England) particularly for potential impacts associated with the construction phase.

Operation Phase

- 9.7.6 Operational materials, including chemicals, fuels and oils, would potentially be stored at the Proposed Scheme. In common with other modern development, secondary containment appropriate to the level of risk would be included in the detailed design.
- 9.7.7 Good housekeeping and management practices will be adopted and adhered to through the operation phase to minimise impacts to soil and groundwater. Details of these measures will be set out within the DCO Application.

9.8 Assumptions, Limitations and Uncertainties

- 9.8.1 The following limitations and assumptions have been identified:
- a. The baseline conditions included are high-level and based only on publicly available sources of information. These will be developed as part of the PRA which will also include a walkover to 'key' areas of the Study Area and review of historical maps and third-party data.

9.9 Summary of Elements Scoped In or Scoped Out

- 9.9.1 A summary of the ground conditions items scoped in or out of the ES is provided in **Table 9-10**.

Table 9-10: Elements Scoped In or Out of the Assessment of Ground Conditions

Element	Phase	Scoped In	Scoped Out	Justification
Construction Phase Effects	Construction	✓		A PRA will be produced as part of the DCO Application, which will provide the information for the ES Chapter. The potential effects that will be considered include: • damage, disturbance or removal of geological features of interest (LGS); • temporary compaction and degradation of soils; • temporary mineral severance or sterilisation; • potential reduction of flow to surface water bodies and change in hydrogeological and hydrological setting locally; • mobilisation and migration of contamination to unsaturated soils, groundwater and surface water courses; • likely significant effects on groundwater as a pathway may be created for drilling fluids or other fluids to reach sensitive groundwater receptors; • potential for contaminants in unsaturated soils to be exposed to surface water run-off and to leach to groundwater in open excavations;

Element	Phase	Scoped In	Scoped Out	Justification
				- likely significant effects from migration of contaminants from uncovered stockpiles to surface water and groundwater receptors; - creation of preferential pathways for the migration of soil contamination and gases; - migration of contamination to unsaturated soils, surface water and groundwater; - likely significant effects on groundwater from construction of underground structures / drilling; - likely significant effects from potential contamination in dust and fine particulate matter may impact on ecological receptors; and - impacts on human health from contamination within unsaturated soil (dust and fine particulate matter) and groundwater. - The disturbance or mobilisation of existing contamination towards buildings or service pipelines on-site or off-site that may result in damage or deterioration and potential permeation of drinking water pipes by contaminants, due to aggressive conditions caused by the contaminants present or through the introduction of fill materials (lowering pH). The recommended mitigation measures identified by the PRA and ES Chapter will be incorporated into the Framework CEMP.

Element	Phase	Scoped In	Scoped Out	Justification
				Furthermore, engagement will be undertaken with local geological groups in relation to potential impacts to the Gilbert's Pit (Charlton) geological SSSI.
Operation Phase Effects	Operational		✓	Good housekeeping and management practices will be adopted and adhered to through the operation phase to minimise likely significant effects to soil and groundwater, and therefore no significant effects are considered likely. Details and securing mechanisms will be provided in the DCO Application.
Decommissioning Phase Effects	Decommissioning		✓	Standard good practice management measures and compliance with the relevant legislation at the time would avoid any likely significant effects, considering the small scale of works required, and therefore no significant effects are considered likely.

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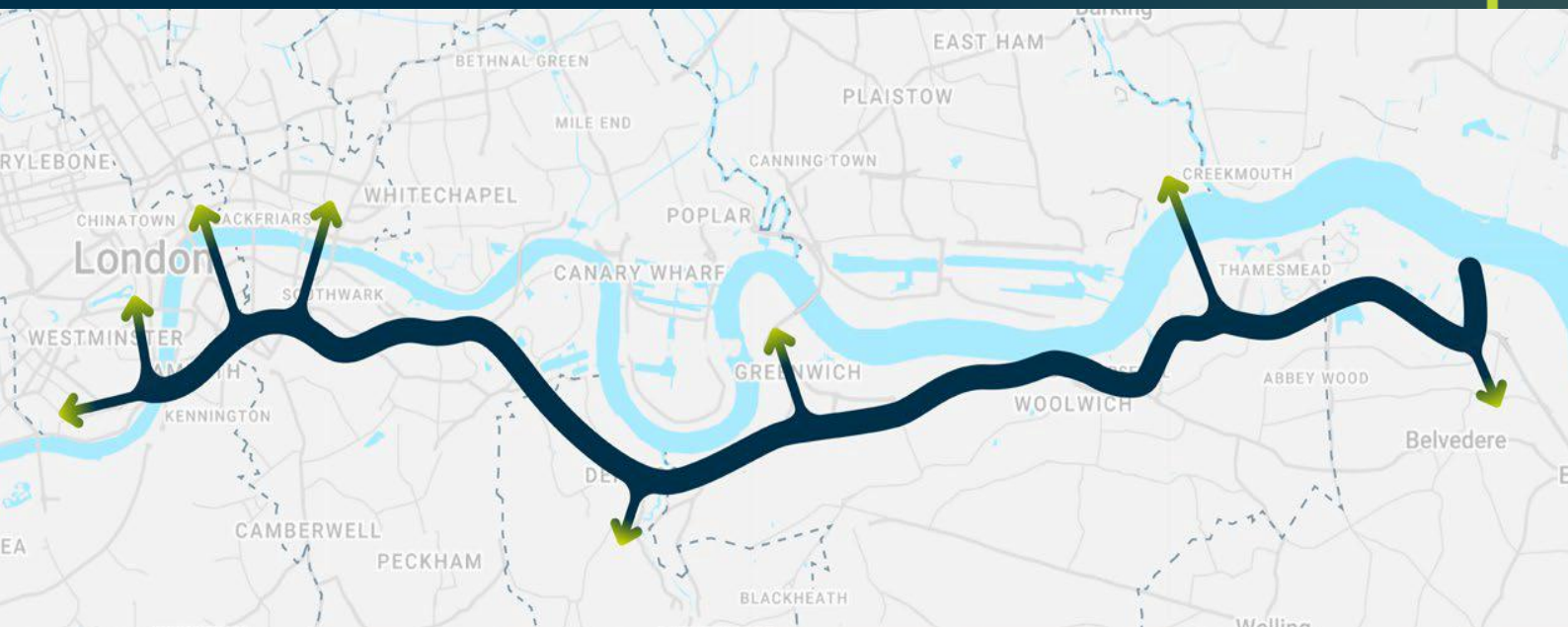
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Environmental Impact Assessment Scoping Report

Volume 1: Main Report

Chapter 10: Historic Environment



Cory Environmental Holdings Limited

July 2026

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10. Historic Environment

10.1 Introduction

10.1.1 This chapter sets out the approach to the assessment of likely significant effects on the historic environment, comprising archaeology, historic buildings and historic landscapes, of the Proposed Scheme (as described in **Volume 1, Chapter 2: Proposed Scheme**). It sets out the proposed methodology and datasets to be used within the historic environment assessment in the Environmental Statement (ES), and identifies those impacts that can be scoped into or out of the assessment of likely significant effects.

10.1.2 This chapter should be read in conjunction with:

- a. **Volume 1, Chapter 8: Ecology** – changes to the landscape and to vegetation cover, including changes arising through mitigation measures, may result in changes to the setting and value of heritage assets;
- b. **Volume 1, Chapter 13: Marine Environment** – changes to the marine environment may result in impacts to marine archaeological remains and deposits;
- c. **Volume 1, Chapter 15: Noise and Vibration** – noise and vibration impacts arising from the Proposed Scheme may result in changes to the setting of heritage assets or impacts on their historic fabric caused by vibration;
- d. **Volume 1, Chapter 17: Townscape and Visual** – changes to the landscape and townscape within which the Proposed Scheme lies, including visual imposition and visibility of the Proposed Scheme, may result in changes to the setting and value of heritage assets; and
- e. **Volume 1, Chapter 18: Transport** – construction vehicle movements may result in changes to the setting and value of heritage assets.

10.1.3 This chapter is supported by the following figures in **Volume 2**, and appendices in **Volume 3**, of this Scoping Report:

- a. **Figure 10.1 Designated Heritage Assets**;
- b. **Figure 10.2 Non-designated Heritage Assets**; and
- c. **Appendix 10.1 Historic Environment Baseline**.

10.2 Study Area

- 10.2.1 For this Scoping Report, the Study Area extends to a distance of 100m from the EIA Scoping Boundary¹ (hereafter the 100m Study Area). A 100m Study Area is considered appropriate for the likely extent of construction and operational impacts and potential significant effects arising from the Proposed Scheme, within the urban context of inner London.
- 10.2.2 For the ES, an amended Study Area will be determined, as appropriate, in consultation with stakeholders, prior to undertaking baseline studies. For buried archaeological remains opportunities to reduce the Study Area, e.g. to 50m either side of the pipeline corridor, may be considered for sections of the Transmission Trunk Main and Transmission Branches directionally drilled wholly through London Clay deposits. Reduction of the Study Area will be dependent on the results of engagement with GLAAS and considering the results of any available settlement assessments.
- 10.2.3 An additional wider Study Area from the EIA Scoping Boundary may be considered appropriate at Riverside Campus – this will be refined for the purpose of the ES and agreed in consultation with stakeholders. For the Scoping Chapter, a 100m Study Area has been applied.
- 10.2.4 A flexible approach will be taken to the identification of very high and high value heritage assets (specifically, World Heritage Sites (WHS), Scheduled Monuments, grade I and grade II* listed buildings and grade I and grade II* registered parks and gardens) where their setting may be altered by the Proposed Scheme or where they experience impacts upon their physical fabric due to vibration. This would be up to a proportionate distance extending further than the 100m Study Area, to be agreed with relevant stakeholders during consultation.
- 10.2.5 Due to dense urbanisation along stretches of the route of the Proposed Scheme, there are buildings which abut or are in close proximity with the outer extent of the 100m Study Area. In addition, some data points for listed assets fall outside the Study Area but their physical structures overlap with the 100m Study Area. A proportionate approach, applying professional judgment, has been applied to ensure high value heritage assets will be included in the assessment and in the numbers of assets identified in this scoping chapter where these instances arise.

¹ All references to 'EIA Scoping Boundary', correspond to the area shown in Volume 2, Figure 1-1.

10.3 Relevant Legislation, Planning Policy and Guidance

10.3.1 Legislation, planning policy and guidance relating to the historic environment and pertinent to the Proposed Scheme is set out below.

Legislation

10.3.2 Legislation relevant to the historic environment assessment of the Proposed Scheme comprises:

- a. Infrastructure Planning (Decisions) Regulations 2010 (Ref 10.1);
- b. The Ancient Monuments and Archaeological Areas Act 1979 (Ref 10.2);
- c. The Planning (Listed Buildings and Conservation Areas) Act 1990 (Ref 10.3); and
- d. The Planning Act 2008 (Ref 10.4).

National Planning Policy

Overarching National Policy Statement for Energy (NPS EN-1)

10.3.3 The relevant national policies from NPS EN-1 for the Historic Environment are summarised below and within **Table 10-1**. These documents have informed the assessment methodology, identification of sensitive heritage assets and the Study Area.

Table 10-1: Overarching National Policy Statement for Energy - Historic Environment

National Policy	Summary of Requirements	Relevance to the Assessment
Overarching National Policy Statement (NPS) for Energy (EN-1) (2025) (Ref 10.5)	Section 5.9 within NPS EN-1 sets out the Government's overarching policy statement for energy. With regards to the Historic Environment, NPS EN-1 paragraphs 5.9.1 to 5.9.37 discuss the Historic Environment and heritage assets.	Key aspects of the NPS relevant to the Historic Environment include the requirement for an ES to describe aspects likely to be significantly affected, including buried archaeology and extant built heritage assets. Further key aspects include the need for applicants to ensure that the impact of a proposed development on the significance of any heritage assets that are affected, are to be

National Policy	Summary of Requirements	Relevance to the Assessment
		adequately understood in the application documents and for heritage assets affected by noise, vibration, light and indirect impacts, to be the subject of studies proportionate to the significance of the heritage assets.

National Planning Policy Framework (NPPF)

10.3.4 The following section from the NPPF (Ref 10.6) is considered relevant to the assessment of potential historic environment effects presented in this chapter and will be considered in the development of the ES:

- a. Section 16: Conserving and enhancing the historic environment.

10.3.5 The Government consulted on a revised NPPF, with a draft version published alongside the consultation that ran until 10 March 2026 (Ref 10.7). No outcome to this consultation has been published yet. The updated framework contains requirements relating to the Historic Environment that are discussed in Volume 1, Chapter 20: Conserving and enhancing the historic environment. These requirements are set out in policies:

- a. HE2: Conservation Areas and World Heritage Sites
- b. HE4: Securing the Conservation and Enhancement of Heritage Assets
- c. HE5: Assessing Effects on Heritage Assets
- d. HE6: Proposals Affecting Designated Heritage Assets
- e. HE8: World Heritage Sites
- f. HE9: Conservation Areas
- g. HE10: Archaeological Assets
- h. HE11: Loss or Removal of Heritage Assets

10.3.6 Regarding harm, the draft NPPF removes the concept of 'optimum viable use' to allow greater flexibility where proposals cause harm not considered to be substantial. The policy has also altered the wording from 'great weight' to 'substantial weight' for consistency across the draft NPPF.

Local and Neighbourhood Planning Policy

10.3.7 The local and neighbourhood planning policy listed in **Table 10-2** is considered relevant to the assessment of potential historic environment impacts

presented in this chapter. The local and neighbourhood planning policies, set out below for each borough, present how the Historic Environment should be managed, conserved and assessed, including designated, non-designated heritage assets and both built heritage and buried archaeological remains.

Table 10-2: List of Relevant Local and Neighbourhood Policy - Historic Environment

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
Greater London Authority (GLA)	The London Plan (Ref 10.8) • Policy HC1 Heritage conservation and growth; • Policy HC2 World Heritage Sites; • Policy HC3 Strategic and Local; Views, which sets out strategic viewpoints; and • Policy HC4 London View Management Framework (LVMF).	The Historic Environment assessment will consider Policies HC1, HC2, HC3 and HC4 in the London Plan. The Historic Environment assessment will specifically assess all designated (Including World Heritage Sites, Registered Parks and Gardens, Conservation Areas and Listed Buildings) and non-designated assets. The assessment will also consider views identified in the London Plan to and from specifically identified assets.
London Borough of Bexley (LBB)	Local Plan Adopted 2023 (Ref 10.9): • Policy SP6: Managing Bexley's heritage assets, DP: Protecting local views; and • Policy DP14: Development affecting a heritage asset.	The Historic Environment assessment will consider Policies SP6 and DP14. The Historic Environment assessment will specifically assess all designated (Including World Heritage Sites, Registered Parks and Gardens, Conservation Areas and Listed Buildings) and non-designated assets. The assessment will also

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
		consider views identified in the Bexley Local Plan to and from specifically identified assets.
Royal Borough of Greenwich (RBG)	Royal Greenwich Local Plan (Ref 10.10); • Policy DH3 Heritage Asset; • Policy DH4 Maritime Greenwich World Heritage Site; • Policy DH(g) Local Views; • Policy DH(h) Conservation Areas • Policy DH(i) Character and Setting; • Policy DH(i) Statutory Listed Buildings • Policy DH(i) Protection of Listed Buildings; • Policy DH(j) Locally Listed Buildings; • Policy DH(k) Thames Policy Area; • Policy DH(l) Areas of Special Character; and • Policy DH(m) Archaeology Royal Borough of Greenwich Draft Local Plan (Ref 10.11); • Policy DH1 Principles for high quality urban design; • Policy DH2 Tall buildings; • Policy DH3 Public realm; • Policy DH4 Heritage Assets;	The Historic Environment assessment will consider Policies DH3, DH4, DH(g), DH(h), DH(i), DH(j), DH(k), DH(l) and DH(m) in the Royal Greenwich Local Plan. The Historic Environment assessment will specifically assess all designated (Including World Heritage Sites, Registered Parks and Gardens, Conservation Areas and Listed Buildings) and non-designated assets. The assessment will also consider views identified in the Royal Greenwich Local Plan to and from specifically identified assets.

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	• Policy DH5 Maritime Greenwich World Heritage Site; and • Policy DH6 Strategic and Local Views.	
London Borough of (LBLe) Lewisham	Lewisham Local Plan 2020-2040 (Ref 10.12): • Policy HE1 Lewisham's historic environment; • Policy HE2 Designated heritage assets; • Policy HE3 Non-designated heritage assets; and • Policy QD5 View management.	The Historic Environment assessment will consider Policies HE1, HE2, HE3 and QD5 in the Lewisham Local Plan. The Historic Environment assessment will specifically assess all designated (Including World Heritage Sites, Conservation Areas, Registered Parks and Gardens and Listed Buildings) and non-designated assets and will assess views identified in the Lewisham Local Plan to and from specifically identified assets.
London Borough of Southwark (LBS)	The Southwark Plan 2019-2036 (Ref 10.13): • Policy P19 Listed buildings and structures; • Policy P20 Conservation areas; • Policy P21 Conservation of the historic environment and natural heritage; • Policy P22 Borough views, • Policy P23 Archaeology;	The Historic Environment assessment will consider Policies P19, P20, P21, P22, P23, P24 and P26. The Historic Environment assessment will specifically assess all designated (Including World Heritage Sites, Conservation Areas, Registered Parks and Gardens and Listed Buildings) and non-designated assets and will assess views identified in

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	- Policy P24 World heritage sites; and - Policy P26 Local List.	the Southwark Plan to and from specifically identified assets.
London Borough of Lambeth Borough (LBLa)	Lambeth Local Plan 2020-2035 (Ref 10.14): - Policy Q18 Historic environment strategy; - Policy Q19 Westminster World Heritage Site; Policy Q20 Statutory listed buildings; Policy Q21 Registered parks and gardens; Policy Q22 Conservation areas; Policy Q23 Non-designated heritage assets: local heritage list, Q25 Views. South Bank & Waterloo Neighbourhood Plan 2017-2032 (Ref 10.15): - Policies P8 and P9: Development Management. Kennington Oval and Vauxhall Neighbourhood Plan 2035 (Ref 10.16): - Policy KOV 4: Community Infrastructure Premises	The Historic Environment assessment will consider Policies Q18, Q19, Q20, Q21 and Q23. The Historic Environment assessment will specifically assess all designated (Including World Heritage Sites, Registered Parks and Gardens, Conservation Areas and Listed Buildings) and non-designated assets and will assess views identified in the Lambeth Local Plan to and from specifically identified assets. The Historic Environment assessment will also consider Policies P8 and P9 in the South Bank & Waterloo Neighbourhood Plan 2017-2032 and Policy KOV 4 in the Kennington Oval and Vauxhall Neighbourhood Plan 2035.
London Borough of Barking and Dagenham (LBBD)	London Borough of Barking and Dagenham Local Plan 2020-2037 (Ref 10.17): Policy DMD 4: Heritage assets and archaeological remains.	The Historic Environment assessment will consider Policy DMD 4 in the London Borough of Barking and Dagenham Local Plan.

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
		The Historic Environment assessment will specifically assess all designated (Including World Heritage Sites, Registered Parks and Gardens, Conservation Areas and Listed Buildings) and non-designated assets. The assessment will also consider views identified in the London Borough of Barking and Dagenham Local Plan to and from specifically identified assets.
London Borough of Tower Hamlets (LBTH)	Tower Hamlets Local Plan 2031 Managing Growth and Sharing Benefits (Ref 10.18): • Policy S.DH3: Heritage and the historic environment; • Policy D.DH4: Shaping and managing views; and • Policy S.DH5: World heritage sites.	The Historic Environment assessment will consider Policies S.DH3, D.DH4 and S.DH5 in the Tower Hamlets Local Plan. The Historic Environment assessment will specifically assess all designated (Including World Heritage Sites, Registered Parks and Gardens, Conservation Areas and Listed Buildings) and non-designated assets. The assessment will also consider views identified in the Tower Hamlets Local Plan to and from specifically identified assets.

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
City of London Corporation (CoL)	Local Plan 2025 (Ref 10.19): • Policy CS12 Historic Environment; • Policy DM 12.1 Managing change affecting all heritage assets and spaces; • Policy DM 12.2 Development in conservation areas; • Policy DM 12.3 Listed buildings; • Policy DM 12.4 Ancient monuments and archaeology; • Policy DM 12.5 Historic parks and gardens; and • Policy CS13 Protected Views. City Plan 2040 (Ref 10.20): • Strategic Policy S11: Historic Environment; • Policy HE1 Managing Change to the Historic Environment; • Policy HE2: Ancient Monuments and Archaeology; • Policy HE3: Setting of the Tower of London World Heritage Site; and • Strategic Policy S13: Protected Views.	The Historic Environment assessment will consider Policies CS12, DM 12.1, DM 12.2, DM 12.3, 12.4, 12.5 and CS13 in the City of London Local Plan. The Historic Environment assessment will specifically assess all designated (Including World Heritage Sites, Registered Parks and Gardens, Conservation Areas and Listed Buildings) and non-designated assets. The assessment will also consider protected views identified in the City of London Local Plan to and from specifically identified assets. The Historic Environment assessment will also consider Policies within the emerging City Plan 2040, including Policies S11, HE1, HE2, HE3 and S13.
City of Westminster (CoW)	Westminster City Plan 2019-2040 (Ref 10.21): • Policy 44 Westminster's heritage	The Historic Environment assessment will consider Policy 44 in the Westminster City Plan.

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	Victoria Neighbourhood Plan 2025 - 2040 (Ref 10.22): • Policy VND01: Important Views; and • Policy VND02: Conservation Areas.	The Historic Environment assessment will specifically assess all designated (Including World Heritage Sites, Registered Parks and Gardens, Conservation Areas and Listed Buildings) and non-designated assets. The assessment will also consider views identified in the Westminster Local Plan to and from specifically identified assets. The Historic Environment assessment will also consider Policies VND01 and VND02 in the Victoria Neighbourhood Plan and will assess Important Views and Conservation Areas.
Royal Borough of Kensington and Chelsea (RBKC)	Local Plan 2024 (Ref 10.23): • Policy CD3 Heritage Assets; • Policy CD4 Heritage Assets – Conservation Areas; • Policy CD5 Heritage Assets – Listed Buildings; • Policy CD6 Scheduled Monuments and Archaeology; • Policy CD7 Registered Parks and Gardens of special historic interest.	The Historic Environment assessment will consider Policies CD3, CD4, CD5, CD6, and CD7 in the Royal Borough of Kensington and Chelsea Local Plan. The Historic Environment assessment will specifically assess all designated (Including World Heritage Sites, Registered Parks and Gardens, Conservation Areas and Listed Buildings) and non-designated assets. The assessment will also

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
		consider views identified in the Royal Borough of Kensington and Chelsea Local Plan to and from specifically identified assets.

Relevant Guidance

10.3.1 This EIA Scoping Report chapter has been based on the following national and international guidance:

- a. National Planning Practice Guidance (NPPG) (Ref 10.24)
- b. UNESCO Guidance and Toolkit for Impact Assessment in a World Heritage Context (2022) (Ref 10.25);
- c. London World Heritage Sites - Guidance on Settings (2012) (Ref 10.26);
- d. LVMF (2012) (Ref 10.27);
- e. Maritime Greenwich World Heritage Site Management Plan (2014) (Ref 10.28);
- f. Planning Practice Guidance (PPG) (2024) (Ref 10.29);
- g. Historic Environment Good Practice Advice in Planning Note 2: Managing Decision Taking in the Historic Environment (Historic England, March 2015) (Ref 10.30);
- h. Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets; (Historic England, December 2017) (Ref 10.31);
- i. Historic England Advice Note 12: Historic Environment Statements of Heritage Significance: Analysing Significance in Heritage Assets (Historic England, 2019) (Ref 10.32);
- j. Managing Archaeology in London. Guidance for developers, archaeologists and planners to promote the understanding and enjoyment of our historic environment (2025) (Ref 10.33);
- k. Chartered Institute for Archaeologists (CIfA) Standard and guidance for commissioning work or providing consultancy advice on archaeology and the historic environment (Ref 10.34);
- l. CIfA Standard and Guidance for Historic Environment Desk-Based Assessment (Ref 10.35);
- m. CIfA Code of Conduct: professional ethics in archaeology (Ref 10.36);

- n. Institute of Environmental Management and Assessment (IEMA) (now known as ISEP (Institute of Sustainability and Environmental Professionals) guidance, referred from herein as the 'ISEP Guidance (Ref 10.37);
- o. The Institute of Historic Building Conservation (IHBC) guidance (Ref 10.38); and
- p. ClfA Principles of Cultural Heritage Impact Assessment in the UK. (Ref 10.39)

10.4 Baseline Conditions and Future Baseline

10.4.1 The currently known baseline historic environment resource described in this section has been informed by the following data sources:

- a. Historic England's National Heritage List for England (NHLE) (Ref 10.40);
- b. The Greater London Historic Environment Record (GLHER) (Ref 10.41);
- c. British Geological Survey GeoIndex viewer (Ref 10.42);
- d. Google Maps aerial imagery (Ref 10.43); and
- e. Other readily available online sources.

10.4.2 The heritage assets discussed within this chapter, including designated and non-designated heritage assets, are summarised by London Borough for ease of reference, and are identified by their unique identification number assigned by the NHLE for designated assets (e.g. NHLE 1003669) and by the GLHER Primary Reference Number (PRN) (e.g. GLHER 136583) for non-designated heritage assets.

Designated Heritage Assets

Summary

10.4.3 The historic environment 100m Study Area for the purposes of scoping the EIA for the Proposed Scheme contains the following designated heritage assets, which abut or overlap with the 100m Study Area and/or fall within or overlap with the EIA Scoping Boundary:

- a. One UNESCO WHS, Maritime Greenwich, within the EIA Scoping Boundary;
- b. 26 Scheduled Monuments, of which 12 are within the EIA Scoping Boundary;
- c. Four Grade I Registered Park and Gardens, of which one is within the EIA Scoping Boundary;
- d. Two Grade II* Registered Park and Gardens, of which one is within the EIA Scoping Boundary;

- e. 18 Grade II Registered Park and Gardens, of which 16 are within the EIA Scoping Boundary;
- f. 83 Conservation Areas of which 61 are located within the EIA Scoping Boundary.
- g. 71 Grade I Listed Buildings, of which 6 are within the EIA Scoping Boundary;
- h. 170 Grade II* Listed Buildings, of which 16 are within the EIA Scoping Boundary; and
- i. 1216 Grade II Listed Buildings of which 116 are within the EIA Scoping Boundary.

London Borough of Bexley

- 10.4.4 The Proposed Scheme in LBB largely runs through industrial and modern residential areas. The only designated heritage asset within the EIA Scoping Boundary is the Crossness Conservation Area, which centres on the Grade I listed Former Crossness Pumping Station (NHLE 1064241). The station itself, and two associated Grade II assets, are beyond the 100m Study Area. This cluster of assets could be scoped in for further assessment following consultation and further review of the parameters of the Proposed Scheme, once these have been fixed for the DCO Application.
- 10.4.5 There are no WHS, Scheduled Monuments, Registered Parks and Gardens, Registered Battlefields, or listed buildings within the 100m Study Area.

Royal Borough of Greenwich

- 10.4.6 The EIA Scoping Boundary and 100m Study Area for the Proposed Scheme cross the Maritime Greenwich UNESCO WHS. The associated buffer zone for the Maritime Greenwich WHS extends further and is designed to signal the immediate visual and archaeological sensitivity of the surrounding landscape, in addition to protecting the WHS from development that would adversely impact upon the monument's visual setting and Outstanding Universal Value. The WHS is a heritage asset of very high value and was inscribed in 1997 (Inscribed WHS No. 795) for its Outstanding Universal Value (OUV) in maritime, scientific, royal, and architectural cultural heritage, located within a single historic landscape, and containing several nationally important heritage assets. The area covered by the WHS was the centre of globally important developments in navigation and astronomy through the Royal Observatory Greenwich, where the Prime Meridian and Greenwich Mean Time originated, shaping global mapping and timekeeping. Designated assets within the WHS that are within the 100m Study Area and EIA Scoping Boundary include two Scheduled Monuments, Greenwich Palace (NHLE 1410710) and Queen's House (NHLE 1002060), plus the Grade I Registered Park and Garden (RPG) Greenwich Park (NHLE 1000174), which intersects with the 100m Study Area at the northwest corner of the RPG.

- 10.4.7 There are no Registered Battlefields within the 100m Study Area.
- 10.4.8 There are seven Conservation Areas within that part of the 100m Study Area which crosses the Royal Borough of Greenwich. These all intersect with the EIA Scoping Boundary: Deptford High Street Conservation Area; Greenwich East Greenwich Conservation Area; Park Conservation Area; Royal Arsenal Conservation Area; Thames Barrier & Bowater Road; West Greenwich Conservation Area; and Woolwich Conservation Area.
- 10.4.9 There are five Grade I listed buildings within the 100m Study Area: the Church of St Alfege (NHLE 1358970) which is bounded on all sides by and which partly overlaps with the EIA Scoping Boundary, Gate Lodges at East Gate of Royal Naval College (NHLE 1358993), Royal Naval College, Queen Mary's Quarter (NHLE 1211384) which immediately abuts the EIA Scoping Boundary, Royal Naval College Southwest Building, King William's Quarter (NHLE 1211426) which immediately abuts the EIA Scoping Boundary and the Royal Naval College Gates, Gate Piers and Lodges to West Entrance (NHLE 1078973).
- 10.4.10 Four further Grade I listed buildings fall partly within the 100m Study Area or about it: National Maritime Museum (NHLE 1211481), Royal Naval College Northeast Building, Queen Anne's Quarter (NHLE 1290044), Royal Arsenal Brass Foundry Royal Foundry (NHLE 1078956) and the Cutty Sark (NHLE 1079013).
- 10.4.11 There are eleven Grade II* listed buildings within the 100m Study Area, including two which partially overlap with the 100m Study Area. There are no Grade II* listed buildings within the EIA Scoping Boundary.
- 10.4.12 There are 102 Grade II listed buildings within the 100m Study Area, of which 15 are located within the EIA Scoping Boundary.

London Borough of Lewisham

- 10.4.13 There are no designated assets within the EIA Scoping Boundary.
- 10.4.14 Within the 100m Study Area there are no Scheduled Monuments, Registered Parks and Gardens, Registered Battlefields, or Grade II listed buildings.
- 10.4.15 There are two Conservation Areas within the 100m Study Area: Deptford Creekside and Deptford High Street & St Paul's Church.
- 10.4.16 One Grade I listed building is located partly within the 100m Study Area, namely, The Church of St Paul's (NHLE 1080003).
- 10.4.17 Near Deptford within the 100m Study Area, there are ten Grade II* listed buildings, mostly terraced dwellings on Albury Street within the Deptford High Street & St Paul's Church Conservation Area, and seven Grade II listed

buildings. A further Grade II* listed building is located partly within the 100m Study Area.

London Borough of Southwark

- 10.4.18 There are no WHS or Registered Battlefields within the 100m Study Area.
- 10.4.19 Extending into the 100m Study Area and partially overlapping with the EIA Scoping Boundary is the Grade II Registered Park and Garden, Southwark Park (NHLE 1000838).
- 10.4.20 Extending into the EIA Scoping Boundary are 11 Conservation Areas: Bermondsey Street; Borough High Street; Edward III's Rotherhithe; St George's Circus; Liberty of the Mint; Thrale Street; Trinity Church Square; Union Street; Valentine Place; West Square; and Wilson Grove.
- 10.4.21 There are also two Grade II* and 17 Grade II listed buildings within the EIA Scoping Boundary.
- 10.4.22 There are five Scheduled Monuments located within the 100m Study Area within the London Borough of Southwark. These are the Medieval moated manor house, 43m west of Cathay House (NHLE 1001983), Abbey buildings, Bermondsey (NHLE 1001984), Remains of Winchester Palace, Clink Street and waterfront (NHLE 1002054), and The Globe Theatre (NHLE 1012806). Abbey Buildings, Bermondsey (NHLE 1001984). These are located within the EIA Scoping Boundary.
- 10.4.23 Within the 100m Study Area are a further three Conservation Areas: King's Bench, St Mary's Rotherhithe and Yates Estate and Victory.
- 10.4.24 Also, within the 100m Study Area, there are a further nine Grade II* listed buildings and 149 Grade II listed buildings.
- 10.4.25 The Grade I Listed George Inn (NHLE 1378357) lies partially within the 100m Study Area.

London Borough of Lambeth

- 10.4.26 The most notable heritage asset is the Grade I listed Lambeth Palace (NHLE 1116399), which dates back in parts to the 12th century. The Palace itself lies within the 100m Study Area, with the surrounding Grade II Registered Park and Garden (NHLE 1000818) extending into the EIA Scoping Boundary.
- 10.4.27 There are no WHS, Scheduled Monuments, or Registered Battlefields, within the 100m Study Area.
- 10.4.28 There are ten Conservation Areas within the 100m Study Area: Albert Embankment; Lambeth Palace; Lambeth Walk and China Walk; Lower Marsh; Mitre Road and Ufford Street; Roupell Street; South Bank; Vauxhall; Walcot; and Waterloo.

10.4.29 A further Grade I listed building in the 100m Study Area is the Royal Festival Hall (NHLE 1249756).

10.4.30 Two Grade II* listed heritage assets are partially within the 100m Study Area: the Royal National Theatre (NHLE 12723234) and Waterloo Bridge (NHLE 127500).

10.4.31 There are also six Grade II* and 42 Grade II listed buildings within the 100m Study Area.

London Borough of Barking and Dagenham

10.4.32 The 100m Study Area in Barking and Dagenham consists of three areas where transmission branches of the Proposed Scheme enter the area on the north bank of the Thames. This is a largely industrial area.

10.4.33 There are no WHS, Scheduled Monuments, Registered Parks and Gardens, Registered Battlefields, Conservation Areas, or listed buildings within the 100m Study Area.

London Borough of Tower Hamlets

10.4.34 The Proposed Scheme intrudes only a short distance into the Tower Hamlets borough, landing on the north bank in the Wapping Pierhead Conservation Area. There are no designated assets within the EIA Scoping Boundary.

10.4.35 There are no WHS, Scheduled Monuments, Registered Parks and Gardens, Registered Battlefields, Conservation Areas, or of Grade I or II* listed buildings within the 100m Study Area.

10.4.36 There are 14 Grade II listed buildings within the Study Area including wharfs and warehouses, reflecting the area's industrial and maritime heritage.

City of London

10.4.37 There are no WHS or Registered Battlefields within the 100m Study Area.

10.4.38 There are a total of 20 Scheduled Monuments located within the 100m Study Area within the City of London. These include Smiths' Wharf (NHLE 1001995), Vintners' Hall (NHLE 1002033), Painter Stainers' Hall (NHLE 1002030), Huggin Hill Roman bath house, 120m WNW of St James's Church (NHLE 1001981), Skinners' Hall, (NHLE 1002031), Tallow Chandlers' Hall, (NHLE 1002032), Dyers' Hall (NHLE 10020570), Armourers' and Brasiers' Hall (NHLE 1002056), Roman governor's palace (site of) (NHLE 1001997), Innholders' Hall (NHLE 1002028), Remains of St Pancras Church, Pancras Lane (NHLE 1001975), Roman amphitheatre, Guildhall Yard (NHLE 1013411) and Baynard's Castle, 78m south-west of St Benet Metropolitan Welsh Church (NHLE 1001965).

- 10.4.39 There are seven sections of the Scheduled Monument, London Wall, that have been identified within the 100m Study Area and include London Wall: remains of Roman wall and bastion, Goring Street (NHLE 1002049), London Wall: remains of Roman fort wall and east gate under Aldermanbury (NHLE 1002053), London Wall: remains of Roman and medieval wall from west end of All Hallows Church to 38 Camomile Street (NHLE 1002050), London Wall: section bounding All Hallows Churchyard (NHLE 1002067), London Wall: remains of Roman wall and conduit and medieval postern, Bloomfield House to site of Moor Gate (NHLE 1002051), London Wall: section of Roman wall within the London Wall underground car park, 25m north of Austral House and 55m north west of Coleman Street (NHLE 1018885), and London Wall: remains of Roman wall and bastion, Camomile Street (NHLE 1005547).
- 10.4.40 Of the 20 Scheduled Monuments, ten intersect with or are immediately adjacent to the EIA Scoping Boundary, namely Dyers' Hall (NHLE 10020570), Skinners' Hall, (NHLE 1002031), Roman governor's palace (site of) (NHLE 1001997), Vintners' Hall (NHLE 1002033), Innholders' Hall (NHLE 1002028), Remains of St Pancras Church, Pancras Lane (NHLE 1001975), Roman amphitheatre, Guildhall Yard (NHLE 1013411), Armourers' and Brasiers' Hall (NHLE 1002056), London Wall: remains of Roman wall and conduit and medieval postern, Bloomfield House to site of Moor Gate (NHLE 1002051), and London Wall: remains of Roman and medieval wall from W end of All Hallows Church to 38 Camomile Street (NHLE 1002050).
- 10.4.41 There are two Registered Parks and Gardens located within the 100m Study Area: The Barbican, Grade II* (NHLE 1001668) and Finsbury Circus, Grade II (NHLE 1001259).
- 10.4.42 Within the EIA Scoping Boundary are seven Conservation Areas: Bank; Bow Lane; Bishopsgate; New Broad Street; Finsbury Circus; Guildhall; and Queen Street. There is one Grade I listed building, the Church of All Hallows (NHLE 1064632), two Grade II* and four Grade II buildings.
- 10.4.43 There are a further six Conservation Areas located within the 100m Study Area: Barbican and Golden Lane; Creechurch; Laurence Pountney Hill; St Helen's Place; St Paul's Cathedral; and Whitefriars.
- 10.4.44 There are 12 Grade I listed buildings within the 100m Study Area: Church of St Margaret (NHLE 1064634); Church of St James Garlickhithe (NHLE 1064669); Church of St Lawrence Jewry (NHLE 1064673); Guildhall (NHLE 1064675); Skinners Hall (NHLE 1064686); Church of St Mary Le Bow (NHLE 1064696); Bank of England (NHLE 1079134); Church of St Mary Aldermary (NHLE 1079145); Vintners Hall (NHLE 1180690); Guild Church of St Ethelburga the Virgin (NHLE 1191603); Church of St Michael Paternoster Royal (NHLE 1286707) and the Tower of Former Church of St Olave (NHLE 1359180).

10.4.45 A further three Grade I listed buildings partially overlap with the 100m Study Area: the Midland Bank (NHLE 1064598); the Church of St Helen (NHLE 1286458); and the Church of St Andrew by the Wardrobe (NHLE 1079148).

10.4.46 There are also 14 Grade II* and 86 Grade II listed buildings within the 100m Study Area. A further Grade II* listed building, National Westminster Bank including Lothbury Gallery (NHLE 1079136), lies partially within the 100m Study Area.

City of Westminster

10.4.47 There are no WHS, Scheduled Monuments, or Registered Battlefields, within the 100m Study Area.

10.4.48 Within the EIA Scoping Boundary, there are 13 Registered Parks and Gardens. These are Grade I Trafalgar Square (NHLE 1001362); Grade II* Victoria Embankment Gardens (NHLE 1000844); and a further 11 Registered Parks and Gardens at Grade II: Warwick Square (NHLE 1000848); Dolphin Square Gardens (NHLE 1455668); Eccleston Square (NHLE 1000802); Victoria Tower Gardens (NHLE 1000845); Landscape To Churchill Gardens Estate (NHLE 1469043); The Grosvenor Estate: Chester Square (NHLE 1001675); The Grosvenor Estate: Belgrave Square (NHLE 1000792); The Grosvenor Estate: Eaton Square (NHLE 1000801); Pimlico Gardens (NHLE 1469085); St George's Square Garden (NHLE 1467523); and Portman Square And Manchester Square (NHLE 1000820).

10.4.49 Extending into the EIA Scoping Boundary are 24 Conservation Areas: East Marylebone, Haymarket, Regent Street, Chinatown, Westminster Abbey and Parliament Square, Lillington Gardens, Smith Square, Belgravia, Savoy, Stratford Place, Churchill Gardens, Adelphi, Millbank, Leicester Square, Pimlico, Regency Street, Vincent Square, Trafalgar Square, Covent Garden, Westminster Cathedral, Dolphin Square, Harley Street, St James's, and Soho.

10.4.50 Within the EIA Scoping Boundary are five Grade I listed buildings: Spanish Embassy (NHLE 1218320), The Royal Society of Arts (NHLE 1216787); Institute of Directors (NHLE 1225843); York Water Gate (NHLE 1237938); and the Statue of Charles I (NHLE 1357291). There are also 11 Grade II* and 81 Grade II listed buildings within the EIA Scoping Boundary.

10.4.51 Within the 100m Study Area are a further three Registered Parks and Gardens. These are the Grade I Hyde Park (NHLE 1000814) and St James's Park (NHLE 1000483); and Grade II St James's Square (NHLE 1000833).

10.4.52 Also within the 100m Study Area are a further seven Conservation Areas: Peabody Avenue, Whitehall, Royal Parks, Grosvenor Gardens, Charlotte Street West, Mayfair, and Strand.

10.4.53 Within the 100m Study Area are an additional 28 Grade I listed buildings: Church of St James the Less (NHLE 1066164); St James The Less Parish Rooms and Schools (NHLE 1066166); Cleopatra's Needle (NHLE 1066169); Churchyard Walls and Railings Surrounding Church of St Martin in the Fields on North, South, East and West Sides (NHLE 1066237); 13-23, Belgrave Square SW1 (NHLE 1066457); Church of St Paul Covent Garden (NHLE 1066487); 36, Craven Street Wc2 (NHLE 1066930); Numbers 1-9 Including Railings to North and East (NHLE 1209780); Numbers 10 to 18 (Including The Institute of Contemporary Arts); and Railings to North and West (NHLE 1209794); Statue of James II in Front of National Gallery West Wing (NHLE 1217629); Church of St Martin in the Fields (NHLE 1217661); ; Church of All Souls, Langham Place (NHLE 1221802); The Reform Club (NHLE 1225841); The Athenaeum (NHLE 1225842); 10, Portman Close W1 (NHLE 1227091); Royal Institute of British Architects Drawings Collection (NHLE 1227092); Home House (Courtauld Institute); (NHLE 1227105); Royal Opera Arcades (Including No 24 Charles II Street and No 5b Pall Mall); (NHLE 1235289); Stratford House, The Oriental Club (NHLE 1237107); Admiralty Arch, First Sea Lord's Residence and offices, Balustrades and Steps (NHLE 1238982); Duke of York Column and Steps (NHLE 1239383); All Saints Church and Numbers 7 and 8: All Saints Church House and Vestry, Including Railings to Basement Area and Attached Pair of Lamp Standards (NHLE 1239569); The Travellers Club (NHLE 1266151); The Nelson Monument (Nelson's Column); (NHLE 1276052); 12, Buckingham Street Wc2 (NHLE 1291053); 25-36, Belgrave Square SW1 (NHLE 1292018); Church of St Peters (NHLE 1357345); and Sainsbury Wing At The National Gallery (NHLE 1451082).

10.4.54 There are additionally five Grade I listed buildings partly overlapping with the 100m Study Area.

10.4.55 There are a further 82 Grade II* listed buildings located within the 100m Study Area, and an additional 15 Grade II* listed buildings partly falling within the 100m Study Area.

10.4.56 There are 667 Grade II listed buildings within the 100m Study Area, of which 81 are located within the EIA Scoping Boundary.

Royal Borough of Kensington and Chelsea

10.4.57 There are no World Heritage Sites, Scheduled Monuments, or Registered Battlefields within the 100m Study Area within this borough.

10.4.58 There are three Registered Parks and Gardens within the EIA Scoping Boundary, all designated at Grade II; Cadogan Place (NHLE 1000796), Royal Hospital Chelsea and Ranelagh Gardens (NHLE 1000353), and Hans Place (NHLE 1000809).

10.4.59 There are three Conservation Areas that fall within the EIA Scoping Boundary or directly abut it: Chelsea, Royal Hospital, and Thurloe/Smith's Charity.

10.4.60 There are four Grade I listed buildings located within the 100m Study Area: the Natural History Museum, Front Lodge and Gates, gate piers and railings (NHLE 1080675), the Victoria and Albert Museum (NHLE 1190187), the Church of the Holy Trinity (NHLE 1265767), and The Royal Hospital Main Hospital Buildings Seven Three Storey Connected Blocks (NHLE 1226301) which is partially located within the 100m Study Area; however, the Historic England data point for this asset lies outside the 100m Study Area.

10.4.61 There are five Grade II* listed buildings within the 100m Study Area, one of which is located within the EIA Scoping Boundary; Wilbraham House and Wall to Right (NHLE 1358161). An additional one Grade II* listed building is located partially within the 100m Study Area.

10.4.62 There are 110 Grade II listed buildings within the 100m Study Area crossing the City of Westminster of which 38 are located within the EIA Scoping Boundary.

London Borough of Camden

10.4.63 The EIA Scoping Boundary does not intersect with Camden Council; however, the 100m Study Area does include heritage assets within the local authority area.

10.4.64 There are no World Heritage Sites, Scheduled Monuments, Registered Parks and Gardens, Registered Battlefields, or Grade I or II* listed buildings within the 100m Study Area within this Borough. There is one Conservation Area: Seven Dials (Covent Garden), and six Grade II listed buildings.

Non-Designated Heritage Assets

10.4.65 Within the 100m Study Area, there are a total of 6751 non-designated heritage assets, comprising 6448 non-designated archaeological assets and 303 non-designated historic buildings and structures. Of these non-designated heritage assets 1202 are recorded within the EIA Scoping Boundary.

10.4.66 The Archaeological Priority Areas (APA) and number of non-designated heritage assets located within the EIA Scoping Boundary and 100m Study Area for each Borough is provided below, and a summary of Historic Environment baseline context is provided at **Volume 3, Appendix 10.1: Historic Environment Baseline**.

London Borough of Bexley

10.4.67 A single Tier 3 APA: Thamesmead and Erith Marshes covers the entirety of the EIA Scoping Boundary within the LBB.

10.4.68 There are a total of 36 non-designated heritage assets within the 100m Study Area, six of which are archaeological assets recorded within the EIA Scoping Boundary. There are no non-designated heritage assets dated to the Palaeolithic, early medieval or medieval periods within the 100m Study Area. Those noted within the EIA Scoping Boundary are dated from the prehistoric to the modern period, with one asset of an unknown date.

Royal Borough of Greenwich

10.4.69 There are eight APA which intersect with the Scoping Boundary within RBG, these are:

- a. The APA: Royal Arsenal East includes the EIA Scoping Boundary from Pettacre Close to the borough boundary with Bexley.
- b. The APA: Royal Arsenal West includes the EIA Scoping Boundary from the Imperial Building to Pettacre Close.
- c. The APA: Old Woolwich encompasses the EIA Scoping Boundary from Woolwich Ferry South Pier to the Imperial Building.
- d. The APA: Woolwich Dockyard covers the EIA Scoping Boundary along Woolwich Church Street which is bounded by two roundabouts.
- e. The APA: Cox's Mount and Maryon Park comprises the park and a small section of the EIA Scoping Boundary to the south of Woolwich Road.
- f. The APA: Greenwich Peninsula and Foreshore encompasses the EIA Scoping Boundary to the north of Woolwich Road from Lassell Street to the Royal Greenwich Trust School.
- g. The APA: Royal Greenwich comprises the EIA Scoping Boundary between the University of Greenwich Campus and Maze Hill.
- h. The APA: Greenwich Town extends across the EIA Scoping Boundary from the east bank of Deptford Creek to the University of Greenwich Campus.
- i. The APA: Deptford comprises the EIA Scoping Boundary north-west of Deptford Creek.

10.4.70 There are a total of 467 non-designated heritage assets within the 100m Study Area, 119 of which are recorded within the EIA Scoping Boundary; a mix of archaeological and built heritage assets. Those noted within the EIA Scoping Boundary are dated from the Palaeolithic to the modern period, with one asset of an unknown date also recorded.

London Borough of Lewisham

10.4.71 There are three APA which intersect with the EIA Scoping Boundary within LBLe, these are:

- a. The Tier 1 APA: Deptford Dockyard and Sayes Court covers the EIA Scoping Boundary along Sayes Court Street.
- b. The Tier 2 APA: Lewisham Riverside Settlements borders the Borough of Greenwich, comprising the Hughesfield Estate and area to the south of Creek Road.
- c. The Tier 3 APA: Thames Gravel Terraces and Alluvial Floodplain comprises the remainder of the Study Area which lies within Lewisham, spanning from the Hughesfield Estate to the borough boundary with Southwark.

10.4.72 There are a total of 41 non-designated heritage assets within the 100m Study Area, nine of which are archaeological assets and recorded within the EIA Scoping Boundary. There are no non-designated heritage assets dated to the Palaeolithic, Mesolithic, Neolithic, Bronze Age or Iron Age periods within the 100m Study Area. Those noted within the EIA Scoping Boundary are dated from the early medieval to the modern period, with one asset of an unknown date also recorded.

10.4.73 London Borough of Tower Hamlets A single Tier 2 APA: Wapping encompasses the entirety of the EIA Scoping Boundary within the LBTH.

10.4.74 There are a total of 43 non-designated heritage assets within the 100m Study Area. Of these, nine non-designated heritage assets are recorded within the EIA Scoping Boundary, comprising both archaeological remains and historic buildings. There are no Palaeolithic, Mesolithic, Bronze Age, Iron Age, Roman, early medieval, modern or unknown non-designated heritage assets within the 100m Study Area. Within the EIA Scoping boundary, assets of a Neolithic, medieval and post-medieval date have been recovered.

London Borough of Southwark

10.4.75 The Tier 1 APA: North Southwark and Roman Roads covers the majority of the EIA Scoping Boundary within the Borough of Southwark, excluding the area around St George's Circus and much of the area around Southwark Park.

10.4.76 There are a total of 2272 non-designated heritage assets noted within the 100m Study Area. Of these, 460 non-designated heritage assets are recorded within the EIA Scoping Boundary, comprising both buried archaeological remains and historic buildings. Assets within the EIA Scoping Boundary date from the Mesolithic to the Modern period, with assets of an unknown date also noted. There are no Palaeolithic heritage assets within the 100m Study Area.

London Borough of Lambeth

10.4.77 A single APA: Lambeth Waterfront covers the majority of the EIA Scoping Boundary, with only the section located along Waterloo Road until St John's Waterloo being located outside.

10.4.78 There are a total of 213 non-designated heritage assets noted within the 100m Study Area. Of these, 36 are recorded within the EIA Scoping Boundary, comprising both archaeological and built heritage assets. Non-designated heritage assets date from the Bronze Age, as well as from the Roman to modern periods, and those of unknown date also noted. The Mesolithic and Neolithic are represented across the wider 100m Study Area, but there are no Palaeolithic non-designated heritage assets within the 100m Study Area.

London Borough of Barking and Dagenham

10.4.79 A single Tier 3 APA: Barking Level and Dagenham Marsh, extends across the EIA Scoping Boundary within LBBD.

10.4.80 There are no non-designated heritage assets located within the EIA Scoping Boundary within LBBD. Within the wider 100m Study Area there are a total of 11 non-designated heritage assets, which are archaeological assets dating from the medieval to modern periods. There is also one asset of an unknown date.

City of London

10.4.81 The City of London is considered to be equivalent to a Tier 1 APA, with a high archaeological potential present in all areas, except those where there is evidence that archaeological remains have been lost due to deep basement construction or other intrusive groundworks.

10.4.82 There are a total of 2857 non-designated heritage assets within the 100m Study Area. Of these, 353 are recorded within the EIA Scoping Boundary, comprising both archaeological and built heritage assets. Heritage assets within the EIA Scoping Boundary date between the Neolithic to modern periods, with assets of an unknown date also recorded. Palaeolithic and Mesolithic heritage assets are noted within the wider 100m Study Area.

City of Westminster

10.4.83 There are six APA which intersect with the EIA Scoping Boundary within CoW, these are:

- a. The Tier 1 APA: Westminster and Whitehall comprises a small section of the EIA Scoping Boundary which crosses the roundabout to the south of Trafalgar Square. Westminster and Whitehall have been central to royal and parliamentary administration of the country since the medieval period and for nearly 1000
- b. The Tier 1 APA: *Lundenwic* and the Strand comprises the EIA Scoping Boundary to the east of Haymarket and south of Shaftesbury Avenue. from the Ice Age have been recovered from Trafalgar Square (Ref 10.44).

- c. The Tier 2 APA: Great Estates comprises the EIA Scoping Boundary to the west of Haymarket and to the north of Shaftesbury Avenue until the intersection of Harley Street and Wigmore Street.
- d. The Tier 2 APA: Oxford Street/Bayswater encompasses sections of the EIA Scoping Boundary which fall between Oxford Street and Wigmore Street/Seymour Street, from Marylebone Lane to Great Cumberland Place, as well as Stanhope Place and Connaught Square.
- e. The Tier 2 APA: Watling Street covers the EIA Scoping Boundary between Great Cumberland Place and Connaught Square and focussed on the Roman road of Watling Street, which was an important routeway linking *Londinium* with St Albans and beyond.
- f. The Tier 3 APA: Pimlico includes the parts of the EIA Scoping Boundary which lie between Horseferry Road, the borough boundary with Kensington and Chelsea, and Eaton Square.

10.4.84 There are a total of 728 non-designated heritage assets within the 100m Study Area. Of these, 190 are recorded within the EIA Scoping Boundary, comprising both archaeological and built heritage assets. Non-designated heritage assets within the EIA Scoping Boundary range in date from the Palaeolithic to the modern period, as well as a number of assets of an unknown date. The Neolithic, Bronze Age and Iron Age are not represented.

Royal Borough of Kensington and Chelsea

10.4.85 A single Tier 2 APA: Chelsea Riverside comprises the section of the EIA Scoping Boundary located within Raneleigh Gardens.

10.4.86 There are a total of 83 non-designated heritage assets within the 100m Study Area. Of these, 20 non-designated heritage assets are recorded within the EIA Scoping Boundary, comprising both archaeological and built heritage assets. All periods are represented across the 100m Study Area but only assets from the medieval to modern period are recorded within the EIA Scoping Boundary, as well as a single asset of an unknown date.

Future Baseline

10.4.87 The historic environment chapter within the ES will include an outline of the likely evolution of the baseline environment without the implementation of the Proposed Scheme as far as natural changes from the baseline scenario can be assessed.

10.4.88 Should there be any changes to the baseline in the future, this is likely to relate to either the discovery of previously unknown below ground archaeological remains within the Study Area or the setting of above ground heritage assets being changed by other new developments.

10.5 Potential for Likely Significant Effects

- 10.5.1 This section identifies impacts from the Proposed Scheme which have the potential to give rise to likely significant effects on historic environment receptors. The design of the Proposed Scheme is evolving through an iterative process. Given this, likely significant effects to buried archaeology and built heritage, during the construction, operation and decommissioning phases, may not be limited to those identified in the section below and will be reviewed and confirmed in the ES.

Potential Effects During the Construction Phase

- 10.5.2 The Proposed Scheme has the potential to affect the value of designated and non-designated heritage assets during the construction phase. Potential effects identified at this stage include:
- a. Physical effects such as truncation, removal or alteration of the fabric of above and below ground heritage assets because of ground disturbance or excavation e.g. for construction of Maintenance and Access Points (MAP) and the Thermal Store(s). Physical effects may also arise from changes to environmental conditions in which archaeological deposits are preserved e.g. through dewatering.
 - b. Physical effects such as damage or alteration of the fabric of above and below ground heritage assets because of vibration and settlement effects arising from micro-tunnelling, for example due to directional drilling or pipe jacking.
 - c. Temporary changes to the setting of heritage assets that affect their value, from construction activities such as compounds, traffic movements, noise, lighting, dust and visual intrusion.
 - d. Permanent changes to the setting of heritage assets that alters their value because of the construction of above ground infrastructure.

Construction Methodology

- 10.5.3 Construction of the London SHM Transmission Trunk Main and Transmission Branches will involve excavation, via directional drilling, to a depth of approximately between 5m and 40m below ground level (bgl). Installation and construction of the Transmission Trunk Main and Transmission Branches would be undertaken at MAP sites. The dimensions of the Launch and Reception MAP and eight Pump Station MAP are specified in **Volume 1, Chapter 2: Proposed Scheme** of this Scoping Report. Each MAP site will be excavated down to a depth approximately between 5m and 40m.
- 10.5.4 Other elements of the Proposed Scheme of relevance to the heritage assessment include a primary pumping station and heat recovery system, at Riverside Campus in LBB, which is understood at this stage to cover an area of approximately 420m by 220m, and will have intrusive activities relating to

the excavation and installation of heat exchangers, pumps, and ancillary equipment, along with the installation of two additional back pressure turbines.

10.5.5 The Proposed Scheme will also include thermal storage to hold surplus heat from the Heat Recovery System at Riverside Campus. The Thermal Store(s) will be covered 'reservoirs' of hot water at ground level for discharge to the London SHM, as required, maintaining a consistent buffer of stratified hot water for distribution to provide network resilience. The final strategy for thermal storage will be described and assessed in the ES, including the location(s), and the extent and depth of excavation required. However, it is anticipated that the strategy could include a combination of co-location with MAP and larger stores located within and/or in close proximity to the Riverside Campus.

10.5.6 The London SHM Transmission Trunk Main and Transmission Branches are anticipated to primarily be excavated through the archaeologically sterile London Clay. Given this, those sections of the Transmission Trunk Main and Transmission Branches directionally drilled through the London Clay will not physically impact any archaeological remains. There may be areas where the Transmission Trunk Main and Transmission Branches extend at shallower depth and may have potential to impact buried archaeological remains. These sections and areas will be assessed in the ES following consultation with Historic England and GLAAS.

Potential Effects to Designated Assets During the Construction Phase

10.5.7 The designated assets identified at the EIA Scoping stage that may be impacted by the Proposed Scheme during the construction phase include the below assets; however, these would be subject to review following design development and consultation with statutory bodies:

- a. The Maritime Greenwich World Heritage Site (NHLE 1000096), the Greenwich Palace Scheduled Monument (NHLE 1410710) and a non-designated post-medieval burial ground (GLHER 144021) located within the RBG. There is potential for physical impacts to the Scheduled Monument and non-designated post-medieval burial ground and potentially impacts to the OUV of the Maritime Greenwich World Heritage Site (including the Attributes that convey OUV, Integrity and Authenticity) during the construction phase of the Proposed Scheme.
- b. The Scheduled Monument Abbey Buildings, Bermondsey (NHLE 1001984) located within the LBS. There is potential for construction impacts to the Scheduled Monument resulting from activities undertaken during the construction phase of the Proposed Scheme.
- c. London Wall: there may be potential for physical impacts from vibration and settlement, as a result of directional drilling or pipejacking beneath several sections of the Scheduled Monument

during the construction phase of the Proposed Scheme. These include the remains of Roman wall and conduit and medieval postern, Bloomfield House, to site of Moor Gate (NHLE 1002051), the section bounding All Hallows Churchyard (NHLE 1002067) and the remains of Roman and medieval wall for west end of All Hallows Church to 38 Camomile Street (NHLE 1002050).

- d. Scheduled Monument Roman Governor's Palace (Site of) (NHLE 1001997) in the CoL. There may be temporary changes to the setting of the asset during the construction phase of the Proposed Scheme.
- e. Grade II* Victoria Embankment Gardens (NHLE 1000844) Registered Park and Garden. There may be physical impacts and changes to the setting of the asset during the construction phase of the Proposed Scheme.
- f. Grade II Registered Park and Garden, Southwark Park (NHLE 1000838) is located in the LBS, with potential for physical impacts to the asset and temporary changes to the setting of the asset during the construction phase of the Proposed Scheme.
- g. Five Grade II Registered Park and Gardens, where the construction of MAP Zones has potential to temporarily change the setting of these designated heritage assets: Lambeth Palace (NHLE 1000818), Victoria Tower Gardens (NHLE 1000845), the Landscape to Churchill Gardens Estate (NHLE 1469043), the Royal Hospital, Chelsea, and Ranelagh Gardens (NHLE 1000353), and The Grosvenor Estate: Belgrave Square (NHLE 1000792).

Potential Effects to Non-Designated Assets During the Construction Phase

10.5.8 There is also potential for physical impacts to non-designated heritage assets within the EIA Scoping Boundary, through intrusive construction activities such as MAP excavation, ground disturbance, and dewatering associated with the Proposed Scheme. Non-designated heritage assets identified at EIA Scoping stage include the below assets; however, these would be subject to review following design development and consultation with statutory bodies:

- a. Alluvial deposits known as Crayford Silts and associated peat deposits, which may contain palaeoenvironmental remains, that extend across the LBB and the eastern area of the RBG. There is potential for Palaeolithic and Mesolithic archaeological remains that include former land surfaces and flint working floors (GLHER 102736, GLHER 124456 and GLHER 17356).
- b. The location of a proposed Thermal Store, where a Late Mesolithic land surface (GLHER 17356) has been identified extending within its footprint.
- c. Evidence of the early medieval settlement at Deptford (GLHER 17390), with the remains of the late medieval settlement of Deptford Green (GLHER 17358) recorded within the EIA Scoping Boundary.

- d. Archaeological remains and potential inhumations relating to St Mary Magdalene Churchyard (GLHER 118040 and GLHER 104814) have been recorded within the EIA Scoping Boundary.
- e. Archaeological remains and potential inhumations associated with St George the Martyrs Church (GLHER 127465).
- f. Archaeological remains and inhumations associated within St Alfege's Graveyard (GLHER 136583).
- g. Archaeological remains relating to the post-medieval Tabard Street Leper Hospital (GLHER 137070).
- h. Archaeological remains and inhumations associated within Crossbones Graveyard (GLHER 96800).
- i. Archaeological remains associated with St George's Fort (GLHER 119289).
- j. Archaeological remains and inhumations within the non-designated asset St John's Church (Tudor Cemetery).
- k. Archaeological remains and inhumations within the non-designated medieval churchyard of St James Garlickhythe (GLHER 141714).

Potential Effects During the Operation Phase

- 10.5.9 There is potential for changes to the setting of designated and non-designated built heritage assets, from the operation of the Proposed Scheme at Riverside Campus and the thermal stores, which may alter their heritage value. This is therefore proposed to be scoped in for assessment at the ES stage.
- 10.5.10 However, operational activities, including maintenance, lighting, and noise, arising from the MAP ground level coverings and kiosks elsewhere within the Proposed Scheme, are proposed to be scoped out of the assessment for both designated and non-designated heritage assets. The setting of these assets is unlikely to be altered through operation of this infrastructure to an extent that would give rise to significant environmental effects.
- 10.5.11 Impacts to buried archaeological remains will be limited to the intrusive works undertaken during the construction phase. Operation and maintenance of the Proposed Scheme are unlikely to result in significant effects to buried archaeological remains, so impacts on archaeological remains during this phase are proposed to be scoped out from the assessment.

Decommissioning Phase

- 10.5.12 The Proposed Scheme is intended to become part of London's critical infrastructure with no decommissioning proposed. However, if decommissioning were to be required, it is likely that minor works would be needed to remove above ground infrastructure. Underground pipelines are expected to be left in situ to minimise adverse environmental effects. Standard decommissioning practice and management measures would be expected to

avoid any likely significant effects, considering the small-scale of works required. It is not expected that decommissioning would require works sufficient to trigger significant effects on the historic environment, with buried archaeological remains expected to have been removed during the construction phase of the Proposed Scheme. Given this, effects on the historic environment during decommissioning are proposed to be scoped out of the assessment.

10.6 Assessment Methodology

Impact Assessment Methodology

- 10.6.1 The assessment of potential effects as a result of the Proposed Scheme (construction and operation) on heritage assets will be undertaken using the methodology set out below.

Value of Heritage Assets

- 10.6.2 The value of a heritage asset (its heritage significance) is guided by its designated status but derived also from its heritage interest which may be archaeological, architectural, artistic or historic (NPPF Annex 2, Glossary) (Ref 10.6). Each identified heritage asset will be assigned a value in accordance with the criteria set out in **Table 10-3**. Using professional judgement and the results of consultation carried out as part of the assessment, heritage assets will be assessed on an individual basis, with regional variations and individual qualities taken into account, where applicable, to assign the value.

Table 10-3: Criteria for Assessing the Value of Heritage Assets

Asset Value	Description
Very High	• WHS
High	• Scheduled monuments • Grade I and II* listed buildings • Registered battlefields • Grade I and II* registered parks and gardens • Conservation areas of demonstrable high value • Non-designated heritage assets (archaeological sites, historic buildings, monuments, parks, gardens or landscapes) that can be shown to have demonstrable national or international importance • Well preserved historic landscape character areas (HLCA), exhibiting considerable coherence, time-depth or other critical factor(s)
Medium	• Grade II listed buildings • Conservation areas

Asset Value	Description
	• Grade II registered parks and gardens • Non-designated heritage assets (archaeological sites, historic buildings, monuments, park, gardens or landscapes) that can be shown to have demonstrable regional importance • Averagely preserved HLCA, exhibiting reasonable coherence, time-depth or other critical factor(s) • Historic townscapes with historic integrity in that the assets that constitute their make-up are clearly legible
Low	• Locally listed buildings • Non-designated heritage assets (archaeological sites, historic buildings, monuments, park, gardens or landscapes) that can be shown to have demonstrable local importance • Assets whose heritage interests are compromised by poor preservation or survival of contextual associations to justify inclusion into a higher grade • HLCA whose value is limited by poor preservation and/ or poor survival of contextual associations
Very Low	• Assets identified on national or regional databases, but which have no archaeological, architectural, artistic or historic interest • Historic landscapes with no or little significant historical merit

Assessing Magnitude of Impact

- 10.6.3 Having identified the value of the heritage asset, the next stage in the assessment will be to identify the level and degree of impact to an asset arising from the Proposed Scheme. Impacts may arise during construction, operation or decommissioning (subject to the assessment at Section 10.5 above) and can be temporary, reversible, or permanent. Such impacts may be beneficial or adverse. Impacts can occur to the physical fabric of the asset or affect its setting. The contribution of setting to the value of any affected assets will be subject to assessment.
- 10.6.4 The magnitude of impact (impact rating) will be assigned with reference to a four-point scale as set out in **Table 10-4**. The assessment of the level and degree of impact will be made in consideration of any embedded mitigation measures for the Proposed Scheme. If no impact is identified, no impact rating will be given, and no resulting effect reported.

Table 10-4: Factors Influencing the Assessment of Magnitude of Impact

Magnitude of Impact	Description of Impact
High	Changes to most or all key components of the asset, such that it is totally altered or destroyed, resulting in a comprehensive impact upon its overall value; and/or Comprehensive alteration, including the total loss or complete restoration, of elements of an asset's setting that cause a fundamental change in our ability to understand and appreciate its heritage interests; thereby resulting in a comprehensive impact upon its overall value.
Medium	Changes to many key components of the asset, such that it is significantly altered or modified, resulting in a noticeable impact upon its overall value; and/or Changes to the setting of an asset which noticeably affect our ability to understand and appreciate its heritage interests, resulting in a noticeable impact upon its overall value.
Low	Changes to some key components of the asset, such that it is slightly altered, resulting in a slight impact on its overall value; and/or Changes to the setting of an asset that slightly alter our ability to understand and appreciate its heritage interests, resulting in a slight impact upon its overall value.
Very Low	Very minor changes to key components of an asset, resulting in no real change upon its overall value; and/or Changes to the setting of an asset that have little effect on our ability to understand and appreciate its heritage interests, resulting in no real change upon its overall value.
No Change	No alteration or change to the value of the asset or its setting.

Significance of effects

- 10.6.5 An assessment to classify the effect, having taken into consideration any embedded mitigation, is determined using the matrix within **Table 10-5**, which takes account of the value (or sensitivity) of the asset (**Table 10-3**) and the magnitude of impact (**Table 10-4**). Effects can be neutral, adverse, or beneficial.

Table 10-5 Assessment of Effect

Magnitude of Impact	Value of Heritage Asset				
	Very High	High	Medium	Low	Very Low
High	Major	Major	Major	Moderate	Minor
Medium	Major	Major	Moderate	Minor	Negligible
Low	Moderate	Moderate	Minor	Negligible	Negligible
Very Low	Minor	Minor	Negligible	Negligible	Negligible
No Change	Neutral	Neutral	Neutral	Neutral	Neutral

- 10.6.6 The ES will report on the significance of effect in accordance with EIA methodology. Major and moderate effects will be considered significant.
- 10.6.7 Within the NPPF (Ref 10.6), impacts affecting the value of heritage assets are considered in terms of harm and there is a requirement for the decision maker to determine whether the level of harm amounts to 'substantial harm' or 'less than substantial harm'. It is anticipated and noted that the new emerging NPPF will alter the terminology relating to Harm. This is also supported by section 5.9.28 of NPS EN-1 (Ref 10.5) that directs the Secretary of State to give considerable importance and weight to the desirability of preserving all heritage assets, with any harm or loss of value (heritage significance) of a designated heritage asset (including as a result of development within its setting) requiring clear and convincing justification. Section 5.9.36 outlines that the Secretary of State should give appropriate weight to the desirability of preserving the setting of heritage assets and should treat favourably applications that preserve those elements of the setting that make a positive contribution to a heritage asset (or better reveal its value (heritage significance)).
- 10.6.8 There is no direct correlation between the significance of effect as reported in the ES and the level of harm caused to heritage significance. A major (significant) effect on a heritage asset would, however, more often be the basis by which a decision maker would determine that the level of harm to the significance of the asset would be substantial. A moderate (significant) effect is unlikely to meet the test of substantial harm and would therefore more often be considered as less than substantial, which triggers the statutory presumptions against development within the Infrastructure Planning (Decisions) Regulations 2010 (Ref 10.1). A minor or negligible (not significant) effect would also be likely considered as less than substantial harm; however, a neutral effect is classified as no harm. In all cases determining the level of harm to the significance of the asset arising from development impact is one of professional judgement.

10.6.9 The ES chapter will present an impact assessment using EIA terminology, as outlined in **Table 10-1**, **Table 10-2**, **Table 10-3** and **Table 10-4**, and will report significant and non-significant effects. The assessment of harm, as defined in the NPPF, will be presented as a standalone Harm Statement or will be included within the Planning Statement submitted as part of the DCO Application.

Sources of Information

10.6.10 The baseline assessment will be undertaken in accordance with guidance set out by the ClfA, Historic England and GLAAS, in particular the ClfA Standard and Guidance for Historic Environment DBA (Ref 10.34), the ClfA Code of Conduct (Ref 10.36) and Historic England's Managing Archaeology in London Guidance for developers, archaeologists and planners to promote the understanding and enjoyment of our historic environment (Ref 10.33).

10.6.11 Principles of Cultural Heritage Impact Assessment in the UK (Ref 10.37) is a guide to good practice in cultural heritage impact assessment published jointly by the ISEP (formerly IEMA), the IHBC and the ClfA. The document provides guidance on understanding heritage assets and evaluating the consequences of change and will be considered when undertaking the assessment.

Desk-Based Sources

10.6.12 A Historic Environment desk-based assessment (DBA) will be prepared in accordance with industry standards and good practice guidelines (Ref 10.34), and with reference to any statutory consultation responses received as part of the EIA Scoping Opinion.

10.6.13 The DBA will inform the Historic Environment chapter of the ES and will form an appendix to the ES.

10.6.14 Sources of information that will be consulted include:

- a. National Heritage List for England database (Ref 10.40);
- b. formal searches of the Greater London HER for information on non-designated heritage assets, previous archaeological investigations and the Historic Landscape Characterisation data;
- c. British Geological Survey (BGS) Onshore GeoIndex (Ref 10.42), for information on geology and topography, including historic borehole data;
- d. published and unpublished literature (including a review of reports for previous fieldwork carried out within the Study Area);
- e. available geotechnical data;
- f. historic Ordnance Survey maps held by the National Library of Scotland (which also holds those for England);

- g. documentary, cartographic and other resources as deposited within the Local Archives and Local Studies Library e.g. Westminster Archives, London Metropolitan Archive, Museum of London Archaeological Archive and Guildhall Library;
- h. regional research agendas; and
- i. Development Plans, Archaeological Priority Area and Conservation Area appraisals, guidance and local lists.

Site Walkover Surveys

- 10.6.15 A walkover survey of specific MAP locations, Thermal Store(s), heat pumping stations and the Riverside Campus, which have been identified as areas of both impact to buried archaeological remains and change to the setting of heritage assets, will be undertaken in consultation with relevant stakeholders.
- 10.6.16 This visit will establish the key features of the asset's setting, alongside any intervisibility with the Proposed Scheme and any potential physical impacts to buried archaeological remains and assets.

Additional Survey

- 10.6.17 The desk-based research may, where appropriate and where viable, be supported by archaeological evaluation surveys, the scope of which will be informed by the DBA, and through engagement with GLAAS. These surveys may include:
- a. geophysical survey to identify the presence/absence of previously unrecorded archaeological remains; and
 - b. archaeological/geoarchaeological trial pit or trench evaluation to confirm the results of the geophysical survey, and characterise the nature, extent and level of preservation of archaeological remains.

10.7 Design, Mitigation and Enhancement Measures

- 10.7.1 The Proposed Scheme design will seek to avoid impacts to heritage assets where practicable. This will include avoiding direct physical impacts to historic fabric and changes to the setting of designated and non-designated heritage assets, by incorporating embedded mitigation measures within the Proposed Scheme design. Such measures may include the use of buffers or exclusion zones surrounding heritage assets, adjustment of the Proposed Scheme layout and the use of sympathetic design and surface finishes, screening or filtering vegetation. Details will be set out in the DCO Application.
- 10.7.2 Where potential impacts on heritage assets cannot be avoided through embedded mitigation measures, additional mitigation may be required. This may include an appropriate programme of archaeological investigation, recording, public dissemination of the results and archiving as well as historic building recording as appropriate. Additional mitigation measures relevant to

the historic environment will be set out in the Framework Construction Environmental Management Plan (CEMP), Framework Operational Environmental Management Plan (OEMP), and the Outline Written Scheme of Investigation (WSI), prepared as part of the DCO Application. The plans will form the basis of the detailed CEMP, OEMP and WSI that will be secured through requirements in the DCO.

10.8 Assumptions, Limitations and Uncertainties

- 10.8.1 It is assumed there will be access to all required land to undertake the walkover survey and any additional surveys that may be required to support the historic environment assessment. If access is not available, professional judgement will be used, based on available research and data, and reasonable, realistic, worst-case assumptions, to assess the archaeological potential of the area and the setting of any heritage assets within this area if identified.
- 10.8.2 It is assumed that the data provided by third party external sources is accurate.
- 10.8.3 A heritage site visit was not undertaken to inform this scoping chapter but will be carried out to inform the ES.
- 10.8.4 A zone of theoretical visibility (ZTV) has not been taken into account to inform this scoping chapter. ZTV and key viewpoints will be considered for the construction and operation phases of the Proposed Scheme, where relevant, as part of the further assessment presented in the ES, and to inform an assessment of intervisibility between heritage assets and the Proposed Scheme and the settings assessment.

10.9 Summary of Elements Scoped In or Scoped Out

- 10.9.1 A summary of the Historic Environment items scoped in or out of the ES is provided in **Table 10-6**.

Table 10-6: Summary of Elements Scoped In or Scoped Out

Elements	Phase	Scoped In	Scoped Out	Justification
Designated heritage assets and non-designated heritage assets within the EIA Scoping Boundary and within a 100m Study Area and high value assets, where proportionate to the assessment, beyond the 100m Study Area which may experience physical impacts on historic fabric and archaeological remains/deposits arising from intrusive construction activities including excavation and ground reduction for MAP, thermal storage site and directional drilling, or settlement/vibration	Construction	✓		The Proposed Scheme has the potential to result in a physical impact on the fabric of heritage assets or archaeological remains/deposits through their truncation, removal, alteration or damage to their standing structures.
Designated and non-designated heritage assets within the EIA Scoping Boundary and within a 100m Study Area and high value assets, where proportionate to the assessment, beyond the 100m Study Area which may experience effects arising from changes to their setting from above ground construction activities, including site compounds, access routes, material storage, traffic movements, noise, dust, and lighting during construction of the above ground infrastructure	Construction	✓		Construction activities and new above ground infrastructure may impact heritage assets with changes to their setting that may affect their value.

Elements	Phase	Scoped In	Scoped Out	Justification
Marine Archaeology	Construction		✓	Volume 1, Chapter 13: Marine Environment of this Scoping Report has assessed that there are no impacts to marine archaeology anticipated as a result of the Proposed Scheme. Given this, marine archaeology effects are proposed to be scoped out of the ES.
Designated heritage assets and built heritage non-designated heritage assets within the EIA Scoping Boundary and within the Study Area – operational above ground impacts including lighting, noise and maintenance that may result in changes to the setting of heritage assets arising from the part of the Proposed Scheme at the Riverside Campus and thermal stores.	Operation	✓		Operational and maintenance activities at the Riverside Campus and thermal store locations may impact heritage assets – study areas to be confirmed as the Proposed Scheme develops prior to ES.
Designated and built heritage non-designated heritage assets within the EIA Scoping Boundary and within the Study Area – operational above ground impacts arising from lighting, noise and maintenance arising from MAP ground level coverings and kiosks.	Operation		✓	The MAP ground level coverings and kiosks are proposed to be scoped out for assessment at the operation phase as any impacts arising from lighting, noise or maintenance are not likely to significantly alter the settings of heritage assets.

Elements	Phase	Scoped In	Scoped Out	Justification
Non-designated heritage assets with below ground archaeological remains and deposits	Operation		✓	There is not expected to be any likely significant effects to buried archaeology during the operation phase of the Proposed Scheme. Impacts on archaeology are therefore proposed to be scoped out of the assessment at the operation phase.
All impacts / heritage assets	Decommissioning		✓	The Proposed Scheme is intended to become part of London's critical infrastructure with no decommissioning proposed. However, if decommissioning were to be required, it is likely that minor works would be needed to remove above ground infrastructure. Standard decommissioning practice management measures would be expected to avoid any likely significant effects, considering the small-scale of works required. Given this, decommissioning effects are proposed to be scoped out of the ES.

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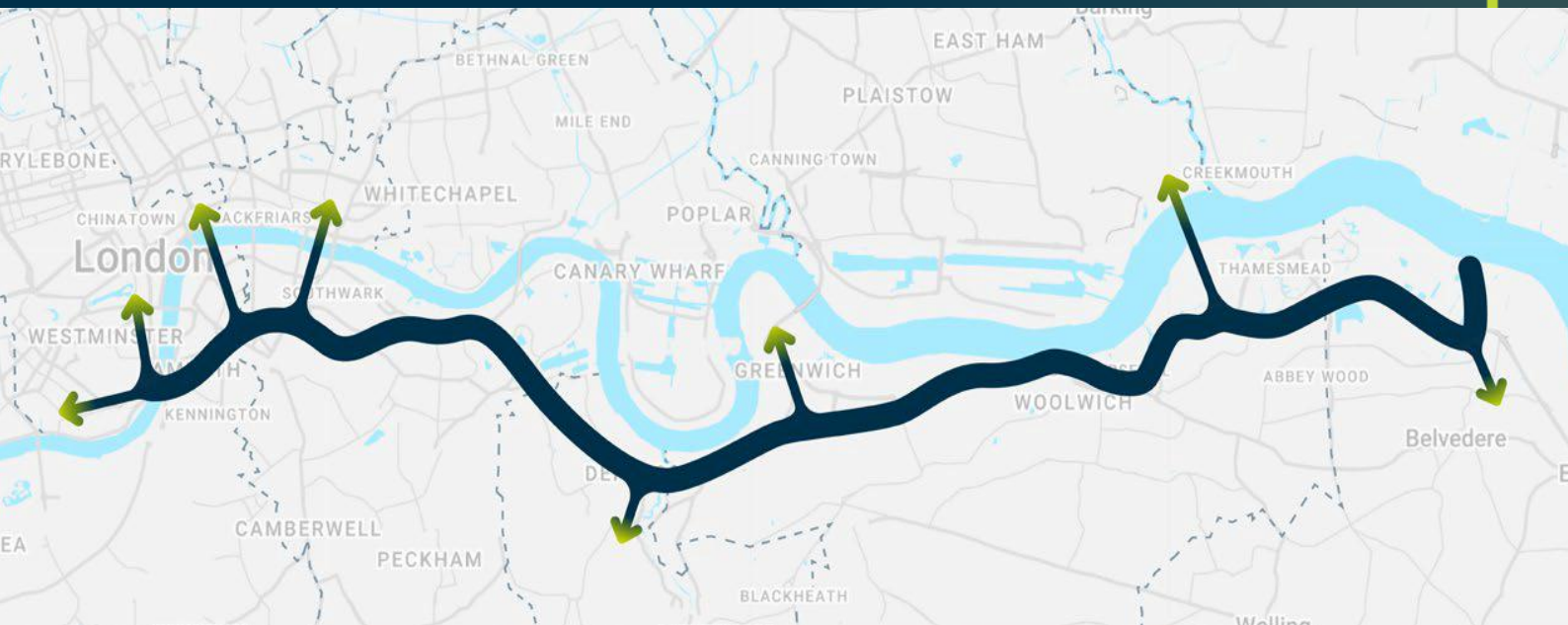
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Environmental Impact Assessment Scoping Report

Volume 1: Main Report

Chapter 11: Human Health



Cory Environmental Holdings Limited

July 2026

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11. Human Health

11.1 Introduction

- 11.1.1 This chapter identifies the potential for likely significant effects of the Proposed Scheme on human health. It sets out the proposed methodology for the human health assessment in the Environmental Statement (ES) and identifies effects to be scoped either into or out of the assessment.
- 11.1.2 The World Health Organisation (WHO) Europe (1946) (Ref 11.1) defines health as “...a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”. Consequently, public health encompasses general well-being, not just the absence of illness. Health is defined as incorporating both physical and mental health and is affected by a range of factors, termed the ‘wider determinants of health’, which span biophysical, social, behavioural, economic and institutional factors.
- 11.1.3 Due to the multi-disciplinary nature of human health, the assessment of the likely significant effects of the Proposed Scheme on human health will draw on technical assessments presented in the ES in relation to the following chapters in **Volume 1** of this EIA Scoping Report: **Chapter 6: Air Quality; Chapter 7: Climate; Chapter 9: Ground Conditions; Chapter 12: Major Accidents and Disasters; Chapter 15: Noise and Vibration; Chapter 16: Socio-Economics; Chapter 17: Townscape and Visual; Chapter 18: Transport; and Chapter 19: Water Environment and Flood Risk.**

11.2 Study Area

- 11.2.1 The human health profile baseline data collation area will comprise of all local authority administrative areas within which the Proposed Scheme is located. The relevant local authorities are: London Borough of Bexley (LBB); Royal Borough of Greenwich (RBG); London Borough of Lewisham (LBLe); London Borough of Southwark (LBS); London Borough of Lambeth (LBLa); London Borough of Barking and Dagenham (LBBD); London Borough of Tower Hamlets (LBTH); City of London (CoL); City of Westminster (CoW); and Royal Borough of Kensington and Chelsea (RBKC).
- 11.2.2 In addition, the baseline includes a high-level identification of health infrastructure receptors located within the Study Areas defined within **Volume 1, Chapter 6: Air Quality** and **Volume 1, Chapter 15: Noise and Vibration**. The health profile baseline data collation area for this component of the baseline is consistent with **Volume 1, Chapter 6: Air Quality, Volume 1, Chapter 15: Noise and Vibration and Volume 1, Chapter 16: Socio-Economics**, and identifies a non-exhaustive list of receptors located within or

adjacent to the EIA Scoping Boundary¹. The Study Area will be refined within the ES where appropriate.

- 11.2.3 The study area for the assessment of likely significant effects of the Proposed Scheme on human health will be informed by the geographic extent of the study areas defined within relevant EIA chapters, as listed in paragraph 11.1.3. The assessment will refer to the study areas identified in those chapters where relevant. As an example, for local and site-specific receptors identified within the socio-economics assessment, the human health assessment will follow the same approach and assess direct effects within the DCO Order Limits and adjacent land.

11.3 Relevant Legislation, Planning Policy and Guidance

- 11.3.1 The relevant legislation, planning policy and guidance relating to the human health assessment is outlined below.

Legislation

- 11.3.2 The applicable legislation includes:

- a. The Health and Care Act 2022 (Ref 11.2) sets out health reforms in England. The Health and Care Act 2022 removes existing competition rules and formalises Integrated Care Systems (ICS) as the means for the provision of healthcare services. Each ICS has an Integrated Care Board (ICB), of which there are 42 that cover England. The North East London ICB, South East London ICB, South West London ICB, and West & North London ICB fall within the profile baseline health profile baseline data collation area described above.
- b. The Equality Act 2010 (Ref 11.3) protects people from discrimination in the workplace and wider society, replacing previous anti-discrimination laws with a single Act. It requires equal treatment in access to employment as well as private and public services. The Act is relevant to the assessment because it establishes the framework for considering effects on groups with protected characteristics, including age and disability, which may experience disproportionate health impacts from developments.
- c. The Infrastructure Planning (EIA) Regulations 2017 (Ref 11.4) require consideration of the likely significant direct and indirect effects of projects on 'population and human health'. The purpose of the human health assessment is to identify and characterise relevant health receptors (the population, including vulnerable groups), to assess the nature, scale and significance of effects arising from the Proposed Scheme.

¹ All references to 'EIA Scoping Boundary' correspond to the area shown in **Volume 2, Figure 1-1**.

National Planning Policy

Overarching National Policy Statement for Energy (NPS EN-1)

- 11.3.3 The relevant policies from the Overarching National Policy Statement for Energy (NPS EN-1) (Ref 11.5) for human health, are summarised within **Table 11-1**. These have informed the assessment methodology and identification of sensitive receptors within the Study Area.

Table 11-1: National Policy Statement – Human Health

National Policy	Summary of Requirements	Relevance to the Assessment
Overarching National Policy Statement for Energy (NPS EN-1) (2025) (Ref 11.5)	Paragraphs 4.4.1-4.4.6 in relation to the assessment of effects on human health.	The policy acknowledges that access to energy is beneficial to society as a whole and that the production, distribution, and use of energy may have negative effects on some people's health. It then sets out the criteria to be considered within the assessment, including requiring applicants to consider both the direct impacts of energy infrastructure on human health (including traffic, air and water pollution, dust, odour, hazardous substances, noise, radiation, and pests) and indirect impacts arising from changes to local population composition that may affect access to public services, transport, and open space.

National Planning Policy Framework (NPPF)

- 11.3.4 Paragraph 96 of the NPPF (2024, Ref 11.6) is considered relevant to the assessment of potential human health effects as it establishes that planning policies and decisions should promote healthy, inclusive and safe places, requiring consideration of how development affects social interaction, safety, and access to facilities that support healthy living.
- 11.3.5 The Government consulted on a revised NPPF, with a draft version published alongside the consultation that ran until 10 March 2026 (Ref 11.7). No outcome to this consultation has been published yet. The updated framework contains requirements relating to human health that are discussed in Section 16: Promoting Healthy Communities of the draft NPPF. The relevant policies are:
- a. HC1 – Planning for healthy communities;
 - b. HC6 – Retention of key community facilities and public service infrastructure; and
 - c. HC7 – Development affecting existing recreation facilities.
- 11.3.6 Together, these policies establish a comprehensive framework for promoting healthy and inclusive places, requiring development plans to proactively plan for community facilities, green space and recreational land, while protecting existing provision from loss unless equivalent or better facilities can be secured.

Local and Neighbourhood Planning Policy

- 11.3.7 In addition to national and strategic guidance on Health Impact Assessments (HIA), regard will be given to relevant borough-level Health Impact Assessment guidance, where applicable. This includes, for example, LBTH Health Impact Assessment Guidance (2021), which supports Local Plan Policy D.SG3 and sets out requirements for the preparation of both rapid and detailed HIA. The LBTH guidance requires that a rapid HIA is undertaken in the first instance to screen the potential health effects of a development, with a detailed HIA required where significant health effects are identified. A detailed HIA should assess the likely health effects of the Proposed Scheme against relevant health determinants, identify measures to maximise positive health outcomes and minimise negative impacts, and consider the needs of vulnerable groups and those experiencing health inequalities.
- 11.3.8 The approach adopted within this chapter comprises a scoping exercise informed by these principles to determine the relevant health determinants requiring assessment as outlined in **Table 11-13**, which fulfils an equivalent function to that set out in LBTH guidance. More broadly, the local planning policy listed in **Table 11-2** are considered relevant to the assessment of potential human health impacts presented in this chapter.

Table 11-2: List of Relevant Local and Neighbourhood Policy – Human Health

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
The Greater London Authority: London Plan (2021) (Ref 11.8)	• Policy GG3 – Creating a Healthy City • Policy SI1 – Improving Air Quality • Policy D13 – Agent of Change • Policy D14 – Noise • Policy G1 – Green Infrastructure • Policy G4 – Open Space • Policy G5 – Urban Greening • Policy T2 – Healthy Streets Approach • Policy S5 – Health and Social Care Facilities	Policy addresses air and water pollution, noise, and dust as direct effects on human health, and access to open space for recreation, active travel, and health service provision as indirect effects.
Bexley Local Plan (2023) (Ref 11.9)	• Policy DP16 – Health Impact Assessments • Policy SP8 – Green Infrastructure and Green Belt • Policy DP17 – Publicly Accessible Open Space • Policy SP7 – Social and Community Services and Facilities • Policy DP9 – Development within Town Centres (harmful uses)	Policy is directly relevant to noise and air pollution, access to open space and green infrastructure for recreation and physical activity, and health service capacity.
Royal Borough of Greenwich Core Strategy with Detailed Policies (2014) (Ref 11.10)	• Policy E(a) – Pollution (general) • Policy E(b) – Pollution from Existing Uses • Policy E(c) – Air Pollution • Policy E(d) – Hazardous Materials • Policy E(e) – Contaminated Land • Policy CH2 – Healthy Communities • Policy DH(b) – Protection of Amenity for Adjacent Occupiers • Policy OS1 – Open Space	Policy encompasses air and water pollution, noise, odour, hazardous substances, and contaminated land as direct effects on human health, and access to open space and green infrastructure for recreation and physical activity as an indirect effect.

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	• Policy OS(b) – Community Open Space • Policy OS(c) – Public Open Space Deficiency Areas • Policy OS(d) – Sportsgrounds and Playing Fields • Policy IM4 – Sustainable Travel • Policy IM(b) – Walking and Cycling	
Royal Borough of Greenwich Draft Local Plan (2025) (Ref 11.11)	• Policy EN1 – Green and Blue Infrastructure • Policy EN2 – Open Space • Policy EN4 – Air Quality • Policy EN5 – Local Environmental Impacts • Policy TC7 – Social and Community Infrastructure • Policy T1 – Active Travel and Cycle Parking • Policy H11 – Housing Quality	Policy addresses air pollution, noise and vibration, odour, light pollution, and contaminated land. Additionally covers access to green and open space for recreation and physical activity and indirect effects on health service provision.
Lewisham Local Plan 2020–2040 (2025) (Ref 11.12)	• Policy QD7 – Amenity and Agent of Change • Policy SD6 – Improving Air Quality • Policy SD10 – Water Supply and Wastewater • Policy SD11 – Ground Conditions • Policy DM6 – Health Impact Assessments • Policy GR1 – Green Infrastructure and Lewisham's Green Grid • Policy GR2 – Open Space • Policy GR3 – Biodiversity and Access to Nature • Policy GR5 – Urban Greening and Trees • Policy CI1 – Safeguarding and Securing Community Infrastructure • Policy CI3 – Sports, Recreation and Play • Policy TR1 – Sustainable Transport and Movement	Policy addresses noise, air and water quality, as direct effects on human health, and access to open space and green infrastructure for recreation and physical activity, active travel, and health service provision as indirect effects.

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	Policy TR3 – Healthy Streets as Part of Healthy Neighbourhoods	
Southwark Plan (2022) (Ref 11.13)	- Policy SP5 – Thriving Neighbourhoods and Tackling Health Equalities - Policy P45 – Healthy Developments - Policy P56 – Protection of Amenity - Policy P57 – Open Space - Policy P59 – Green Infrastructure - Policy P64 – Contaminated Land and Hazardous Substances - Policy P65 – Improving Air Quality - Policy P66 – Reducing Noise Pollution and Enhancing Soundscapes - Policy P51 – Walking - Policy P53 – Cycling	Policy addresses air pollution, noise, odour, contaminated land, and hazardous substances as direct effects on human health, and access to open space and green infrastructure for recreation and active travel as indirect effects.
Lambeth Local Plan 2020-2035 (2021) (Ref 11.14)	- Policy Q2 – Amenity - Policy EN1 – Open Space, Green Infrastructure and Biodiversity - Policy H3 – Safeguarding Existing Housing - Policy S1 – Safeguarding Existing Social Infrastructure - Policy S2 – New or Improved Social Infrastructure - Policy T1 – Sustainable Travel - Policy T2 – Walking	Policy is relevant for noise, vibration, odour and air quality as direct effects on amenity and human health, and access to open space for recreation, active travel, and health service provision as indirect effects.
South Bank & Waterloo Neighbourhood Plan 2017 - 2032 (Ref 11.15)	- Policy P1 – Protection of Open Space - Policy P2 – Open Space Contributions from Major Development	Policy is directly relevant to access to open space for recreation and physical activity, air quality improvement through green roofs and green infrastructure,

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	- Policy P3 – Green Roofs and Air Quality - Policy P13 – Social Infrastructure - Policy P14 – Cultural Uses and Facilities	and access to community and health facilities as an indirect effect.
Kennington, Oval and Vauxhall Neighbourhood Plan 2035 (Ref 11.16)	- Policy KOV1 – Local Green Spaces - Policy KOV2 – Improving Air Quality - Policy KOV3 – Local Shops and Services - Policy KOV4 – Community Infrastructure Premises	Policy addresses air pollution as a direct health effect, and access to local green spaces and community infrastructure as indirect effects.
London Borough of Barking and Dagenham Local Plan 2020-2037 (2024) (Ref 11.17)	- Policy SP7 – Securing a Clean, Green and Sustainable Borough - Policy DMSI3 – Nuisance - Policy DMSI4 – Air Quality - Policy DMSI5 – Land Contamination - Policy DMNE1 – Parks, Open Spaces and Play Space - Policy DMNE2 – Urban Greening - Policy DMNE4 – Water Environment - Policy SP4 – Delivering Social and Cultural Infrastructure - Policy SP8 – Integrated and Sustainable Transport - Policy DMT1 – Making Better Connected Neighbourhoods	Policy addresses air pollution, noise, vibration, odour, dust, contaminated land, and water pollution as direct effects on human health, and access to open space and green infrastructure for recreation and health services as indirect effects.
Tower Hamlets Local Plan 2031: Managing Growth and Sharing Benefits (2020) (Ref 11.18)	- Policy S.ES1 – Protecting and Enhancing Our Environment - Policy D.ES2 – Air Quality - Policy D.ES8 – Contaminated Land and storage of hazardous substances - Policy D.ES9 – Noise and vibration	Policy addresses air pollution, noise, contaminated land, and water pollution as direct effects on human health, and access to open space and green infrastructure for recreation and physical activity as indirect effects.

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	- Policy D.SG3 – Health Impact Assessments - Policy S.OWS1 – Creating a Network of Open Spaces - Policy D.OWS3 – Open Space and Green Grid Networks	
City of London Local Plan (2015) (Ref 11.19)	- Policy DM15.6 – Air Quality - Policy DM15.7 – Noise and light pollution - Policy DM15.8 – Contaminated Land and Water Quality - Policy DM16.1 – Open Spaces (protection and provision)	Policy addresses air pollution, noise, hazardous substances, contaminated land, and water pollution as direct effects on human health, and access to open space for recreation and physical activity as an indirect effect.
Draft City of London Plan 2040 (2024) (Ref 11.20)	- Policy HL1 – Inclusive Buildings and Spaces - Policy HL2 – Air Quality - Policy HL3 – Noise - Policy HL4 – Contaminated Land and Water Quality - Policy HL5 – Location and Protection of Social and Community Facilities - Policy HL7 – Sport and Recreation - Policy HL8 – Play Areas and Facilities - Policy HL9 – Health Impact Assessment - Policy OS1 – Protection and Provision of Open Spaces - Policy AT1 – Pedestrian Movement, Permeability and Wayfinding - Policy AT2 – Active Travel including Cycling	Policy directly addresses air pollution, noise, contaminated land, water quality and indirect effects such social facilities, sport and recreation, open space and HIA.
City of Westminster: City Plan 2019–2040 (2026) (Ref 11.21)	- Policy 36 – Air Quality - Policy 37 – Local Environmental Impacts - Policy 38 – Green Infrastructure	Policy is relevant for air pollution, noise, vibration, odour, and contaminated land as direct effects on human health, and

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	- Policy 29 – Walking and Cycling - Policy 21 – Community Infrastructure and Facilities	access to open space, green infrastructure for recreation, and health service provision as indirect effects.
Victoria Neighbourhood Plan 2025-2040 (Ref 11.22)	- Policy VNG-01 – Biodiversity and Urban Greening - Policy VNA-01 – A Walkable Environment - Policy VNL-02 – Social and Community Facilities - Policy VND-07 – Climate Change, Design and Indoor Air Quality	Policy is relevant to air quality as a direct health effect, and access to green space, active travel, and community facilities for physical activity and health service provision as indirect effects.
Royal Borough Kensington and Chelsea Local Plan (2024) (Ref 11.23)	- Policy GB6 – Air Quality - Policy GB8 – Noise and Vibration - Policy GB9 – Odour - Policy GB14 – Green and Blue Infrastructure - Policy GB15 – Parks, Gardens and Open Spaces - Policy CD9 – Living Conditions - Policy SI1 – Social Infrastructure and Facilities - Policy TR6 – Active Travel	Policy addresses noise, vibration, odour and air quality as direct effects on amenity and human health, and access to open space for recreation, active travel, and health service provision as indirect effects.

Relevant Guidance

11.3.9 Relevant guidance and standards that have been used within the EIA scoping process and will also be taken into account as part of the EIA include:

- a. The Institute of Environmental Management and Assessment (IEMA – now the Institute of Sustainability and Environmental Professionals (ISEP)) guidance titled ‘Effective Scoping of Human Health in EIA’ (2022) (Ref 11.24) provides a structured framework to help EIA practitioners identify and prioritise the key health determinants that should be scoped into a human health assessment. The guidance has informed the scoping process for the human health assessment and ensures that all potential health pathways will be appropriately considered in the assessment.
- b. IEMA (now ISEP) guidance on ‘Determining Significance for Human Health in EIA’ (2022) (Ref 11.25) presents a framework for EIA practitioners to identify significant effects on human health. The guidance defines significance as an informed expert judgement of the importance, desirability or acceptability of a change. The guidance also emphasises the need to consider the significance of human health effects in relation to vulnerable groups. The methodological framework forms the basis for the approach to the assessment of health impacts that will be presented in the ES.
- c. Planning Practice Guidance (PPG) was first published in March 2014. This guidance is updated regularly and provides advice on a range of topics related to the implementation of the National Planning Policy Framework (NPPF) (Ref 11.6) policies. The PPG documents that are relevant to the human health and wellbeing assessment are the PPG for Healthy and Safe Communities (Ref 11.26), the PPG for Open Space, Sports and Recreation Facilities, Public Rights of Way (PRoW) and Local Green Space (Ref 11.27), and the PPG for Plan-making (Ref 11.28). They provide context for the assessment of effects relating to several health determinants such as physical activity, open space, leisure and play and transport modes, access and connections.

11.4 Baseline Conditions and Future Baseline

11.4.1 This section provides a summary of the baseline conditions in respect of human health. The baseline is separated into two sections:

- a. Human Health Profile; and
- b. Local Receptors.

Human Health Profile

- 11.4.2 To understand the likely significant effects on human health, it is important to establish the conditions within the human health profile baseline data collation area. This section focuses on a number of human health indicators (including population, age, ethnicity, economic activity, deprivation, life expectancy, general health, long-term illness and disability, and unpaid care) at the local authority, regional and national levels to provide the demographic context of the local community. Where available, the most recently available data is presented at all geographical levels relevant to the profile baseline health profile baseline data collation area, using the Office for National Statistics (ONS) Census 2021 (Ref 11.29), Index of Multiple Deprivation (IMD) (Ref 11.30), ONS Life expectancy Estimates (Ref 11.31) and the Office for Health Improvement and Disparities (OHID) Public Health Profiles (Ref 11.32).

Population

- 11.4.3 According to the Census 2021 (Ref 11.29), the most populous local authority that the Proposed Scheme is located within is LBLa, with a population of 317,654. The least populous local authority is the CoL, with a population of 8,583. The data for all relevant local authorities, as well as Greater London and England, is presented in **Table 11-3**.

Table 11-3: Relevant Local Authority Populations

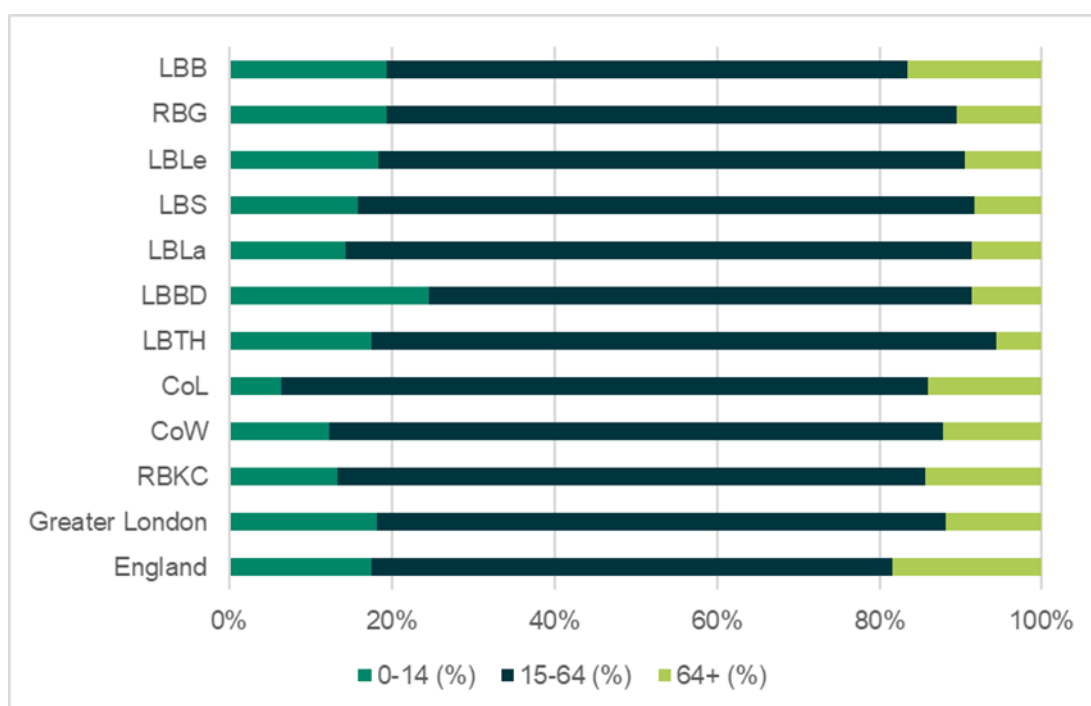
Local Authority	Population
LBB	246,472
RBG	289,068
LBLe	300,553
LBS	307,637
LBLa	317,654
LBBD	218,869
LBTH	310,306
CoL	8,583
CoW	204,236
RBKC	143,376
Greater London	8,799,728
England	56,490,047

Source: ONS (2022) Census 2021 (Ref 11.29)

Age

- 11.4.4 Census 2021 (Ref 11.29) also presents population by age, the details of which are shown in **Plate 11-1**. LBB has the largest proportion of its population aged 0-14, at 24.6%. In contrast, the CoL has the smallest proportion, with this age group representing 6.4% of the population. Except LBB (64.1%), all of the relevant local authorities have a larger proportion of their population aged between 15-64 compared to the England average (64.2%).

Plate 11-1: Population Age Breakdown



Source: ONS (2022) Census 2021 (Ref 11.29)

Ethnicity

- 11.4.5 The 2021 Census (Ref 11.29) contains data on the population ethnicity of the local authorities in the Study Area as well as nationally. As seen in **Table 11-4**, all the relevant local authorities have a significantly smaller White ethnic population (as a proportion of their total population) compared to the England national average (81%), with the local authority with the smallest proportion of the population defined as White ethnicity being LBTH (39.4%). In all local authorities, the second largest ethnicity is either Asian or Black, except LBTH, where the largest ethnicity is Asian, and the second largest is White.

Table 11-4: Study Area Ethnicity

Local Authority	Asian (%)	Black (%)	Mixed (%)	White (%)	Other (%)
LBB	9.9	12.2	3.5	71.9	2.5
RBG	13.2	21.0	6.0	55.7	4.2
LBLe	9.0	26.8	8.1	51.5	4.7
LBS	9.9	25.1	7.2	51.4	6.3
LBLa	7.3	24.0	8.1	55	5.7
LBBB	25.9	21.4	4.3	44.9	3.6
LBTH	44.4	7.3	5.0	39.4	3.9
CoL	16.8	2.7	5.5	69.4	5.6
CoW	16.8	8.1	6.5	55.2	13.5
RBKC	11.9	7.9	6.6	63.7	9.9
Greater London	20.7	13.5	5.7	53.8	6.3
England	9.6	4.2	3.0	81.0	2.2

Source: ONS (2022) Census 2021 (Ref 11.29)

Economic Activity

- 11.4.6 The 2021 Census (Ref 11.29) contains data on the economic activity of the population across the local authorities within the Study Area as well as nationally. As shown in **Table 11-5**, all the relevant local authorities have a larger proportion of economically active residents compared to the England national average (60.9%). LBLa has the highest proportion of economically active residents (73.3%), followed by the CoL (70.9%) and LBS (70.7%). Unemployment rates across the Study Area are on average higher than the England average (3.5%), with LBTH recording the highest unemployment rate (6.0%), followed by LBLe (5.7%) and LBBB (5.6%).

Table 11-5: Study Area Economic Activity

Local Authority	Economically Active (Incl. full-time students) (%)	Employed (%)	Unemployed (%)	Economically Inactive (%)
LBB	64.0	60.2	3.8	36.0
RBG	67.6	62.2	5.3	32.4
LBLe	70.0	64.2	5.7	30.0
LBS	70.7	65.2	5.6	29.3

Local Authority	Economically Active (Incl. full-time students) (%)	Employed (%)	Unemployed (%)	Economically Inactive (%)
LBLa	73.3	68.0	5.3	26.7
LBBD	64.1	58.5	5.6	35.9
LBTH	67.4	61.4	6.0	32.6
CoL	70.9	66.9	4.1	29.1
CoW	62.1	57.3	4.8	37.9
RBKC	61.0	56.4	4.6	39.0
Greater London	66.2	61.4	4.8	33.8
England	60.9	57.4	3.5	39.1

Source: ONS (2022) Census 2021 (Ref 11.29)

Deprivation

- 11.4.7 The Government's English IMD (Ref 11.30) provides an overall deprivation score for each Lower Super Output Area (LSOA) and local authority in England. The overall score is based on a number of domains and sub domains which together provide a measure of deprivation. Each area is ranked according to its overall score, and the index provides a measure of relative deprivation across all areas.
- 11.4.8 Based on the IMD 2025 data, out of the ten local authorities within the Study Area, LBBD is ranked as the ninth most deprived local authority of 297 districts in England (where 1 is the most deprived). In all, 1.7% of LSOAs in LBBD are ranked within the ten percent most deprived LSOAs nationally. While LBTH is ranked as less deprived than LBBD (ranked 20th), it has the largest proportion of LSOAs ranked within the ten percent most deprived, at 13%. The CoL is ranked the least deprived of the local authorities in the Study Area (267th of 297 local authorities).
- 11.4.9 Within the Health Deprivation and Disability Domain, LBTH has the largest proportion of LSOA ranked within the 10% most deprived nationally. Full details of these IMD 2025 scores are outlined in **Table 11-6**.

Table 11-6: Study Area Deprivation

Local Authority	IMD - Rank of average rank ²	IMD - Proportion of LSOA in most deprived 10% nationally (%)	Health Deprivation and Disability - Proportion of LSOA in most deprived 10% nationally (%)
LBB	200	0.0	0.7
RBG	74	0.0	1.2
LBLe	46	1.7	1.1
LBS	67	0.0	1.7
LBLa	70	0.6	1.1
LBBD	9	1.7	0.9
LBTH	20	13.0	3.0
CoL	267	0.0	0.0
CoW	87	8.9	0.8
RBKC	130	3.0	1.0

Source: MHCLG (2025) Indices of Multiple Deprivation (Ref 11.30)

Life Expectancy

11.4.10 Data from the Office for National Statistics provides life expectancy profiles at local authority level (Ref 11.31). **Table 11-7** presents the life expectancy at birth for males and females across the Study Area for the period of 2022 – 2024. The highest life expectancy for both males and females is in RBKC (82.2 and 87.1, respectively). The lowest for both sexes is LBBD, at 78.3 and 81.7, respectively. For males, only three local authorities exceed the England average of 79.5 (RBKC, LBB and CoW), whilst for females, only three do not exceed the national average of 83.3 (LBBD, RBG, and LBTH).

Table 11-7: Study Area Life Expectancy

Local Authority	Life Expectancy (years)– Male	Life Expectancy (years) - Female
LBB	80.3	83.5
RBG	79.4	82.9
LBLe	78.9	83.6
LBS	79.4	83.7
LBLa	78.9	83.8

² Refers to the deprivation ranking of all 297 local authorities across England, with 1 being the most deprived.

Local Authority	Life Expectancy (years)– Male	Life Expectancy (years) - Female
LBBB	78.3	81.7
LBTH	78.7	82.9
CoL	N/A ³	N/A
CoW	81.9	86.4
RBKC	82.2	87.1
Greater London	80.5	84.7
England	79.5	83.3

Source: ONS (2025) Life expectancy estimates UK (Ref 11.31)

General Health

11.4.11 The 2021 Census (Ref 11.29) contains data on self-reported general health across the local authorities in the Study Area as well as nationally. As seen in **Table 11-8**, all local authorities report higher proportions of residents in 'Very Good' health compared to the England average (48.5%), with RBKC recording the highest proportion at 59.6%, followed by CoL (57.5%), CoW (56.3%) and LBLa (56.2%). By contrast, all the relevant local authorities have lower proportions of residents reporting 'Fair' or 'Bad' health than the England averages of 12.7% and 4.0%, respectively. The local authorities with the highest proportions of residents reporting 'Bad' or 'Very Bad' health are CoW (5.1% cumulatively) and LBTH (4.9% cumulatively).

Table 11-8: Study Area General Health

Local Authority	Very Good (%)	Good (%)	Fair (%)	Bad (%)	Very Bad (%)
LBB	50.8	33.4	11.5	3.3	1.0
RBG	52.7	32.0	10.7	3.5	1.1
LBLe	53.1	32.0	10.5	3.3	1.0
LBS	55.8	30.3	9.8	3.1	1.0
LBLa	56.2	30.3	9.5	3.0	1.0
LBBB	51.1	32.9	11.1	3.7	1.1
LBTH	53.0	32.1	10.0	3.6	1.3
CoL	57.5	31.8	8.0	2.2	0.5
CoW	56.3	28.9	9.7	3.6	1.5

³ Life Expectancy estimates are not published for CoL.

Local Authority	Very Good (%)	Good (%)	Fair (%)	Bad (%)	Very Bad (%)
RBKC	59.6	26.7	9.2	3.4	1.1
Greater London	53.6	31.8	10.3	3.2	1.0
England	48.5	33.7	12.7	4.0	1.2

Source: ONS (2022) Census 2021 (Ref 11.29)

Long-term Illness and Disability

11.4.12 The 2021 Census (Ref 11.29) provides data on the proportion of individuals living with long-term illness or disability. As shown in **Table 11-9**, all local authorities have lower proportions of residents who are disabled under the Equality Act 2010 compared to the England averages of 7.3% (day-to-day activities limited a lot) and 10.0% (day-to-day activities limited a little). CoW and LBBD have the highest proportions of residents whose activities are limited a lot, at 6.5% and 6.3%, respectively, while the CoL has the lowest at 3.3%.

11.4.13 The proportion of residents who are not disabled but have a long-term physical or mental health condition is also lower across all the relevant local authorities than the England average of 6.8%, with the exception of the CoL (7.6%). Additionally, all the relevant local authorities have higher proportions of residents with no long-term health conditions than the England average of 75.9%, with LBBD recording the highest proportion among the Study Area local authorities, at 83.2%.

Table 11-9: Study Area Long-term Illness and Disability

Local Authority	Disabled under the Equality Act: Day-to-day activities limited a lot (%)	Disabled under the Equality Act: Day-to-day activities limited a little (%)	Not disabled under the Equality Act: Has long term physical or mental health condition but day-to-day activities are not limited (%)	Not disabled under the Equality Act: No long term physical or mental health conditions (%)
LBB	6.2	8.4	5.9	79.5
RBG	6.4	8.0	5.3	80.3
LBLe	6.0	8.4	6.0	79.6
LBS	5.6	8.0	5.9	80.4
LBLa	5.4	7.8	6.2	80.6

Local Authority	Disabled under the Equality Act: Day-to-day activities limited a lot (%)	Disabled under the Equality Act: Day-to-day activities limited a little (%)	Not disabled under the Equality Act: Has long term physical or mental health condition but day-to-day activities are not limited (%)	Not disabled under the Equality Act: No long term physical or mental health conditions (%)
LBBB	6.3	7.0	3.6	83.2
LBTH	5.7	7.3	4.5	82.5
CoL	3.3	7.4	7.6	81.7
CoW	6.5	7.3	4.7	81.5
RBKC	5.9	6.9	4.6	82.6
Greater London	5.7	7.5	5.2	81.5
England	7.3	10.0	6.8	75.9

Source: ONS (2022) Census 2021 (Ref 11.29)

Unpaid Care

11.4.14 **Table 11-10** draws on the 2021 Census (Ref 11.29) to present data on unpaid care provision across the Study Area. The majority of residents across all the relevant local authorities provide no unpaid care, with proportions ranging from 91.7% in LBB to 94.1% in the CoL, all higher than the England average of 91.2%. Rates of higher-intensity unpaid care provision (50 or more hours per week) are notably lower across the Study Area than the national average of 2.6%, with LBLa, LBS, LBTH, LBLe, and CoW all recording figures of 1.5-1.8%. In LBBB, 2.3% of residents provide 50 or more hours of unpaid care per week; this is the highest among Study Area local authorities, though still below the England average. Provision of lower-intensity unpaid care (19 hours or less per week) is similarly below the national average of 4.3% across most of the relevant local authorities, with only LBB (4.1%) and the CoL (4.0%) approaching the national average.

Table 11-10: Study Area Unpaid Care

Local Authority	Provides no unpaid care (%)	Provides 19 hours or less unpaid care a week (%)	Provides 20 to 49 hours unpaid care a week (%)	Provides 50 or more hours unpaid care a week (%)
LBB	91.7	4.1	1.7	2.5
RBG	92.8	3.3	1.7	2.2
LBLe	92.9	3.6	1.7	1.8
LBS	93.5	3.2	1.6	1.7
LBLa	93.8	3.3	1.5	1.5
LBBD	92.9	2.7	2.0	2.3
LBTH	93.6	2.8	1.8	1.8
CoL	94.1	4.0	1.0	0.9
CoW	93.1	3.4	1.7	1.8
RBKC	93.2	3.6	1.5	1.7
Greater London	92.8	3.6	1.7	2.0
England	91.2	4.3	1.8	2.6

Source: ONS (2022) Census 2021 (Ref 11.29)

Further Health Indicators

11.4.15 **Table 11-11** presents a range of further health indicators for local authorities within the Study Area, drawn from the OHID Public Health Profiles (Ref 11.32). Data for the CoL is not available across all indicators due to its small population size.

11.4.16 Suicide rates across the Study Area are generally below the England average of 10.9 per 100,000 population, with RBKC recording the highest rate at 9.4 per 100,000 and LBBD the lowest at 4.9 per 100,000. Under-75 mortality rates from all causes vary considerably across the relevant local authorities, with RBKC recording the lowest rate (220.9) and LBBD the highest (401.7), above both the London and England averages. Mortality rates from cardiovascular disease and cancer follow a similar pattern, with LBBD again recording the highest rates on both measures, and RBKC recording the lowest rates.

11.4.17 In terms of lifestyle indicators, rates of physical activity among adults are broadly comparable to the England average (67.4%) across most of the relevant local authorities, with LBLa (76.6%) and LBS (74.1%) standing out as notably higher. Rates of overweight or obese adults are lower than the England average (64.5%) in the majority of the relevant local authorities,

particularly in CoW (51.9%), though LBBD (69.3%) exceeds the national average. Adult smoking rates vary considerably, from 6.8% in LBS to 15.4% in LBBD, with CoW (14.1%) and LBTH (14.2%) also above the England average of 10.4%.

Table 11-11: Further Health Indicators

Local Authority	Suicide Rate per 100,000 population (2022-2024)	Under 75 Mortality Rate per 100,000 population from all causes (2024)	Under 75 Mortality Rate per 100,000 population from cardiovascular disease (2024)	Under 75 Mortality Rate per 100,000 population from cancer (2024)	Percentage of physically active adults (2023/2024) (%)	Percentage of overweight and obese adults (2023/2024) (%)	Percentage of adult smokers (2024) (%)
LBB	7.5	298.7	75.2	112.2	58.5	64.2	7.2
RBG	9.3	349.5	87.7	122.8	63.6	60.2	8.6
LBLe	7.3	339.6	105.6	109.2	71.1	55.7	8.8
LBS	8.3	352.9	83.1	123.9	74.1	57.4	6.8
LBLa	9.3	360.7	100.8	119.5	76.6	54.8	10.7
LBBD	4.9	401.7	109.4	149.9	57.4	69.3	15.4
LBTH	7.4	358.1	81.4	120.3	66.0	60.4	14.2
CoL ⁴	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CoW	9.0	273.8	63.9	96.8	65.9	51.9	14.1
RBKC	9.4	220.9	43.6	78.0	65.0	54.6	8.4

⁴ OHID does not publish a public health profile for City of London due to its small population size.

Local Authority	Suicide Rate per 100,000 population (2022-2024)	Under 75 Mortality Rate per 100,000 population from all causes (2024)	Under 75 Mortality Rate per 100,000 population from cardiovascular disease (2024)	Under 75 Mortality Rate per 100,000 population from cancer (2024)	Percentage of physically active adults (2023/2024) (%)	Percentage of overweight and obese adults (2023/2024) (%)	Percentage of adult smokers (2024) (%)
Greater London	7.5	293.9	71.6	105.4	66.7	57.8	10.2
England	10.9	329.4	74.3	117.9	67.4	64.5	10.4

Source: OHID (2020) Public Health Profiles. (Ref 11.32)

Local Receptors

11.4.18 Local to the EIA Scoping Boundary, there are several health infrastructure receptors including Guy's Hospital, St Thomas' Hospital, The Princess Grace Hospital, Royal Marsden Hospital, The Lister Hospital, and St Bartholomew's Hospital, as well as numerous GP surgeries. This is not an exhaustive list but provides an indication of the types of health infrastructure receptors within the baseline. Receptors located within or adjacent to the Proposed Scheme, including those falling within the air quality and noise and vibration Study Areas (as defined within **Volume 1, Chapter 6: Air Quality** and **Volume 1, Chapter 15: Noise and Vibration**), are considered to have the potential to experience direct effects. Receptors along roads to be used by the construction traffic of the Proposed Scheme have the potential to experience indirect effects, such as diversion or disruption of access caused by infrastructure or increased traffic. Residential properties, community facilities and recreational receptors relevant to the human health assessment are outlined in **Volume 1, Chapter 16: Socio-Economics**. Further detail on local human health receptors will be presented at the ES stage, following further refinement of the project design.

Future Baseline

11.4.19 The ONS provides data on population projections at local authority level (Ref 11.33). Anticipated population change in the Study Area is shown in **Table 11-12**. Of the relevant local authorities, the CoL has the highest projected population growth from 2022 to 2040 (36.8%), followed by LBTH (22.4%). The local authority with the lowest projected population growth is LBB (6.2%), followed by LBB (7.6%), and LBLa (7.8%). Six of the ten local authorities are expected to experience larger population growth than the English national average (9.0%).

Table 11-12: Health Profile Baseline Data Collation Area Projections

Local Authority	2022 ⁵	2040	Percentage Change (%)
LBB	247,754	268,169	7.6
RBG	291,879	330,611	11.7
LBLe	299,023	324,696	7.9
LBS	311,492	355,272	12.3
LBLa	316,700	343,449	7.8

⁵ ONS Population Projections are 2022-based, meaning that all projections are calculated based on a baseline of 2022. This means that the baseline populations of each borough will be slightly different to those outlined in Table 11-3, which uses Census population figures from 2021.

Local Authority	2022 ⁵	2040	Percentage Change (%)
CoW	209,866	240,083	12.6
LBBD	220,039	234,479	6.2
LBTH	323,854	417,284	22.4
CoL	11,457	18,138	36.8
RBKC	146,392	164,242	10.9
Greater London	8,869,043	9,772,157	10.2
England	57,112,542	62,787,650	9.0

Source: ONS (2025) Population Projections (Ref 11.33)

11.5 Potential for Likely Significant Effects

Construction Phase

11.5.1 The Proposed Scheme has the potential to affect human health, including local human health receptors, due to construction activities through:

- Creation of temporary employment required for construction of the Proposed Scheme, as well as education and training opportunities.
- Activities relating to the construction of the Proposed Scheme, such as noise, vibration, impacts on air, land and water quality, dust, climate change, and visual disturbance caused by these activities.
- Potential closure or diversions of recreational routes as a result of construction activities.
- Potential severance of access to open space from the construction activities.
- Potential severance of access to housing, local community facilities and social infrastructure resulting from construction activities.

Operation Phase

11.5.2 The Proposed Scheme has to potential to affect human health during operation through:

- Activities relating to the operation of the Proposed Scheme, including noise, impacts on water quality, climate change, and visual disturbance from new above ground infrastructure.

11.5.3 Noise may lead to disturbance and stress-related effects, while any deterioration in water quality could increase risks associated with contamination pathways. Contributions to, or interactions with, climate change

may exacerbate health risks such as heat stress or flooding, and visual changes to the townscape may affect amenity and mental wellbeing.

- 11.5.4 As outlined in **Volume 1, Chapter 16: Socio-Economics**, it is not anticipated that any significant employment, education, or training opportunities would arise during operation as the permanent workforce required to operate the Proposed Scheme would be limited.
- 11.5.5 As detailed in **Volume 1, Chapter 18: Transport**, a minimal number of trips are expected to be generated during operation of the Proposed Scheme, and given this, no significant transport effects are expected during this phase, including closures and diversions of routes and severance of access.
- 11.5.6 As is covered in **Volume 1, Chapter 6: Air Quality**, no significant air quality effects during the operation of the Proposed Scheme are anticipated, and so, no air quality effects on human health during operation are anticipated. **Volume 1, Chapter 9: Ground Conditions** outlines how any potential effects on ground conditions will be managed through the OEMP, therefore no significant human health effects driven by changes in land quality are expected during operation of the Proposed Scheme.

Decommissioning Phase

- 11.5.7 The Proposed Scheme is intended to become part of London's critical infrastructure with no decommissioning proposed. However, if decommissioning were to be required, it is likely that minor works would be needed to remove above ground infrastructure. Underground pipelines expected to be left in-situ to minimise adverse environmental effects. Standard good practice management measures would be expected to avoid any likely significant effects, considering the small scale of works required.
- 11.5.8 Similarly, it is not expected that decommissioning would require vehicle movements at a significant scale sufficient to trigger a detailed human health assessment, or large-scale earthworks or demolition. Given this, a detailed assessment of decommissioning stage is proposed to be scoped out.

11.6 Assessment Methodology

Sensitive Receptors

- 11.6.1 The human health scoping baseline assessment identifies the following sensitive receptors within the Study Area:
- residents within the Study Area;
 - non-residents visiting the Study Area;
 - local construction workforce who may be involved in the construction of the Proposed Scheme;

- d. publicly accessible open spaces and recreational routes used for physical activity; and
 - e. nearby community facilities and social infrastructure including health infrastructure facilities.
- 11.6.2 The human health ES assessment will focus on the likely significant effects on vulnerable groups who are most likely to be susceptible to effects on health arising from the Proposed Scheme. This includes the following groups:
- a. older people;
 - b. people with existing health conditions;
 - c. people experiencing unemployment or low incomes; and
 - d. people who may experience social exclusion or isolation.

Impact Assessment Methodology

- 11.6.3 The ISEP guidance ‘Determining Significance For Human Health In Environmental Impact Assessment’ will form the basis of the approach adopted to assess effects on human health in the ES. The WHO defines health as a *“state of complete physical, mental and social wellbeing not merely the absence of disease or infirmity”* (Ref 11.25). Therefore, public health encompasses general wellbeing not just the absence of illness and includes consideration of both physical and mental health and wellbeing.
- 11.6.4 The health and wellbeing of individuals is influenced by a broad range of individual, constitutional and behavioural factors (‘determinants’), as well as broader environmental, social and economic factors. Some factors act directly, while others act indirectly. Within a population there can also be health inequalities, defined by the WHO as *“...differences in health status or in the distribution of health determinants between different population groups. For example, differences in mobility between elderly people and younger populations or differences in mortality rates between people from different social classes”* (Ref 11.1).
- 11.6.5 ISEP’s ‘Guide to Effective Scoping of Human Health in Environmental Impact Assessment’ (Ref 11.24) lists 22 potential determinants of health, under five broad categories: health-related behaviours, social environment, economic environment, biophysical environment, and institutional and built environment. **Table 11-13** outlines these determinants and how human health could be affected through effects on these determinants.

Table 11-13: Health Determinants and Potential Associated Effects

Health Determinant	Potential Effect on Human Health
Physical activity	Reduced opportunities for active travel or access to open space may contribute to lower levels of physical activity, which is associated with poorer physical health and poorer mental wellbeing.
Risk taking behaviour	Risk taking behaviours such as alcohol and substance use, unsafe travel behaviours or antisocial activities can influence physical injury rates and mental wellbeing.
Diet and nutrition	Access to healthy, affordable food contributes to good diet and nutrition. Changes that affect access to shops, services, or food outlets may influence people's ability to maintain a balanced diet, which is linked to physical health outcomes.
Housing	Access to adequate, affordable housing and living conditions is important determinant to physical and mental health. Disruption may contribute to stress and anxiety and reduced wellbeing.
Relocation	Relocation can disrupt established social networks, access to services, employment, education and familiarity with place, all of which support physical and mental wellbeing. Forced or unplanned relocation can contribute to stress, anxiety, changes to community cohesion, and reduced sense of security or belonging.
Open space, leisure and play	Open spaces and active travel opportunities promote physical outdoor activity and therefore have multi-faceted wellbeing benefits. Reduced access to or loss of recreational areas and active travel resources may affect physical and mental health in numerous ways, including reduced social interaction.
Transport modes, access and connections	Transport disruption may affect access to services, contributing to physical and mental health effects such as increased stress or anxiety.
Community safety	Anxiety associated with potential hazards and safety risks amongst local people.
Community identity, culture,	Loss of social networks, belonging and stability, with potential adverse effects on social cohesion and mental health. Uncertainty and anxiety about potential adverse effects of the Proposed Scheme.

Health Determinant	Potential Effect on Human Health
resilience and influence	
Social participation, interaction and support	Opportunities for social interaction and access to support networks are linked to mental health, resilience and overall wellbeing. Reduced ability to engage in social activities or maintain social connections may contribute to loneliness, isolation, and poorer mental health outcomes.
Education and training	Education, skills and training are key determinants of physical and mental health. There is potential for those seeking education, skills, and training opportunities to experience benefits and disbenefits associated with the Proposed Scheme.
Employment and income	Employment and income are key determinants of physical and mental health. Economically active members of the population, including local business owners, employees and those looking for work, have potential to experience benefits and disbenefits from the Proposed Scheme.
Climate change mitigation and adaptation	Potential long-term effects on health associated with climate change and changes in environmental exposures.
Air quality	Potential direct and indirect effects on physical health including respiratory and cardiovascular impacts.
Water quality or availability	Potential indirect physical health effects associated with exposure to contaminated water and ecological degradation affecting community wellbeing.
Land quality	Potential indirect physical health effects associated with contaminated soils (e.g. contact) and secondary pathways such as dust generation or impacts on food production.
Noise and vibration	Potential direct and indirect effects on health including on sleep, annoyance, mental health and wellbeing, cognitive performance, and cardiovascular stress.
Radiation	Exposure to radiation may cause adverse health effects depending on dose and duration, including potential risks to physical health. Public concern about radiation can also contribute to stress and anxiety.
Townscape and visual	Potential effects on mental health relating to loss of visual amenity, change in place identity and character.

Health Determinant	Potential Effect on Human Health
Health and social care services	Access to health and social care services is essential for maintaining good physical and mental health. Changes that affect service capacity, accessibility, or demand may impact the ability of people to manage existing health conditions or access support services, potentially resulting in poorer health outcomes.
Built environment	The quality of the built environment influences physical and mental health through factors such as walkability, access to amenities, quality of housing, green infrastructure, and safety. Changes to the built environment may reduce opportunities for active travel, increase exposure to hazards, and contribute to stress or reduced wellbeing.
Wider societal infrastructure and resources	Access to community infrastructure, local services, and shared resources supports physical, mental and social wellbeing. Changes to, or reduced access to these assets may affect community cohesion, access to support, and opportunities for healthy living.

Source: IEMA (2022) *Guide to Effective Scoping of Human Health in Environmental Impact Assessment* (Ref 11.24)

11.6.6 The specific magnitude and sensitivity criteria that will be applied for the human health assessment reflects the ISEP guidance, ‘Determining Significance For Human Health In Environmental Impact Assessment’ (Ref 11.25). For health, there is no accepted definition of what constitutes a significant (or not significant) effect. However, effects are generally characterised by the relationship between the magnitude of an effect and the sensitivity of the affected human receptor. Given this, the significance criteria of human health effects of the Proposed Scheme will be assessed based on expert judgement and professional experience of the author, relying on the following considerations:

- a. Sensitivity of human health receptors including general population and potentially vulnerable sub-populations: specific values in terms of sensitivity can be attributed to population health considering levels of deprivation, inequality, community concern, care provision and adaptability. The assessment takes account of the qualitative (rather than quantitative) sensitivity of relevant populations; and
- b. Magnitude of effect: this entails consideration of the scale of the exposure of the population to an effect; whether the effect is one-off or continuous; the likely nature of the human health effect; the

permanence of the change; and the proportion of the relevant Study Area population that would be affected.

Sensitivity of Receptors

- 11.6.7 The sensitivity of population health is driven by a number of factors that are set out in **Table 11-14** and are based on the ISEP guidance (Ref 11.25).

Table 11-14: Health Sensitivity Criteria

Sensitivity Level	Sensitivity Criteria
High	High levels of deprivation (including pockets of deprivation); reliance on shared resources (between the population and the Proposed Scheme); existing wide inequalities between the most and least healthy; a community whose outlook is predominantly anxiety or concern; people who are prevented from undertaking daily activities; dependants; people with very poor health status; and/or people with a very low capacity to adapt.
Medium	Moderate levels of deprivation; few alternatives to shared resources; existing widening inequalities between the most and least healthy; a community whose outlook is predominantly uncertainty with some concern; people who are highly limited from undertaking daily activities; people providing or requiring a lot of care; people with poor health status; and/or people with a limited capacity to adapt.
Low	Low levels of deprivation; many alternatives to shared resources; existing narrowing inequalities between the most and least healthy; a community whose outlook is predominantly ambivalence with some concern; people who are slightly limited from undertaking daily activities; people providing or requiring some care; people with fair health status; and/or people with a high capacity to adapt.
Very Low	Very low levels of deprivation; no shared resources; existing narrow inequalities between the most and least healthy; a community whose outlook is predominantly support with some concern; people who are not limited from undertaking daily activities; people who are independent (not a carer or dependent); people with good health status; and/or people with a very high capacity to adapt.

Source: IEMA (2022). *Guide to Determining Significance for Human Health in Environmental Impact Assessment* (Ref 11.25)

Magnitude of Impacts

- 11.6.8 Magnitude of impact is driven by a number of factors which are set out in **Table 11-15**, based on guidance set out in the ISEP guidance (Ref 11.25).

Table 11-15: Health Magnitude Criteria

Magnitude Level	Magnitude Criteria
High	High exposure or scale; long-term duration; continuous frequency; severity predominantly related to mortality or changes in morbidity (physical or mental health) or very severe illness/injury outcomes; majority of population affected; permanent change; substantial service quality implications.
Medium	Low exposure or medium scale; medium-term duration; frequent events; severity predominantly related to moderate changes in morbidity or moderate change in quality of life; large minority of population affected; gradual reversal; small service quality implications.
Low	Very low exposure or small scale; short-term duration; occasional events; severity predominantly related to minor change in morbidity or moderate change in quality of life; small minority of population affected; rapid reversal; slight service quality implications.
Very Low	Negligible exposure or small scale; very short-term duration; one off frequency; severity predominantly relates to minor change in quality of life; very few people affected; immediate reversal once activity completes; no service quality implications.

Source: IEMA (2022). *Guide to Determining Significance for Human Health in Environmental Impact Assessment* (Ref 11.25)

Determining Significance

- 11.6.9 Human health effects reflect the relationship between the sensitivity of the relevant population health, and the magnitude of the impact, as set out in **Table 11-16**, which reflects the ISEP guidance for determining significance (Ref 11.25).

Table 11-16: Significance of Effects

Sensitivity value or of resource/receptor	Magnitude of Impact			
	High	Medium	Low	Very Low
High	Major	Major / Moderate	Moderate / Minor	Minor / Negligible
Medium	Major / Moderate	Moderate	Minor	Minor / Negligible
Low	Moderate / Minor	Minor	Minor	Negligible
Very Low	Minor / Negligible	Minor / Negligible	Negligible	Negligible

11.6.10 The assessment aims to be objective and quantifies effects as far as possible. However, some effects can only be evaluated on a qualitative basis. Effects will be defined as follows:

- a. beneficial classifications of effect indicate an advantageous effect on human health, which may be minor, moderate or major in scale;
- b. adverse classifications of effect indicate a disadvantageous effect on human health, which may be minor, moderate or major in scale;
- c. negligible classifications of effect indicate imperceptible effects on human health; and
- d. no effect classifications indicate that there are no effects on human health.

11.6.11 In accordance with the methodology set out in **Volume 1, Chapter 5: EIA Approach and Methodology**, the following criteria will be applied:

- a. 'moderate' or 'major' effects are classed 'significant';
- b. 'minor' effects are classed as 'not significant', although they may be a matter of local concern; and
- c. 'negligible' effects are classed as 'not significant'.

11.7 Design, Mitigation and Enhancement Measures

Construction Phase

11.7.1 Embedded mitigation measures will be included in the design where practicable to help avoid, reduce or mitigate effects on human health resources and receptors. The following technical assessments presented in the ES will outline specific measures relevant to effects on human health: **Chapter 6: Air Quality; Chapter 7: Climate; Chapter 9: Ground**

Conditions; Chapter 12: Major Accidents and Disasters; Chapter 15: Noise and Vibration; Chapter 16: Socio-Economics; Chapter 17: Townscape and Visual; Chapter 18: Transport; and Chapter 19: Water Environment and Flood Risk. A Framework Construction Environmental Management Plan (CEMP) will accompany the DCO Application, which will describe the framework of mitigation measures identified to be followed and carried forward to a detailed CEMP prior to construction of the Proposed Scheme. It will outline mitigation measures to reduce likely significant effects on human health from air, land, and water quality, dust generation, visual disruption, and traffic and access associated with construction of the Proposed Scheme.

- 11.7.2 A Framework Construction Logistics Plan (CLP) will be submitted with the DCO Application. This document will detail measures to regulate construction traffic associated with the construction of the Proposed Scheme and will be agreed with the relevant authorities prior to starting the construction phase.
- 11.7.3 Additional mitigation will be developed, where required, as the design is progressed and will be included in the ES, as appropriate. Where potential significant adverse human health effects are identified, additional mitigation will be provided.

Operation Phase

- 11.7.4 As with construction, embedded mitigation measures will be included in the design where practicable to help avoid, reduce or mitigate effects on human health resources and receptors. The specific measures set out in other chapters of the ES will also be relevant to human health effects during operation (see paragraph 11.1.3 for a list of relevant chapters). Additional mitigation will be developed, where required, as the design is progressed and will be included in the ES, as appropriate. Where potential significant adverse effects are identified, additional mitigation will be provided.

11.8 Assumptions, Limitations and Uncertainties

- 11.8.1 The following limitations and assumptions have been identified:

- a. The human health assessment that will be carried out as part of the ES is based on professional judgement and considers both the adverse and beneficial effects that the Proposed Scheme will have on surrounding receptors. It provides an indication of human health effects on people and the local community.
- b. The baseline conditions analysis will be carried out against a benchmark of current human health baseline conditions prevailing around the Proposed Scheme, as far as is possible within the

limitations of individual datasets. Baseline data will be subject to a time lag between collection and publication. As with any dataset, these conditions may be subject to change over time which may influence the findings of the assessment.

- c. The human health assessment will draw on a number of other technical assessments presented within relevant ES chapters. Assumptions and limitations identified within those information sources will also apply to the human health assessment.

11.9 Summary of Elements Scoped In or Scoped Out

- 11.9.1 A summary of the human health items scoped in or out of the ES is provided in **Table 11-17**. The scoping has been informed by the potential for likely significant effects, drawing on the findings of relevant technical chapters (including, but not limited to, townscape and visual, major accidents and disasters, air quality, noise and vibration, socio-economics, transport, climate, and water environment and flood risk). Where determinants have been scoped out, this reflects the unlikely potential for significant effects or where effects are appropriately considered within other topic-specific assessments.

Table 11-17: Summary of Scope of Human Health Assessment

Human Health Effects	Phase	Scoped In	Scoped Out	Justification
Healthcare and other social infrastructure. Changes in access to and demand for healthcare services and other community facilities.	Construction	✓		As outlined in Volume 1, Chapter 16: Socio-economics and Volume 1, Chapter 18: Transport , the Proposed Scheme could lead to changes in access to healthcare services and other community facilities for residents of nearby residential receptors. Adverse effects could arise from construction traffic or route diversions potentially affecting accessibility.
	Operation		✓	As detailed in Volume 1, Chapter 16: Socio-economics and Volume 1, Chapter 18: Transport , activities associated with the operation of the Proposed Scheme will be minimal and unlikely to cause significant effects on community and social infrastructure.
Open space, play and leisure. Changes in availability and quality of, and access to, public areas of open space and recreational walking and cycling routes.	Construction	✓		As outlined in Volume 1, Chapter 16: Socio-economics and Volume 1, Chapter 18: Transport , the Proposed Scheme could lead to changes in access to and quality of public areas of open space and recreational walking and cycling routes for residents and visitors during construction.
	Operation		✓	As outlined in Volume 1, Chapter 16: Socio-economics and Volume 1, Chapter 18: Transport , there would be minimal

Human Health Effects	Phase	Scoped In	Scoped Out	Justification
				maintenance works associated with the Proposed Scheme. The Proposed Scheme is therefore unlikely to lead to significant negative effects on open space, play and leisure as a determinant of human health beyond construction once complete and operational.
Transport modes, access and connections. Changes in community severance, vehicles on the local road network and public transport.	Construction	✓		As outlined in Volume 1, Chapter 18: Transport , the Proposed Scheme could lead to changes in traffic flows on the local road network and public transport during construction.
	Operation		✓	As outlined in Volume 1, Chapter 18: Transport , given the minimal nature of maintenance activities, only a limited level of traffic is anticipated once the Proposed Scheme is complete and operational. Therefore, the Proposed Scheme is unlikely to affect transport modes, access and connections as a determinant of human health and is proposed to be scoped out of the EIA.
Economic environment (employment and income, education and training opportunities). Direct and indirect job creation and economic activity, as well	Construction	✓		The Proposed Scheme could create employment and supply chain opportunities, as well as offer temporary training and upskilling opportunities such as

Human Health Effects	Phase	Scoped In	Scoped Out	Justification
as educational opportunities and support.				apprenticeships during the construction phase.
	Operation		✓	Given the minimal nature of maintenance works, it is anticipated that the generation of operational employment and wider economic benefits will be limited, and staffing requirements could be drawn from the existing Riverside Campus workforce. Therefore, any associated beneficial effects on health (e.g. through employment, income and job security) are not likely to give rise to significant human health effects.
Air quality. Changes in air pollutants from construction activities and construction road traffic.	Construction	✓		As outlined in Volume 1, Chapter 6: Air Quality , there is potential for likely significant effects from the Proposed Scheme on air quality during construction through dust generation, road traffic emissions, and plant emissions which could lead to significant human health effects.
	Operation		✓	As detailed in Volume 1, Chapter 6 Air Quality , all air quality effects during operation have been scoped out, and given this, human health effects driven by air quality during operation has been scoped out of the human health assessment.

Human Health Effects	Phase	Scoped In	Scoped Out	Justification
Noise and vibration. Changes in construction noise and vibration and road traffic noise.	Construction	✓		As outlined in Volume 1, Chapter 15: Noise and Vibration , the Proposed Scheme could lead to potential significant noise effects in regard to construction noise and vibration and road traffic noise. This could lead to adverse effects on residential amenity and mental health and wellbeing.
	Operation	✓		As outlined in Volume 1, Chapter 15: Noise and Vibration , the Proposed Scheme could lead to potential significant noise effects in regard to operational noise. This could lead to adverse effects on residential amenity and mental health and wellbeing.
Townscape and visual amenity. Changes in visual amenity of public areas of open space, active travel walking and cycling routes.	Construction	✓		Based on the scoping assessment outlined in Volume 1, Chapter 17: Townscape and Visual , the assessment will focus on receptors likely to experience changes in visual amenity affecting health and wellbeing, including visible above ground construction from public open spaces and active travel routes. Below ground works and negligible or transient effects are scoped out.
	Operation		✓	Based on the scoping assessment outlined in Volume 1, Chapter 17: Townscape and Visual , changes in visual amenity of public

Human Health Effects	Phase	Scoped In	Scoped Out	Justification
				areas of open space, active travel walking and cycling routes and subsequent impacts on health are expected to be minimal and spatially limited.
Water quality. Changes in contaminated runoff, spills, or leaks of hazardous substances and/or historical land uses.	Construction	✓		As outlined in Volume 1, Chapter 19: Water Environment and Flood Risk , the Proposed Scheme has potential to affect groundwater and surface water quality during construction. This could lead to adverse effects on the health of residents and users of public water supplies if water quality deteriorates.
	Operation	✓		As outlined in Volume 1, Chapter 19: Water Environment and Flood Risk , the Proposed Scheme has potential to affect groundwater and surface water quality during operation. This could lead to adverse effects on the health of residents and users of public water supplies if water quality deteriorates.
Water availability. Changes in water availability during construction.	Construction		✓	As detailed in Volume 1, Chapter 19: Water Environment and Flood Risk , water availability and supply is not expected to be significantly affected during the construction of the Proposed Scheme and has therefore been scoped out of the human health assessment.

Human Health Effects	Phase	Scoped In	Scoped Out	Justification
	Operation		✓	As detailed in Volume 1, Chapter 19: Water Environment and Flood Risk , water availability and supply is not expected to be significantly affected during the operation of the Proposed Scheme and has therefore been scoped out of the human health assessment.
Land quality. Physical health effects associated with contaminated soils (e.g. contact) and secondary pathways such as dust generation or impacts on food production.	Construction	✓		As detailed in Volume 1, Chapter 9: Ground Conditions , the Proposed Scheme has potential to affect ground conditions during construction. A preliminary risk assessment will identify the likely nature of these effects, including determining the likelihood of land quality effects which may lead to adverse effects on human health.
	Operation		✓	As detailed in Volume 1, Chapter 9: Ground Conditions , maintenance activities during the operation phase will be managed through an OEMP. Therefore, no significant human health effects driven by changes in land quality are expected during the operation phase.
Climate change mitigation and adaptation. Changes to Greenhouse Gas (GHG) emissions, extreme	Construction	✓		Climate change poses a threat to the health, safety and security of the global population, both through direct hazards and indirectly due to damage to the living environment. Greenhouse gas emissions from the

Human Health Effects	Phase	Scoped In	Scoped Out	Justification
weather events, flood risk, temperature change and rainfall change.				construction phase could potentially have an indirect effect on human health, as emissions will contribute towards changing climatic conditions which may lead to extreme weather, heat and flood risk and exacerbation of cardiovascular and respiratory conditions.
	Operation	✓		As detailed in Volume 1, Chapter 7: Climate , there is potential for significant climate change effects during the operation of the Proposed Scheme, and has therefore been scoped into the human health assessment.
Health-related behaviours: physical activity; risk taking behaviour; diet and nutrition. Changes to levels of physical activity, risk taking behaviour and consideration for diet and nutrition.	Construction		✓	Given the nature of the Proposed Scheme, construction activity is not anticipated to affect risk taking behaviour or diet and nutrition. Physical activity is scoped out as changes in physical activity will be covered under the open space, play and leisure health determinant.
	Operation		✓	Maintenance activity during operation is not anticipated to affect risk taking behaviour or diet and nutrition.
Housing. Changes to housing need and provision. Changes in access to residential properties	Construction	✓ (Changes in access to		The Proposed Scheme could lead to disruption to access to residential properties. This could lead to adverse effects on mental health and wellbeing. The magnitude and

Human Health Effects	Phase	Scoped In	Scoped Out	Justification
		residential properties only)		spatial extent of these effects will depend on the scale and duration of construction activities, which are uncertain at this stage. Given this, a precautionary approach is adopted and potential effects on housing are scoped into the assessment. As outlined in Volume 1, Chapter 16: Socio-economics, changes to housing need and provision, during construction are scoped out. The workforce will be largely drawn from the London TTWA. Any non-local workers are expected to be temporary and to primarily use visitor accommodation (e.g. hotels), rather than the housing market. As a result, any additional demand would be limited, short-term and dispersed, with no material effect on housing availability or affordability.
	Operation		✓	Given the nature of the Proposed Scheme, the operational phase is not anticipated to lead to changes in housing provision beyond those effects identified as permanent in the construction phase.
Social participation, interaction and support. Changes to opportunities for	Construction	✓		Construction of the Proposed Scheme could affect indoor or outdoor community assets and meeting places, for voluntary, social, cultural

Human Health Effects	Phase	Scoped In	Scoped Out	Justification
community participation and interaction, and for social and family support.				or spiritual participation through potential displacement, severance, and land take effects. The magnitude and spatial extent of these effects will depend on the scale and duration of construction activities, which are uncertain at this stage. Given this, a precautionary approach is adopted and potential effects on social participation, interaction, and support are scoped into the assessment.
	Operation		✓	Given the nature of the Proposed Scheme, the operation phase is not anticipated to affect social participation, interaction, and support beyond those effects identified as permanent in the construction phase.
Social environment: relocation; community safety; community identity; and culture, resilience and influence. Changes to perception and actual level of risk and crime. Changes to community identity such as sense of belonging.	Construction	✓		Construction activity has the potential to give rise to temporary changes in the social environment (including perceived community safety, social cohesion and neighbourhood character) as a result of factors such as increased construction traffic, workforce presence, temporary disruption, and changes to access. The magnitude and spatial extent of these effects will depend on the scale and duration of construction activities, which are uncertain at this stage. Therefore, a

Human Health Effects	Phase	Scoped In	Scoped Out	Justification
				precautionary approach is adopted and potential effects on the social environment are scoped into the assessment.
	Operation		✓	Operational activities associated with the Proposed Scheme are expected to be limited in scale and largely restricted to routine maintenance. These activities are not anticipated to materially alter patterns of community interaction, perceptions of safety, or local identity. Given this, any changes to the social environment (including community safety, identity, culture, resilience and social cohesion) are not likely to give rise to significant human health effects.
Bio-physical environment: radiation. Changes to exposure to radiation risks.	Construction		✓	Given the nature of the Proposed Scheme, construction activity is not anticipated to affect radiation.
	Operation		✓	Given the nature of the Proposed Scheme, operation and maintenance activity is not anticipated to affect radiation. The Proposed Scheme would include standard electricity distribution infrastructure (e.g. cabling and kiosks). Any electromagnetic fields effects would be low, localised and within established health guidelines. Given this, no likely

Human Health Effects	Phase	Scoped In	Scoped Out	Justification
				significant effects on human health are anticipated and the topic is scoped out.
Institutional and built environment: wider societal infrastructure and resources. Changes to features of the built environment and wider public health environment that contribute to physical and mental health outcomes.	Construction		✓	The construction of the Proposed Scheme may either directly (through land take) or indirectly (through changes to access) affect local social infrastructure and components of the built environment. However, it is not expected that construction would generate any effects to wider social infrastructure further to those assessed under 'healthcare and social infrastructure'.
	Operation		✓	While the operation of the Proposed Scheme may involve ongoing presence of infrastructure, any effects on local social infrastructure and components of the built environment (including land take or changes to access) would arise during the construction phase.
Human Health Effects during decommissioning	Decommissioning		✓	The Proposed Scheme is intended to become part of London's critical infrastructure with no decommissioning proposed. However, if decommissioning were to be required, it is likely that minor works would be needed to remove above ground infrastructure. Underground pipelines are expected to be left

Human Health Effects	Phase	Scoped In	Scoped Out	Justification
				in-situ to minimise adverse environmental effects. Standard good practice management measures would be expected to avoid any likely significant effects, considering the small scale of works required. Similarly, it is not anticipated that decommissioning would involve vehicle movements, large-scale earthworks, or demolition activities of a magnitude that would warrant a human health assessment. Given this, a detailed assessment of the decommissioning stage is proposed to be scoped out.

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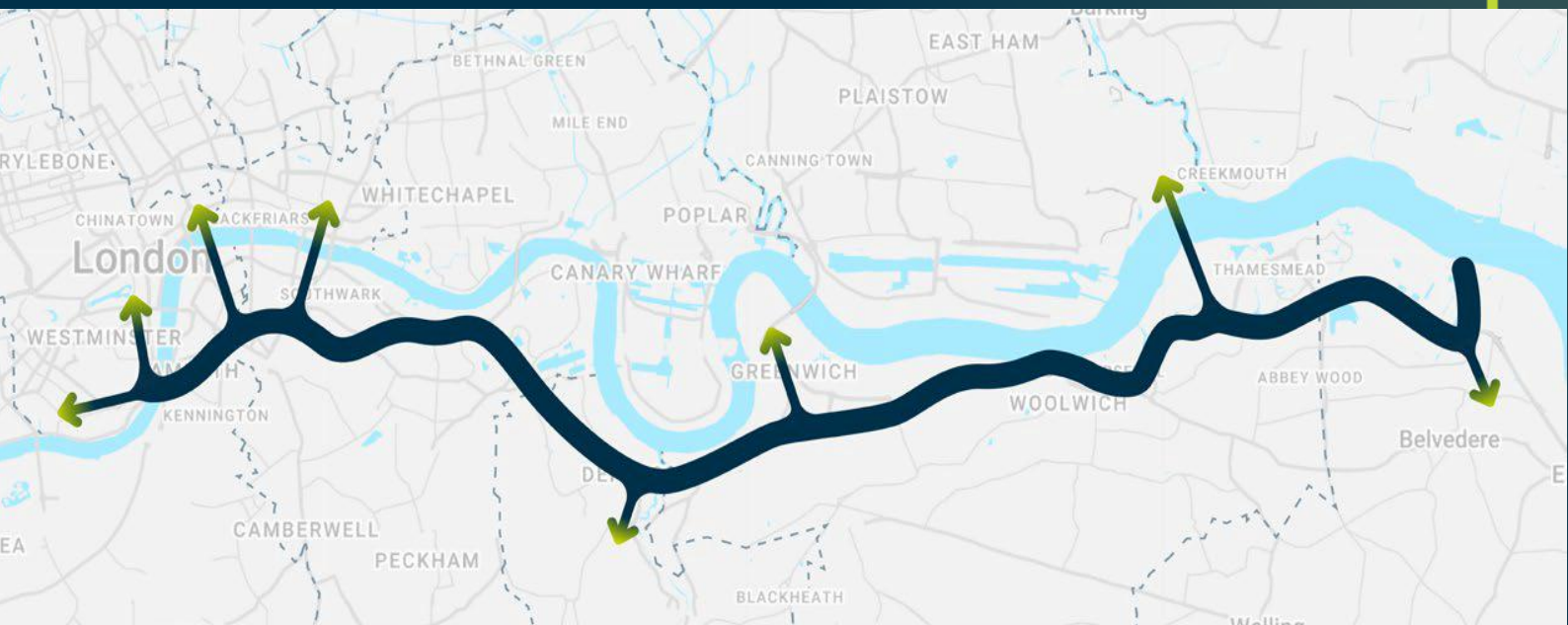
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Environmental Impact Assessment Scoping Report

Volume 1: Main Report

Chapter 12: Major Accidents and Disasters



Cory Environmental Holdings Limited

July 2026

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12. Major Accidents and Disasters

12.1 Introduction

- 12.1.1 This chapter identifies the potential for likely significant effects to arise from the Proposed Scheme with respect to Major Accidents and Disasters (MA&D).
- 12.1.2 The purpose of addressing MA&D within an Environmental Impact Assessment (EIA) is to identify, assess and mitigate the risks associated with MA&D risk events, relevant to the Proposed Scheme. These risk events could cause serious harm to people, property and/or the environment. Definitions outlined in **Table 12-1** with regards to the consideration of MA&D risks have been adopted within this chapter.
- 12.1.3 This EIA Scoping chapter should be read in conjunction with the below chapters within **Volume 1** of this EIA Scoping Report in terms of further description of relevant receptors and topic assessments, where there is an overlap with the MA&D assessment:
- a. **Chapter 7: Climate;**
 - b. **Chapter 8: Ecology;**
 - c. **Chapter 9: Ground Conditions;**
 - d. **Chapter 10: Historic Environment;**
 - e. **Chapter 11: Human Health;**
 - f. **Chapter 13: Marine Environment;**
 - g. **Chapter 16: Socio-Economics;**
 - h. **Chapter 18: Transport; and**
 - i. **Chapter 19: Water Environment and Flood Risk.**

Table 12-1: Summary of Key Terms used in the MA&D Assessment

Term	Definition
Disaster	A disaster, in the context of MA&D assessment, is a naturally occurring phenomenon such as an extreme weather event (e.g. storm, flood, extreme temperatures) or ground-related hazard event (e.g. subsidence, landslide, earthquake) with the potential to cause an event or situation that leads to immediate or delayed serious damage the environment and requires the use of resources beyond those of the Applicant or its contractors to manage.

Term	Definition
Hazard	A hazard is defined as an event that may cause harm. Hazards for the purposes of the MA&D assessment are defined as non-malicious events including natural disasters, industrial accidents and industrial action.
Major accident	A major accident, in the context of a MA&D assessment, means an uncontrolled event caused by a man-made activity or asset that may result in immediate or delayed serious damage the environment and requires the use of resources beyond those of the Proposed Scheme or its contractors to manage. It should be noted that malicious intent is not accidental, however the outcome of such an incident may be the same and, therefore, the same mitigation measures may apply to both deliberate and accidental events
Risk Event	An identified, unplanned event, which is considered relevant to the development and has the potential to result in a major accident and/or disaster, subject to assessment of its potential to result in a significant adverse effect on an environmental receptor.
Serious damage	Serious damage includes permanent or long-lasting damage to an environmental receptor that cannot be restored through minor clean-up and restoration efforts, and which requires the use of resources beyond those of the Proposed Scheme or its contractors to manage.
Threat	Threats for the purposes of the MA&D assessment are defined as malicious attacks.
Vulnerability	Vulnerability describes the susceptibility of an individual, a community, assets or systems to the impacts of hazards, either in terms of the likelihood of that experience or the extent to which an impact might result in an effect (and how reversible that effect might be). Within MA&D assessment, the term 'vulnerability' is used to describe the ability of the Proposed Scheme to plan, control, resist and recover from a MA&D event in a timely manner.

12.1.4 A register of MA&D risk events is presented within **Volume 3, Appendix 12.1: Scoping of Major Accidents and Disasters Risks**. Following the completion of the risk register, it has been concluded that no risk events are likely to lead to significant environmental effects and, therefore, would require

to be scoped in to the assessment in the ES. Therefore, it is proposed that the topic of MA&D can be scoped out of the EIA.

12.2 Study Area

- 12.2.1 The Study Area for the assessment of MA&D is not defined within regulatory guidance or any standardised methodology. Therefore, for the purposes of this EIA Scoping Report, the MA&D Study Area has been identified through the use of professional judgement and with regard to the study areas used for relevant topic assessments.
- 12.2.2 A maximum Study Area of 5km from the EIA Scoping Boundary¹ for the Proposed Scheme has nominally been applied to establish baseline conditions and to evaluate the potential for likely significant effects. This distance has been used because it is likely to capture all relevant risks, hazards and receptors relevant to a MA&D assessment. However, where hazard pathways between receptor and impact are clearly more constrained, focus has been drawn on a more appropriate area and referenced appropriately.

12.3 Relevant Legislation, Planning Policy and Guidance

- 12.3.1 Legislation, planning policy and guidance relating to MA&Ds is outlined below.

Legislation

- 12.3.2 The applicable legalisation for the Proposed Scheme is outlined below. The legislation provided below sets out the regulatory framework for the prevention and control of MA&D. The EIA will take these controls into account in order to determine whether there is potential for likely significant environmental effects, having regard to the nature, scale and location of the Proposed Scheme.
- a. Civil Contingencies Act 2004 (Ref 12.1);
 - b. The Building Regulations 2010 (Ref 12.2);
 - c. The Construction Design and Management (CDM) Regulations 2015 (Ref 12.3);
 - d. The Control of Substances Hazardous to Health (COSHH) Regulations 2002 (Ref 12.4);
 - e. Environmental Permitting (England and Wales) Regulations 2016 (Ref 12.5);
 - f. Health and Safety at Work etc. Act 1974 (Ref 12.6);

¹ All references to 'EIA Scoping Boundary' correspond to the area shown in **Volume 2, Figure 1-1**.

- g. Lifting Operations and Lifting Equipment Regulations 1998 (LOLER) (Ref 12.7);
 - h. The Pressure Systems Safety Regulations 2000 (Ref 12.8);
 - i. The Regulatory Reform (Fire Safety) Order 2005 (Ref 12.9);
 - j. The Workplace (Health, Safety and Welfare) Regulations 1992 (Ref 12.10);
 - k. The Control Of Major Accident Hazards (COMAH) Regulations 2015 (Ref 12.11); and
 - l. The Planning (Hazardous Substances) Regulations 2015 (Ref 12.12).
- 12.3.3 Any assessment that may subsequently be undertaken in respect of MA&D or measures considered necessary to mitigate MA&D effects would neither seek to duplicate, amend or form a substitute for any of the above listed legislation. Consideration of MA&D in this EIA Scoping Report and any subsequent assessment assumes that all legislative obligations are met in full.

National Planning Policy

Overarching National Policy Statement for Energy (NPS EN-1)

- 12.3.4 The relevant policies from the Overarching National Policy Statement for Energy (NPS EN-1) (Ref 12.13) for the MA&D assessment are summarised within **Table 12-2**. These policies have informed the scope of the assessment, identification of sensitive receptors and mitigation requirements.

Table 12-2: National Policy Statement – MA&D

National Policy	Summary of Requirements	Relevance to the Assessment
Overarching National Policy Statement for Energy (NPS EN-1) (Ref 12.13)	The relevant paragraphs within NPS EN-1 include the below: • Paragraph 4.13.3 with regards to energy infrastructure projects that are subject to COMAH Regulations 2015, and • Paragraph 4.13.5 in relation to consulting with the Health and Safety Executive (HSE) on matters relating to safety.	• The Proposed Scheme is not subject to the COMAH Regulations, as it will not require the storage and use of hazardous substances of the quantities defined in the COMAH Regulations. • Initial consultation with HSE on safety matters is being undertaken through consultation on the EIA Scoping Report.

National Planning Policy Framework

- 12.3.5 The National Planning Policy Framework (NPPF) (Ref 12.14) does not contain provisions specific to MA&D within the context of the Proposed Scheme. However, paragraph 46 states that “*Local planning authorities should consult the appropriate bodies when considering applications for the siting of, or changes to, major hazard sites, installations or pipelines, or for development around them.*” The MA&D assessment considers the locations of existing major hazard sites, installations and pipelines as part of the baseline.
- 12.3.6 In addition, NPPF paragraph 102 states that planning policies and decisions should promote public safety, anticipating and addressing malicious threats and other hazards (whether natural or man-made). Developments should be informed by the most up-to-date information available from the police and other agencies about the nature of potential threats and their implications. This includes appropriate and proportionate steps that can be taken to reduce vulnerability, increase resilience and ensure public safety and security. The scope of the MA&D assessment considers threats to safety and security, and other manmade and natural hazards. The assessment is informed by the relevant Local Resilience Forum’s Risk Registers, which set out risks relevant to the local area. Safety and security considerations are included within the scope of the MA&D assessment.

Draft National Planning Policy Framework

- 12.3.7 The Draft National Planning Policy Framework for Consultation (Ref 12.15) states under section P5: Maintain public safety and security that “*Development proposals should anticipate and address possible malicious threats and other hazards (whether natural or man-made)*” The Draft NPPF outlines that these threats and hazards should be addressed in relation to:
- a. occupiers and users;
 - b. uses that could pose a potential hazard to the surrounding area;
 - c. consultation zones around major hazard sites; and
 - d. locations where large numbers of people may be expected to congregate.
- 12.3.8 The MA&D assessment considers possible malicious threats and natural/man-made hazards, and address how these would be managed at the Proposed Scheme. **Volume 3, Appendix 12-1: Scoping of Major Accidents and Disasters Risks** presents the assessment, and explores how the threats and hazards have been addressed in relation to the above factors.

Local and Neighbourhood Planning Policy

- 12.3.9 The Local and Neighbourhood Plan documents referred to in **Volume 1, Chapter 4: Legislative and Planning Policy Context** of this EIA Scoping Report were reviewed, however none of the documents provide any commentary specific to MA&D.
- 12.3.10 As the MA&D assessment is informed by information that is presented in other chapters within this EIA Scoping Report, the policies that are mentioned in **Volume 1, Chapter 7: Climate, Chapter 8: Ecology, Chapter 9: Ground Conditions, Chapter 10: Historic Environment, Chapter 13: Marine Environment, Chapter 16: Socio-Economics, Chapter 18: Transport, and Chapter 19: Water Environment and Flood Risk** apply.

Relevant Guidance

- 12.3.11 There is no specific guidance available which sets out the approach for undertaking a MA&D assessment within EIA, and therefore the assessment has been developed according to EIA best practice, ensuring consistency with the relevant guidance listed below.
- 12.3.12 Guidance relevant to the MA&D assessment includes:
- a. European Commission's 2017 Guidance on EIA (Ref 12.16);
 - b. International Standards Organization's (ISO) ISO 31000:2018 Risk Management – Guidelines (Ref 12.17);
 - c. Institute of Sustainability and Environmental Professionals (ISEP)² guidance 'MA&D in EIA: A Primer' (the 'ISEP Primer') (Ref 12.18); and
 - d. Cabinet Office's Emergency Preparedness guidance (the 'Emergency Preparedness guidance') (Ref 12.19).
- 12.3.13 The assessment presented in this chapter and within **Volume 3, Appendix 12-1: Scoping of Major Accidents and Disasters Risks** has been developed in accordance with the principles of the staged assessment identified in the ISEP Primer and utilises the risk assessment framework set out within the Emergency Preparedness guidance to identify potentially significant effects.
- 12.3.14 The ISO 31000:2018 Risk Management – Guidelines (Ref 12.17) identifies a number of principles that must be satisfied for risk management. The ISO Guidelines also state that when assessing risks, a number of factors including likelihood, timeframe, nature of causes and level at which a risk becomes

² Formerly The Institute of Environmental Management and Assessment's (IEMA)

acceptable would need to be considered. These criteria have been used to inform the assessment of MA&D.

12.3.15 The European Commission's 2017 Guidance on EIA (Ref 12.15) establishes that MA&D must be assessed using a risk-based and vulnerability focused approach. This approach has been followed in **Volume 3, Appendix 12-1: Scoping of Major Accidents and Disasters Risks**.

12.3.16 The National Risk Register (Ref 12.20) and London Resilience Forum Risk Register (Ref 12.20) have been used to identify MA&D hazards relevant to London and identify potential MA&D risks.

12.4 Baseline Conditions and Future Baseline

Context

12.4.1 Baseline in the context of MA&D includes identifying sensitive environmental receptors, which may be impacted in the event of a MA&D, as well as the identification of relevant hazards and threats based on the location of the Proposed Scheme.

12.4.2 To avoid duplication, baseline information referred to within this chapter has also been sourced from other relevant topic assessments presented within EIA Scoping Report (**Volume 1, Chapter 7: Climate, Chapter 8: Ecology, Chapter 9: Ground Conditions, Chapter 10: Historic Environment, Chapter 13: Marine Environment, Chapter 16: Socio-Economics, Chapter 18: Transport, and Chapter 19: Water Environment and Flood Risk**).

12.4.3 In order to identify potential MA&D hazards and threats relevant to the location of the Proposed Scheme, the following data sources have been reviewed:

- a. London Risk Register (Ref 12.21);
- b. European Commission's Major Accident Reporting System (Ref 12.22);
- c. Cabinet Office National Risk Register of Civil Emergencies (Ref 12.20);
- d. COMAH data search (Ref 12.23);
- e. Zetica unexploded ordnance (UXO) Risk Maps (Ref 12.24); and
- f. Environment Agency's Flood Map for planning (Ref 12.25).

12.4.4 The below existing hazards and threats have been identified as having the potential to be relevant to the Proposed Scheme:

- a. droughts;
- b. heatwaves;

- c. low temperatures and heavy snow (extreme cold weather resulting in snow and ice);
- d. storms;
- e. earthquakes;
- f. wildfires;
- g. flooding from rivers, surface water and groundwater;
- h. an incident at a neighbouring facility (including COMAH Sites);
- i. fire/explosion;
- e. general mains network outage causing the Proposed Scheme to lose power;
- j. ground or structural collapse;
- f. major accidents caused by malicious acts/vandalism against the Proposed Scheme or public disorder/industrial action; and
- k. outbreak of disease, including animal health-notifiable disease, emerging infectious disease and pandemic influenza.

12.4.5 Additionally, the Proposed Scheme may generate the following hazards within the context of the baseline environment:

- a. full or partial obstruction of access for emergency services;
- b. impairment, interruption or severance of existing utilities;
- c. structural damage to buildings/existing infrastructure/neighbouring facilities as a result of the construction of the Proposed Scheme;
- d. pipeline collapse/burst;
- e. flooding as a result of the Proposed Scheme;
- f. pollution incidents;
- g. railway incident; and
- h. road traffic accident on the wider traffic network.

12.4.6 Further information on potential source-receptor pathways associated with the above hazards is set out within **Volume 3, Appendix 12-1: Scoping of Major Accident and Disasters Risks**. A summary of the existing industrial sites that may give rise to some of these hazards and receptors which may be impacted in the event of a MA&D (e.g. existing infrastructure, human receptors and environmental receptors) is provided below.

12.4.7 For the topic of MA&D, the baseline has been established across the Proposed Scheme as a whole, rather than examining individual parts of the

Proposed Scheme. Any measurements provided have been taken based on the shortest distance (i.e. as the crow flies) between the closest respective points of the EIA Scoping Boundary and the feature described.

Existing Baseline

Existing Infrastructure and Industrial Sites

12.4.8 There are a number of existing industrial sites and key infrastructure facilities located within 5km of the EIA Scoping Boundary, including but not limited to:

- a. The Riverside Campus, currently accommodating two energy from waste (EfW) facilities and associated infrastructure;
- b. The Thames Barrier;
- c. Greenwich Power Station;
- d. Southwark Integrated Waste Management Facility; and
- e. Beckton Sewage Treatment Works.

12.4.9 The only airport located within 5km of the EIA Scoping Boundary is London City Airport, which is located approximately 1km north. In addition, there are a number of helipads within the Study Area, including the London Heliport which is located approximately 3km south-west.

12.4.10 The Proposed Scheme will cross, or pass along, a number of major roads, these include, but are not limited to:

- a. A13;
- b. A2016;
- c. A2;
- d. A3;
- e. A40;
- f. A5; and
- g. A4.

12.4.11 Further details on interactions with main roads in proximity to the Proposed Scheme are detailed within **Volume 1, Chapter 18: Transport**.

12.4.12 Additionally, there are a large number of railway stations in close proximity to the EIA Scoping Boundary, including South Kensington Underground station, and Liverpool Street Station. Further details on railway stations in proximity to the Proposed Scheme are provided within **Volume 1, Chapter 18: Transport**.

12.4.13 The Proposed Scheme crosses the following London Underground, Overground and railway lines:

- a. Bakerloo line;
- b. Central line;
- c. Circle line;
- d. Jubilee line;
- e. Northern line;
- f. Piccadilly line;
- g. Victoria line;
- h. Waterloo and City line;
- i. Windrush line;
- j. Network Rail railway lines leading up to London Bridge, Waterloo and Victoria stations.

12.4.14 Due to the location of the EIA Scoping Boundary, there are a number of man-made features and existing hazard sources that have been identified that lie in proximity to the Proposed Scheme. A number of COMAH Sites (Ref 12.26) have been identified within 5km of the EIA Scoping Boundary, these include:

- a. Crossness Pumping Station, Lower Tier COMAH Site, located adjacent to the EIA Scoping Boundary;
- b. Stolthaven Dagenham Limited, Upper Tier COMAH Site, located approximately 375m south-west of the EIA Scoping Boundary;
- c. Brenntag UK Limited, Lower Tier COMAH Site, located approximately 400m north-west of the EIA Scoping Boundary;
- d. Flogas Britain Limited, Upper Tier COMAH Site, located approximately 1km east of the EIA Scoping Boundary;
- e. Erith Oil Works, Lower Tier COMAH Site, located approximately 1.1 Beckton Sewage Treatment Works, Lower Tier COMAH Site, located approximately 1.75km north-west of the EIA Scoping Boundary; and
- f. Riverside Sewage Treatment Works, Lower Tier COMAH Site, located approximately 2km north-east of the EIA Scoping Boundary.

12.4.15 Two Hazardous Substances Consent applications have been identified directly east of the EIA Scoping Boundary. These relate to the increased

storage of Liquefied Natural Gas (Refs: 22/01006/HAZ³ and 23/02070/HAZ⁴) at the Asda Erith CDC. While not classified as COMAH sites, they have been considered within the MA&D assessment.

Residential and Commercial Receptors

- 12.4.16 The Proposed Scheme passes through ten boroughs including large parts of central London. The Proposed Scheme is, therefore, surrounded by built up areas including residential receptors throughout. There are a large number of business premises in close proximity to the EIA Scoping Boundary including large industrial estates, business parks and shopping centres. There are also many offices in close proximity to the EIA Scoping Boundary, this is particularly the case for Transmission Branch – City of London. Further details of the residential and commercial properties surrounding the Proposed Scheme are set out within **Volume 1, Chapter 16: Socio-economics**.

Natural Features and Protected Environmental Sites

- 12.4.17 Information on natural features and protected areas in the surrounding environment of the Proposed Scheme are provided in detail within **Volume 1, Chapter 8: Ecology** and **Volume 1, Chapter 13: Marine Environment**. This section provides a brief outline of the natural features and protected environmental sites. There are no internationally designated sites located within 5km of the Proposed Scheme. There are a large number of nationally designated sites within 5km of the EIA Scoping Boundary including five Sites of Special Scientific Interest (SSSI) and 34 Local Nature Reserves (LNR). There are also a number of non-statutory designated sites located in close proximity to the EIA Scoping Boundary, these are identified within **Volume 1, Chapter 8: Ecology**.
- 12.4.18 As outlined in **Volume 1, Chapter 19: Water Environment and Flood Risk**, the EIA Scoping Boundary includes areas located within Flood Zone 1 (Low probability, land having a less than 0.1% annual probability of river or sea flooding), Flood Zone 2 (Medium probability, land having between a 1% and 0.1% annual probability of river flooding), and Flood Zone 3 (High probability, land having a 1% or greater annual probability of river flooding).
- 12.4.19 Zetica online UXO Risk Maps (Ref 12.24) shows that the EIA Scoping Boundary is primarily located within an area of High UXO risk, with a number

³ Application available here: [22/01006/HAZ | Hazardous Substances Consent Application for the Storage of Liquefied Natural Gas and Associated Works. | ASDA CDC Norman Road Belvedere Kent DA17 6JY](#)

⁴ Application available here: [23/02070/HAZ | Hazardous Substances Consent Application for the increased storage of Liquefied Natural Gas. | ASDA CDC Norman Road Belvedere Kent DA17 6JY](#)

of instances of UXO finds within close proximity to the EIA Scoping Boundary. UXO risk is considered within **Volume 1, Chapter 9: Ground Conditions**.

Built Heritage Receptors

12.4.20 Information on heritage assets in the surrounding environment of the Proposed Scheme are provided in detail within **Volume 1, Chapter 10: Historic Environment**.

12.4.21 The following designated heritage assets have been identified within 100m of the Proposed Scheme:

- a. One UNESCO World Heritage Site, Maritime Greenwich, within the Scoping Boundary;
- b. 26 Scheduled Monuments, of which 12 are within the Scoping Boundary,
- c. Four Grade I Registered Park and Gardens, of which one is within the Scoping Boundary,
- d. Two Grade II* Registered Park and Gardens, of which one is within the Scoping Boundary,
- e. 18 Grade II Registered Park and Gardens, of which 16 are within the Scoping Boundary,
- f. 83 Conservation Areas of which 61 are located within the Scoping Boundary.
- g. 71 Grade I Listed Buildings of which 6 are within the Scoping Boundary.
- h. 170 Grade II* Listed Buildings of which 16 are within the Scoping Boundary.
- i. 1216 Grade II Listed Buildings of which 116 are within the Scoping Boundary.

12.4.22 Within the 100m of the EIA Scoping Boundary, there are a total of 6751 non-designated heritage assets, comprising 6448 non-designated archaeological assets and 303 non-designated historic buildings and structures. Of these non-designated heritage assets 1202 are recorded within the EIA Scoping Boundary.

Future Baseline

12.4.23 Additional man-made features and hazard sources could be constructed in the Study Area in the future. The list of cumulative schemes will be reviewed as part of the EIA process, to identify any potential new major accident sources within the Study Area of the Proposed Scheme.

12.4.24 Separately from the Proposed Scheme, Cory is developing a carbon capture and storage (CCS) project at Riverside Campus under the Cory Decarbonisation Project Order 2025 (SI2025/1227) (as corrected) (the 'Cory Decarbonisation Project'). The Cory Decarbonisation Project includes a liquified carbon dioxide (LCO₂) Buffer Storage Area that will store the LCO₂ prior to onwards vessel export via the New Jetty. It is anticipated that the Cory Decarbonisation Project will form part of the future baseline.

12.4.25 In addition, the future baseline for the MA&D assessment will consider natural population growth and how predicted climate change might affect existing conditions at the Proposed Scheme. The future baseline in respect to climate is discussed within **Volume 1, Chapter 7: Climate**.

12.5 Potential for Likely Significant Effects

12.5.1 The ISEP Primer (Ref 12.18) states that the MA&D hazard or threat can be scoped out of the EIA, if the assessment can demonstrate:

- a. *"...there is no source-pathway-receptor linkage of a hazard that could trigger a major accident and/or disaster or potential for the scheme to lead to a significant environmental effect; or*
- b. *all possible major accidents and/or disasters are adequately covered elsewhere in the assessment or covered by existing design measures or compliance with legislation and best practice."*

12.5.2 However, if the above criteria cannot be demonstrated then the topic must be scoped in.

12.5.3 In order to determine whether the above requirements are met, a review of MA&D baseline risks has been undertaken and is included within **Volume 3, Appendix 12-1: Scoping of Major Accidents and Disasters Risks**. The review of MA&D baseline risks was undertaken in line with guidance set out in the ISEP Primer and considers the current risk profile identified within the London Risk Register and consideration of specific risks relating to the Proposed Scheme. Details are provided on the potential source-pathway-receptor linkage as well as details on the reasonable 'worst-case' consequence if the risk event did occur. It is then considered, whether with mitigation in place, the risk could lead to a major accident and/or disaster.

12.5.4 Following the review of the MA&D baseline risks and the risks that could be introduced by the Proposed Scheme (**Volume 3, Appendix 12-1: Scoping of Major Accidents and Disasters Risks**), it is concluded that no potential risk events could occur that are not already addressed by other EIA topics or DCO Application documents or covered by compliance with existing legislation and design standards.

- 12.5.5 All potential risk events identified in **Volume 3, Appendix 12-1: Scoping of Major Accidents and Disasters Risks** are considered to be acceptable or reduced to 'As Low as Reasonably Practicable' (ALARP) with the implementation of mitigation and/or are already assessed as part of other EIA topic chapters and, therefore, can be scoped out of the MA&D assessment.
- 12.5.6 An updated version of **Volume 3, Appendix 12-1: Scoping of Major Accidents and Disasters Risks** will be provided within the ES to signpost the relevant other topic chapters and supporting assessment which consider risk events scoped out of the MA&D assessment as well as signpost to mitigation that has been included.
- 12.5.7 A summary of the key mitigation measures relied upon for scoping out further assessment of MA&D risks is provided in the section below.

12.6 Design, Mitigation and Enhancement Measures

- 12.6.1 The ISEP Primer (Ref 12.18) specifies that a MA&D assessment should identify the embedded mitigation and response strategies required to demonstrate management of risks to be ALARP. The approach to demonstrate this is set out below and draws on:
- a. measures that are already in place to control baseline risks (i.e. existing control measures);
 - b. measures secured through compliance with existing legislation;
 - c. measures that have been identified through the design of the Proposed Scheme; and
 - d. measures to control risks through management measures associated with the Proposed Scheme.
- 12.6.2 A summary of the proposed mitigation measures is provided below, with further details of the relevant hazards and mitigation measures presented within **Volume 3, Appendix 12-1: Scoping of MADs Risks**. With these measures in place, the MA&D risks relevant to the Proposed Scheme would be mitigated to ALARP and, consequently, would not be significant.

Existing Control Measures

- 12.6.3 Under the Civil Contingencies Act (Ref 12.1), all local authorities are required to ensure that hazards and threats that could result in serious damage are identified, and controlled or mitigated, as far as reasonably practicable. The London Risk Register (Ref 12.20) details the response should an emergency arise across the London boroughs that the Proposed Scheme is located within. These response plans form part of the mitigation in place to respond to MA&D which may arise in the baseline environment.

Compliance with Existing Legislation

- 12.6.4 The design, construction, operation (and decommissioning, if required) arrangements of the Proposed Scheme will be required to comply with all relevant health and safety and environmental legislation. These include (but are not limited to): Building Regulations 2010 (Ref 12.2); Construction Design and Management (CDM) Regulations 2015 (Ref 12.3); Health and Safety at Work etc. Act 1974 (Ref 12.6); The Regulatory Reform (Fire Safety) Order 2005 (Ref 12.9); The Management of Health and Safety at Work Regulations 1999 (Ref 12.27), Pressure Systems Safety Regulations 2000 (Ref 12.8), The Energy Act 2023 (Ref 12.27), and The Personal Protective Equipment at Work Regulations 1992 (Ref 12.29).

Measures Embedded within the Design of the Proposed Scheme

- 12.6.5 The Draft Development Consent Order (DCO) of the Proposed Scheme would include Protective Provisions for the protection of the assets of statutory undertakers whose infrastructure the Proposed Scheme crosses or is in close proximity to, such as Transport for London's London underground lines, Network Rail's assets, electricity, telecommunications and water networks. These provisions would set the basis of the design parameters to be maintained by the Proposed Scheme to ensure continued safe operation of these assets.
- 12.6.6 As discussed within **Volume 1, Chapter 9: Ground Conditions**, likely significant effects with regards to ground stability will be considered within the ground conditions assessment of the ES, albeit the specific details will be subject to detailed geotechnical desk studies, a Ground Investigation Report and a Geotechnical Design Report to be prepared at detailed design stage.
- 12.6.7 Likely significant effects with regards to flood risk and drainage would be considered as part of the Flood Risk Assessment and any site drainage documentation submitted with the DCO Application. Further details are provided within **Volume 1, Chapter 19: Water Environment and Flood Risk**.

Management Measures

- 12.6.8 Construction activities across the Proposed Scheme would be managed in compliance with standard good practice measures to be set out within the Framework Construction Environmental Management Plan (CEMP) to be submitted with the DCO Application, which will include details with regards to pollution prevention and incident response. Construction traffic management measures will be set out within a Framework Construction Logistics Plan (CLP).

12.6.9 Furthermore, for the proposed infrastructure at Riverside Campus, good industry practice safety, security and emergency arrangements would be implemented at the site.

12.7 Assumptions, Limitations and Uncertainties

12.7.1 The following limitations and assumptions have been identified:

- a. no modelling or detailed calculations have been undertaken but a qualitative assessment approach has been adopted for MA&D;
- b. where information is not available (such as historical evidence on the likelihood and the environmental consequence of an event), professional judgement has been used to reach a conclusion as part of the assessment;
- c. each risk event has been considered on an individual basis; and
- d. the baseline assessment has been based on a desktop study, with no surveys completed to date.

12.8 Summary of Elements Scoped In or Scoped Out

12.8.1 **Volume 3, Appendix 12-1: Scoping of Major Accidents and Disasters Risks** provides an overview of the scoping of relevant hazards and threats for the Proposed Scheme. As such, the full list of risk events has not been repeated here. Following the MA&D assessment, it has been concluded that no risk events are required to be scoped into the assessment. Therefore, it is proposed that the topic of MA&D can be scoped out of the EIA.

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Environmental Impact Assessment Scoping Report

Volume 1: Main Report

Chapter 13: Marine Environment

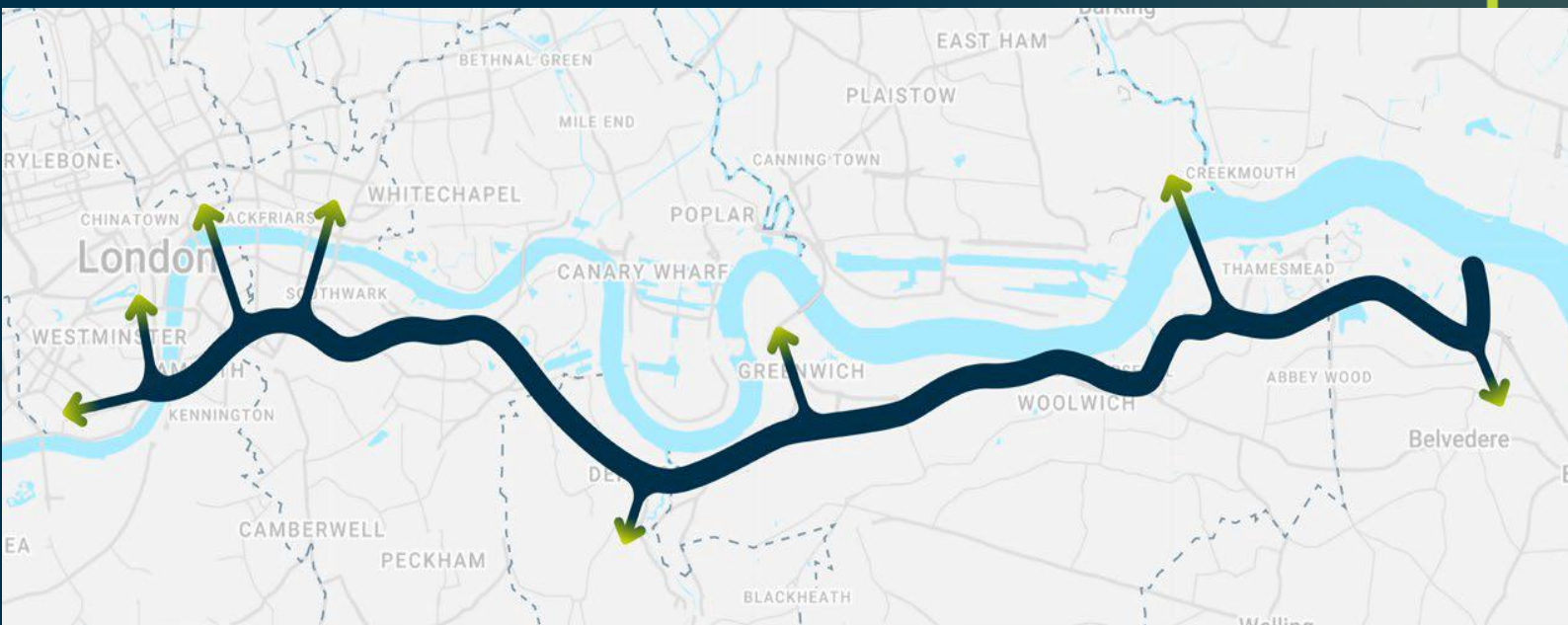


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13. Marine Environment

13.1 Introduction

- 13.1.1 This chapter identifies the potential for likely significant effects of the Proposed Scheme on the marine environment. Based on the construction methodology (refer **Volume 1, Chapter 2: The Proposed Scheme** for further information) for the Proposed Scheme, namely that all river crossings will be undertaken underground at depth below the river bed, it is considered that there is no potential for likely significant effects to the marine environment of the River Thames, or any tidal tributaries. Accordingly, all marine environment topics are proposed to be scoped out of the Environmental Statement (ES).
- 13.1.2 A proportionate, high-level scoping assessment of the marine environment receptors has been carried out with findings presented in **Table 13-3**. This confirms the absence of any impact pathways to marine receptors.
- 13.1.3 For purposes of clarity, the term ‘marine receptors’ refers to all receptors that occur within marine (saline) and estuarine (and other transitional, i.e., brackish) environments below Mean High Water Spring (MHWS). This includes sections of rivers that are tidal and therefore are characterised by the presence of habitats and species that depend on saline or brackish water and tidal cycles (intertidal habitats). Marine receptors also refer to sediments and geology that interact with marine and transitional waters and users of the marine environment e.g. marine fisheries and commercial and leisure vessels that use the tidal section of the River Thames. Comparable freshwater receptors are covered in **Volume 1, Chapter: 8 Ecology** and **Volume 1, Chapter 19: Water Environment and Flood Risk**.

13.2 Study Area

- 13.2.1 Up to nine crossings of the River Thames are located within the EIA Scoping Boundary¹. All crossings are expected to comprise subterranean tunnel crossings to house the London Strategic Heat Main (London SHM, or the ‘Proposed Scheme’), located at a minimum depth of 5m beneath the bed of the River Thames and tidal tributaries. The indicative route of the Proposed Scheme, including the proposed River Thames crossing locations, are shown on **Volume 2, Figure 1-1**.
- 13.2.2 There are no planned intakes from or discharges to the River Thames and limited potential for any direct interactions with the bed of the river, water column or riverbanks. As described in Section 13.6, overland flow with the

¹ All references to ‘EIA Scoping Boundary’, correspond to the area shown in **Volume 2, Figure 1-1**.

potential to pollute controlled waters due to land-based activities related to the Proposed Scheme is assumed to be appropriately controlled at source. As no plausible impact pathways linking the Proposed Scheme to marine receptors have been identified, a Zone of Influence (Zol) has not been defined.

- 13.2.3 For scoping purposes, the Study Area for marine environmental considerations is defined as the tidal extent of the River Thames² up to Mean High Water Springs (MHWS), within the EIA Scoping Boundary. Within this extent, the Study Area focuses on the vicinity of the proposed River Thames crossing locations, where there is potential for interaction with the tidal river environment. The Study Area also encompasses tidal sections of several tributaries (e.g. River Lea and Deptford Creek). Given that only a small part of the overall EIA Scoping Boundary comprises the marine environment, the marine Study Area does not encompass the entire EIA Scoping Boundary (or extend beyond the EIA Scoping Boundary). As noted above, other freshwater river crossings (i.e. those that are non-tidal nor marine) are considered in **Volume 1, Chapter 19: Water Environment and Flood Risk** of this Scoping Report.

13.3 Relevant Legislation, Planning Policy and Guidance

- 13.3.1 Legislation, planning policy and guidance relating to the marine environment assessment is outlined below. For further information, **Volume 1, Chapter 4: Legislative and Planning Policy Context** provides an overview of the legislation and planning policy context relevant to the Proposed Scheme as a whole.

Legislation

- 13.3.2 The applicable legislation includes:

- a. The Planning Act 2008 provides the consenting regime for developments for which development consent is required, such as the Proposed Scheme. In particular it is noted that section 104(2) (aa) provides that applications for development consent must be decided having regard to any appropriate marine policy documents. As the Proposed Scheme involves crossing under the marine area, as defined by the Marine and Coastal Access Act 2009, marine policy documents do need to be considered, as set out below.
- b. The Marine and Coastal Access Act 2009 provides the legislative framework for marine planning, licensing and management in UK waters. It established the Marine Management Organisation (MMO), enables designation and management of the UK Exclusive Economic

² The tidal section of the River Thames extends from Teddington Lock (Kingston upon Thames) which is located to the west of the Proposed Scheme, to the North Sea, which is to the east of the Proposed Scheme.

Zone (EEZ), reformed management of migratory and freshwater fisheries, and introduced statutory public access rights along the English and Welsh coast (Ref 13.1).

- c. The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017, which transposed the Water Framework Directive (2000/60EC) into English and Welsh law. The Regulations provide a legal framework for managing water quality, requiring the Environment Agency to prevent deterioration of water bodies and achieve "good" status for rivers, lakes, and groundwater (Ref 13.2).
- d. The Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations') are the primary UK legislation transposing the EU Habitats Directive (92/43/EEC), protecting critical habitats (Special Areas of Conservation (SAC)/Special Protection Areas (SPA)) and European Protected Species (EPS) (Ref 13.3). They require Habitats Regulations Assessments (HRA) to be undertaken for plans or projects affecting these sites.
- e. The Natural Environment and Rural Communities Act 2006 (NERC Act) provides a framework for biodiversity conservation in England and places a duty on public authorities to have regard to the purpose of conserving biodiversity. Natural England was established under this act as the Government's statutory adviser on the natural environment in England. Section 41 of the Act identifies habitats and species of principal importance for the conservation of biodiversity in England; these are referred to as priority habitats and species and are a material consideration in environmental assessment and decision-making ((Ref 13.4).

National Planning Policy

Overarching National Policy Statement for Energy (NPS EN-1)

- 13.3.3 The relevant national policies from NPS EN-1 for the marine environment are summarised within Table **13-1**.

Table 13-1: Overarching National Policy Statement for Energy – Marine Environment

National Policy	Summary of Requirements	Relevance to the Assessment
Overarching National Policy Statement (NPS) for Energy (EN-1) 2025 (Ref 13.5)	Paragraphs 5.4.9 to 5.4.12 in relation to Marine Conservation Zones (MCZ) and Marine Protected Areas (MPA). Paragraph 1.1.3 in relation to UK Marine Policy Statement (see below) and applicable Marine Plans.	Requirement to consider implications of the Proposed Scheme on MPA. Further information on Marine protected sites is provided in Section 13.4 of this chapter.

National Planning Policy Framework (NPPF)

13.3.4 The following paragraphs and chapters from the NPPF (December 2024 (Ref 13.6)) are considered relevant to the assessment of potential effects presented in this chapter:

- a. Paragraph 25 in relation to collaboration with relevant bodies such as the MMO.
- b. Paragraph 226 in relation to maintaining supply of aggregates (inc. marine dredged).
- c. Chapter 14 in relation to managing climate change, flood risk and coastal change.
- d. Chapter 15 in relation to conserving and enhancing the natural environment.
- e. Chapter 16 in relation to conserving and enhancing historic sites.

13.3.5 It should be noted that a draft NPPF was published for consultation in December 2025, however it is not expected that this draft will significantly alter the policy context or policy compliance of the Proposed Scheme in relation to the marine environment.

Marine Planning Policy

UK Marine Policy Statement (MPS) 2011 (Ref 13.7)

13.3.6 Provides the overall direction and principles for how the marine environment should be managed.

South-east Inshore Marine Plan

13.3.7 The study area is located within the South-east Inshore Marine Plan (Ref 13.8) area, prepared by the MMO under the Marine and Coastal Access Act 2009. The South-east Inshore Marine Plan forms part of the statutory marine planning framework and sets out policies to guide sustainable development within the marine area, including estuarine environments such as the tidal River Thames. The Plan includes policies requiring that development protects marine biodiversity, maintains water quality, safeguards seabed integrity, and considers cumulative effects, while ensuring compatibility with other marine users, including navigation and port operations.

Local Planning and Neighbourhood Policy

13.3.8 The local and neighbourhood planning policy listed in **Table 13-2** are considered relevant to the assessment of likely significant marine impacts presented in this chapter.

Table 13-2: List of Relevant Local and Neighbourhood Policy – Marine Environment

Local and Neighbourhood Policy	Summary of Requirements	Relevance to the Assessment
The London Plan 2021 (Ref 13.9)	Sets out a framework for how London will develop over the next 20-25 years and the Mayor of London's vision for Good Growth. Recognises the River Thames and waterways ("Blue Ribbon Network") as strategic infrastructure in Policies SI 12 Waterways – strategic role, and SI 15 Water transport. Requires planning to maximise environmental, transport and socio-economic benefits. Integrates land–water interface planning, including marine consideration.	Provides strategic spatial and environmental policy context. Establishes general support for expansion of heat networks across London. Directs borough energy masterplans to identify waste heat sources.
London Borough of Bexley Bexley Local Plan (2023) (Ref 13.10)	<i>Policy DP18, Waterfront development and development including, or close to, flood defences</i> sets a requirement for development to protect and enhance the integrity, quality and character of water spaces, including improving biodiversity, flood resilience and public access, while avoiding adverse impacts on water quality, ecology, navigation and the function of waterways. <i>Policy DP19, The River Thames and the Thames Policy Area</i> sets a requirement for development to enhance the Thames' relationship with surrounding areas, support sustainable water-based uses and access (including the Thames Path), and protect and enhance ecology, flood management and habitat connectivity, avoiding harm to the river's environmental value.	Sets out policies for environmental protection, biodiversity and sustainable development.

Local and Neighbourhood Policy	Summary of Requirements	Relevance to the Assessment
Royal Borough of Greenwich The Royal Greenwich Local Plan: Core Strategy with Detailed Policies (2014) (Ref 13.11)	<i>Policy DH(k) Thames Policy Area</i> sets a requirement for development to enhance connectivity with the River Thames, support sustainable transport including river-based modes, and maintain high-quality design and strategic views reflecting the river's character, while also protecting and enhancing its ecological and conservation value, restricting encroachment to water-dependent uses, and safeguarding flood defences to minimise flood risk	Provides policies relating to the water environment and environmental protection.
Royal Borough of Greenwich Draft Local Plan (2025) (Ref 13.12)	<i>Policy DH8 Thames Policy Area</i>	Protecting and enhancing the Thames as a strategic asset (townscape/visual character, riverside use, access and connectivity, heritage and setting)
London Borough of Lewisham Lewisham Local Plan 2020-2040 (2025) (Ref 13.13)	<i>Policy SD9 Lewisham's waterways</i>	
London Borough of Southwark The Southwark Plan (2022) (Ref 13.14)	<i>Strategic Policy SP6, Climate Emergency</i> sets a requirement for development to reduce carbon emissions, prioritise sustainable travel, and enhance green and blue infrastructure to improve biodiversity, flood resilience and environmental quality. <i>Policy P25 on River Thames</i> sets a requirement for development to protect and enhance the River Thames' function, access and character,	Provides policies relating to the natural environment, water management, climate change and protection of the Thames frontage.

Local and Neighbourhood Policy	Summary of Requirements	Relevance to the Assessment
	including maintaining flood defences and avoiding adverse impacts on navigation, biodiversity and heritage.	
London Borough of Lambeth Lambeth Local Plan 2020 - 2035 (2021) (Ref 13.15)	<i>Policy Q24 (River Thames)</i> sets a requirement for development proposals to protect and enhance the Thames' environmental, heritage and landscape character, including avoiding adverse impacts on the river environment, navigation and setting, while restricting development within the river to water-dependent uses only.	Sets out policies relating to environmental protection, green infrastructure and climate resilience.
South Bank & Waterloo Neighbourhood Plan 2017-2032 (Ref 13.16)	<i>No policies from this Neighbourhood Plan are relevant to the assessment in this Scoping Chapter</i>	N/A
Kennington Oval and Vauxhall Neighbourhood Plan 2035 (Ref 13.17)	<i>No policies from this Neighbourhood Plan are relevant to the assessment in this Scoping Chapter</i>	N/A
London Borough of Barking and Dagenham Local Plan 2037 (Ref 13.18)	<i>Policy SP6, Green and blue infrastructure</i> , sets a requirement for development to protect and enhance green and blue infrastructure networks, deliver biodiversity net gain, improve access to open space and waterways, and strengthen ecological connectivity and environmental quality. <i>Policies DMNE 3, Nature conservation and biodiversity and DMNE4, Water environment:</i> set a requirement for development to avoid harm to designated ecological sites, achieve measurable biodiversity net gain, and protect and enhance the River Thames and wider water	Includes policies relating to green and blue infrastructure, climate change and the Thames riverside.

Local and Neighbourhood Policy	Summary of Requirements	Relevance to the Assessment
	environment, including improving access, safeguarding water quality and supporting flood resilience and river-based uses.	
London Borough of Tower Hamlets Tower Hamlets Local Plan 2031: Managing Growth and Sharing Benefit (2020) (Ref 13.19)	<i>Policy S. OWS2, Enhancing the network of water spaces</i> sets a requirement for development to protect the integrity of water spaces, enhance their ecological, biodiversity and water quality value, and improve access, recreation and transport use, while ensuring moorings and related activities do not adversely affect navigation, character, amenity or environmental conditions.	Includes policies addressing water spaces, biodiversity and climate resilience.
City of London City of London Local Plan (2015) (Ref 13.20)	<i>Core Strategic Policy CS9, Thames and the Riverside</i> sets a requirement for development to protect and enhance public access, biodiversity, and the character and economic function of the riverside while minimising flood risk. It requires development to safeguard the River Thames' functional uses (transport, navigation and recreation), restrict non-river-related development within or over the river, and avoid adverse impacts on navigation, river processes and the environment.	Includes policies relating to sustainability, river transport and environmental protection.
City Plan 2040 (draft - 2024) (Ref 13.21)	<i>Policy VT4: River Transport</i> <i>Strategic Policy S17 Thames Policy Area</i>	Includes policies relating to sustainability, river transport and environmental protection
The City of Westminster City Plan 2019 - 2040 (2026) (Ref 13.22)	The <i>Natural environment and River Thames</i> sections set a requirement for development to enhance the public realm and riverfront, support sustainable access and use of the Thames, and deliver measurable biodiversity net gain while avoiding, minimising and compensating impacts on ecological resources	Includes policies on environmental sustainability, biodiversity and the River Thames corridor.

Local and Neighbourhood Policy	Summary of Requirements	Relevance to the Assessment
Victoria Neighbourhood Plan 2025 - 2040 (Ref 13.23)	<i>No policies from this Neighbourhood Plan are relevant to the assessment in this Scoping Chapter</i>	N/A
Royal Borough of Kensington and Chelsea New Local Plan 2024 (Ref 13.24)	<i>Policy GB14: Green and Blue Infrastructure</i> <i>A. Development will be required to contribute to the greening of the borough, enhance habitat to increase biodiversity, and protect/enhance any nearby waterways.</i> <i>Blue Infrastructure</i> <i>L. Development proposals adjacent to the Blue Ribbon Network (River Thames, Chelsea Creek and the Grand Union Canal) must safeguard and take opportunities to improve public access, protect and enhance heritage and biodiversity value, as well as promote their use for education, tourism, leisure and recreation, health, wellbeing and transport for both passengers and freight.</i>	

Relevant Guidance

- 13.3.9 A range of relevant guidance documents inform the assessment of marine and water environment impacts.
- 13.3.10 The MMO, as the relevant marine regulator, provides materials on Marine Licensing and EIA; whilst guidance from professional institutions such as the Chartered Institute of Ecology and Environmental Management (CIEEM) provide the accepted methodology for Ecological Impact Assessment (Ref 13.25).
- 13.3.11 Guidance from the Environment Agency provides methodologies for Water Framework Directive compliance assessments, including assessment of likely significant effects on hydro morphology, water quality and biological receptors (Ref 13.26).
- 13.3.12 The UK Government provides a suite of planning policy guidance documents (Ref 13.27) designed to support the interpretation and application of planning policy, particularly the NPPF.
- 13.3.13 At a local guidance level, the Port of London Authority (PLA) is the statutory harbour authority for the tidal Thames and provides guidance relevant to river works to maintain their navigation and operational interests.

13.4 Baseline Conditions and Future Baseline

- 13.4.1 A desktop review of baseline conditions for this Scoping Report was undertaken using external data sources, with no field surveys or modelling required. Key reference material includes:
- a. Multi-Agency Geographic Information for the Countryside (MAGIC) website (Ref 13.28);
 - b. Joint Nature Conservation Committee (JNCC) MPA Mapper (Ref 13.29);
 - c. Environment Agency Catchment Explorer (Ref 13.30); and
 - d. Water Framework Directive assessment: estuarine and coastal waters [Clearing the Water for All] (Ref 13.26).
- 13.4.2 In London within the proximity of the Proposed Scheme, the River Thames is a strongly tidal, heavily modified urban estuarine system. It is characterised by high suspended solids and marked longitudinal gradients in salinity and water quality. The channel of the River Thames is confined by historic embankments and engineered river walls, resulting in limited intertidal habitat and mixed substrate bed influenced by tidal flows rather than fluvial discharge. Hydrodynamics are dominated by tidal flows that together with high levels of vessel traffic generate a turbid environment with high sediment transport.

- 13.4.3 Despite its urban setting, the tidal Thames supports a functionally diverse estuarine ecosystem typical of the brackish transition zone. Further detail is provided under subsequent headings.

Marine Water Quality

- 13.4.4 Impacts of the Proposed Scheme on the water environment and flood risk is covered in **Volume 1, Chapter 19: Water Environment and Flood Risk** of this Scoping Report.
- 13.4.5 The Proposed Scheme lies within the Thames Middle Water Body, which is a heavily modified urban river system influenced by tidal processes, historic engineering, and diffuse and point-source inputs associated with Greater London. The Thames Middle Water Body includes the tidal sections of a number of tributaries (e.g. River Lea and Deptford Creek) which for the purposes of this report are considered together.
- 13.4.6 Baseline water quality of the Thames Middle Water Body in the vicinity of the Proposed Scheme is characterised by elevated nutrient and contaminant pressures typical of a densely populated catchment, with ongoing management under the Water Framework Directive (Ref 13.2) to improve ecological and chemical status.
- 13.4.7 Within the EIA Scoping Boundary, the River Thames flows at surface level, while the Proposed Scheme is confined to deep sub-surface tunnels, with no direct interaction pathways with the water body.

Marine/estuarine sediments

- 13.4.8 Thames sediments in the vicinity of the Proposed Scheme are typically composed of fine-grained alluvial and estuarine deposits, predominantly silts and clays, laid down under tidally influenced, low-energy, depositional conditions (Ref 13.31). Sediment distribution and thickness vary spatially in response to natural processes such as tidal currents, river flows and re-suspension, as well as anthropogenic influences including navigation. These sediments reflect long-standing urban and navigational use and may locally contain residual organic matter or contaminants associated with historic activity (Ref 13.32).

Intertidal/Subtidal habitats and ecology

- 13.4.9 The Proposed Scheme lies within the Thames Middle Water Body, a heavily modified section of the tidal Thames, characterised by strong tidal influence, high turbidity and mobile sediments.

Intertidal Benthic Communities

- 13.4.10 Intertidal habitats within the EIA Scoping Boundary comprise predominantly narrow fringes of coarse sediment, sand and mud, constrained by engineered

riverbanks through Central London, with more extensive intertidal mudflat and fringing saltmarsh habitats present towards the eastern extent of the EIA Scoping Boundary. Intertidal mudflats and saltmarsh are UK Biodiversity Action Plan (UKBAP) priority habitats and are classified as Habitats of Principal Importance (HPI) under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (Ref 13.4). Equally, intertidal habitats are recognised under the OSPAR Convention and Habitats Regulations (Ref 13.3).

13.4.11 Intertidal habitats described above (paragraph 13.4.10) are narrow and fragmented due to river engineering and flood protection infrastructure. They support typical brackish invertebrate communities of polychaetes (or bristle worms) (such as ragworms *Nereis sp* and the spionidae *Streblospio shrubsolii*) and tubificid oligochaetes such as the marine worm *Limnodrilus hoffmeisteri* (Ref 13.33).

13.4.12 Intertidal benthic assemblages are dominated by:

- a. surface and sub-surface deposit feeders such as polychaete worms and oligochaetes;
- b. mobile scavengers and grazers, such as small crustaceans (crabs and shrimp); and
- c. biofilm and microbial communities as well as bivalves and other fouling organisms forming artificial reef-like assemblages on coarse outcrops and estuarine infrastructure.

13.4.13 Intertidal ecology includes both protected species such as the tentacled lagoon worm *A. romijni* observed downstream of the EIA Scoping Boundary (Ref 13.34) and invasive non-native species such as Chinese Mitten Crab (*Eriocheir sinensis*) and the Quagga mussel (*Dreissena bugensis*).

Subtidal Benthic Communities

13.4.14 Subtidal habitats comprise predominantly soft sediments (mud, sand and mixed substrates) within the tidal river channel, shaped by large tidal ranges (c.7m), strong currents and long-standing navigation. This habitat supports low-diversity benthic communities typical of the inner Thames estuary, dominated by opportunistic and pollution-tolerant taxa (Ref 13.33). The habitat remains functionally important as migration corridors and nursery areas for estuarine and diadromous fish (see paragraph 13.4.18), including species of conservation concern such as European eel.

13.4.15 The subtidal sediments described above (paragraph 13.4.14) support low-diversity benthic assemblages characteristic of brackish estuarine conditions subject to high turbidity, variable salinity and regular physical disturbance.

13.4.16 Benthic communities are generally dominated by tolerant infaunal and epifaunal functional groups, including:

- a. Deposit-feeding oligochaetes (e.g. *Tubifex tubifex*) and polychaetes (e.g., *Streblospio shrubsolii*);
- b. Opportunistic crustaceans (e.g., *Gammarus zaddachi*) and molluscs (eg. non-native *Potamopyrgus antipodarum*);
- c. Filter-feeding taxa associated with firmer substrate or artificial structures (e.g. Trembling Sea mat *Victorella sp* which is a UKBAP species of conservation concern).

13.4.17 Biomass and species richness are relatively low compared to less disturbed estuarine systems (Ref 13.33).

Fish and shellfish

13.4.18 The River Thames and Thames Estuary support a diverse and well-documented fish community, reflecting the transitional nature of the system between freshwater and marine environments. Environment Agency monitoring and long-term survey data indicate that in excess of 115 fish species have been recorded within the Thames Estuary, encompassing freshwater, estuarine and marine taxa (Ref 13.34).

13.4.19 For ecological characterisation purposes, the Thames Estuary is commonly divided into inner, middle and outer estuary zones, based on salinity regime and species composition. The EIA Scoping Boundary for the Proposed Scheme is located within the inner Thames Estuary, where fish communities are strongly influenced by tidal dynamics, turbidity and variable salinity conditions.

13.4.20 The Thames is a critical fish migratory corridor, notable protected species include: European smelt *Osmerus eperlanus*; Atlantic salmon *Salmo salar*; brown/sea trout *Salmo trutta*; twaite shad *Alosa fallax*; lamprey *sp* *Petromyzontidae*; and European eel *Anguilla anguilla*. Resident species in the tidal Thames include: common bream; dace; flounder; roach; goby; perch; and European sea bass (Ref 13.35).

13.4.21 Regularly recorded shellfish include: Common cockle; Whelk; Manila Clams; Shore crab; Chinese mitten crab; and Brown shrimp (Ref 13.36).

Other notable marine species

13.4.22 Marine mammals such as dolphin species, harbour porpoise (*Phocoena phocoena*) and seal species, along with the very rare whales, are occasionally sighted in the Thames and its tidal tributaries within Central London. All marine mammal species are classed as European Protected Species and subject to specific licencing regimes where disturbance is anticipated.

Marine protected sites

13.4.23 Designated sites have been considered if they include features relating to marine biodiversity, including marine habitats and species.

Internationally Designated Sites

13.4.24 In order of proximity to the Study Area, internationally designated sites, with functional hydrological links to the study area include:

- a. Thames Estuary and Marshes SPA/ Ramsar site (approximately 19.5 km east of the Study Area);
- b. Medway Estuary and Marshes SPA/Ramsar site (approximately 32.4 km southeast of the Study Area);
- c. Benfleet and Southend Marshes SPA/Ramsar site (approximately 29.2 km east of the Study Area);
- d. Outer Thames Estuary SPA (approximately 43 km east of the Study Area).
- e. Foulness (Mid-Essex Coast) SPA/Ramsar site (approximately 46.9 km east of the Study Area); and
- f. The Swale SPA/Ramsar site (approximately 55.3 km southeast of the Study Area).

13.4.25 A number of SAC are located in the outer Thames Estuary (over 40 km from the Study Area) including: Margate and Long Sands SAC; Essex Estuaries SAC; Thanet Coast SAC; and Southern North Sea SAC.

Nationally Designated Sites

13.4.26 The desktop study identified the following statutory designated sites within 15 km of the Study Area:

- a. Inner Thames Marshes SSSI (approximately 1 km east of the Study Area);
- b. West Thurrock Lagoon & Marshes SSSI (approximately 8.4 km southeast of the Study Area);
- c. Swanscombe MCZ (approximately 9.2 km of the Study Area);
- d. Swanscombe Peninsula SSSI (approximately 11.2 km southeast of the Study Area); and
- e. The Thames (and its tidal tributaries) is designated as a Metropolitan Site of Importance for Nature Conservation. This designation notes its value as a major wildlife corridor through London, with tidal mudflats used for foraging by wading birds and other marine life (Ref 13.37).

Navigation/other river users

- 13.4.27 The River Thames in the vicinity of the Proposed Scheme forms part of a strategically important and heavily used tidal navigation corridor. River use is diverse and continuous, reflecting its role as both a commercial waterway and a multi-functional social and recreational resource.
- 13.4.28 River users include commercial (cargo, barges), passenger services (river 'buses' and tourist boats), recreational craft, and river-dependent activities such as angling and informal river-based recreation concentrated along accessible stretches of the foreshore and riverbanks; with the latter including engineered banks, wharves, jetties and navigational infrastructure that reflect the long-established working character of the Thames.
- 13.4.29 The Tidal Thames is under formal navigation management by the Port of London Authority.
- 13.4.30 Commercial fishing activities undertaken from licenced fishing boats occur in the outer Thames Estuary with key ports being Whitstable and Queensborough in Kent and Leigh-on-Sea in Essex. Key catches here focus on the seasonal cockle fishery (Ref 13.38, Ref 13.39 and Ref 13.40) supported by other species to a lesser degree.

Marine archaeology (historic environment within the tidal Thames)

- 13.4.31 The archaeological resource within and around the River Thames reflects the river's long-standing role as a focus for settlement, transport, trade and industry. The tidal foreshore and riverbed form an integral component of the historic environment and are considered to have high archaeological potential (Ref 13.41), including for preserved remains of historic river use, infrastructure, vessels and paleo-environmental deposits, subject to variable disturbance from historic and modern river activity (Ref 13.42).
- 13.4.32 No Protected Wreck Sites have been identified within the Study Area.

Future Baseline

- 13.4.33 There is potential for baseline conditions to change in the future due to various factors including continued development within the City of London, increased vessel traffic using the river, and climate change. These changes could have future implications for the River Thames (tidal section) in terms of water quality, water levels, temperature, salinity, habitats and species supported. These changes are not expected to significantly influence the outcomes from the assessment of likely significant effects presented in Table 13-3 on the basis that the Proposed Scheme does not interact with the River Thames or any tidal tributaries, given that there will be no planned in-river works or works on, or near to, the riverbanks. Similarly, in operation, the Proposed Scheme

will be a closed system with no discharges or intakes from the River Thames. Therefore, there is no potential for any likely significant effects and no potential for these conclusions to change because of a future change in baseline conditions.

13.5 Potential for Likely Significant Effects

13.5.1 A summary of the effects out of the ES is provided in **Table 13-3**.

13.5.2 Given that the scheme does not interact with the River Thames (no in-river works or riverbank works), or any tidal tributaries, there is no potential for any likely significant effects. All river crossings are underground and will be located at considerable depth below the riverbed.

13.5.3 There are also no plans to use the River Thames for the transportation or removal of construction materials. It is therefore also concluded that there is no potential for likely significant effects on navigation and other river users.

Table 13-3: Scoping Assessment – Potential for Likely Significant Effects on Marine Receptors

Receptor /Topic	Phase	Potential impact pathway(s) with the Proposed Scheme	In	Out	Justification
Water quality	Construction	Impact on water quality (chemical /temperature/salinity) due to direct abstraction or discharges from the River Thames during construction.		✓	No direct abstractions or planned discharges will occur during construction to the River Thames or other tidal tributaries. Given the depth of tunnelling below ground (minimum depth 5m below the riverbed), there would be no hydrological interactions with the River Thames or any tidal tributaries. Any surface water runoff from onshore works, e.g. construction compounds at tunnel entry and exit points, will be subject to appropriate environmental management controls under the Framework Construction Environmental Management Plan (CEMP) to prevent any direct run off into the River Thames or other tidal tributaries. Given this, local baseline water quality conditions of the tidal Thames and tidal tributaries are not expected to be impacted by the Proposed Scheme and there would be no likely significant effects.
Marine/estuarine sediments	Construction	Direct sediment disturbance		✓	Given that there are no works proposed within the River Thames or any of the tidal tributaries, there is no potential for any direct sediment disturbance or associated increases in suspended sediment

Receptor /Topic	Phase	Potential impact pathway(s) with the Proposed Scheme	In	Out	Justification
					concentrations or sediment disposition and there would be no likely significant effects.
	Construction	Changes to hydrodynamic and sediment transport processes		✓	Given there are no works proposed within the River Thames or tidal tributaries there is no potential for any changes in hydrodynamic processes or sediment transport and there would be no likely significant effects.
	Construction	Sediment / riverbed disturbance due to ground-borne vibrations		✓	The pipeline(s) (two maximum) required for the Proposed Scheme have a maximum diameter of 1.5m. The pipelines will be installed using pipe-jacking (micro-tunnelling bore machine) or horizontal directional drill (HDD). These are all recognised methods that are used to install pipelines and utilities (e.g. cables) underground and are regularly used to crossroads, railways, rivers and developed areas and are used specifically to minimise environmental impacts. The pipelines will be installed at varying depths of between 5m and 30m below the riverbed depending on the crossing locations. Based on predictions of vibration and ground-borne noise carried out using the Rupert Taylor Finite Difference Time Domain model, FINDWAVE® for the Lower Thames Crossing Project (Ref 13.43), it was concluded that ground-borne vibrations from construction of the Lower Thames Crossing Tunnel

Receptor /Topic	Phase	Potential impact pathway(s) with the Proposed Scheme	In	Out	Justification
					(16.5m diameter) at the point it passes beneath the Thames and Medway Canal (7.5m distance) would not exceed 0.03 PPV mm/s. Based on the outputs from this modelling and that the pipelines for this scheme are orders of magnitude smaller (1.5m diameter), the potential for ground-borne vibrations to exceed levels (PPV) that would trigger any significant effect are negligible. It therefore can be robustly concluded that there will be no likely significant effects on the River Thames for ground borne vibrations. There are also no mechanisms for shear stress or uplift forces at the sediment–water interface.
Intertidal/subtidal habitats	Construction	Direct habitat disturbance/loss.		✓	The Proposed Scheme does not involve any in-river works up to MHWS. River crossings will be undertaken at depth and will be trenchless, via pipe-jacking or horizontal directional drill (HDD). Consequently, there is no pathway for any direct effects on intertidal or subtidal habitats within the River Thames or any tidal tributaries. Therefore, there will be no likely significant effects. Impacts on habitats and species located above MHWS are covered in Volume 1, Chapter 8: Ecology.

Receptor /Topic	Phase	Potential impact pathway(s) with the Proposed Scheme	In	Out	Justification
	Construction	Increased turbidity (suspended sediment concentration (SSC)) and smothering (sediment deposition) due to sediment disturbance.		✓	Given that the Proposed Scheme does not involve any in-river works up to MHWS there is no potential for any direct disturbance of riverbed sediments or riverbanks/foreshore areas. Consequently, there is no potential for the release of any sediment and no pathway for impacts on intertidal and subtidal habitats from increased SSC and sediment deposition resulting from sediment disturbance. Therefore, there will be no likely significant effects. As discussed above, given that the pipelines are of small dimensions (2.1m diameter compared to other tunnels such as the Lower Thames Crossing Tunnel (16.5m diameter) and that pipe-jacking (micro tunnelling bore machine) and HDD techniques are used to minimise environmental impacts from crossing rivers, roads and developed areas, the potential for ground-borne vibrations to exceed levels (PPV) that would trigger any significant effect are negligible. It therefore can be concluded that there will be no likely significant effects on the River Thames from ground borne vibrations and that there is therefore no potential for any disturbance of the riverbed or overlying sediments due to vibrations. Therefore, there is no potential for any impacts on subtidal and intertidal habitats due to increased

Receptor /Topic	Phase	Potential impact pathway(s) with the Proposed Scheme	In	Out	Justification
					turbidity (SSC) and smothering (sediment deposition) and there would be no likely significant effects.
	Construction	Changes in water quality/ release of contaminants.		✓	No direct abstractions or discharges are planned during construction. Consequently, there is no potential for any changes to water quality and no pathway for impacts on intertidal/subtidal habitats due to changes in water quality. Therefore, there are no likely significant effects. The Proposed Scheme does not involve any in-river construction works up to MHWS. River crossings will be trenchless and undertaken at depth. Given there will be no direct disturbance of any river sediments and no potential for any contamination release, there is no pathway for any impacts on intertidal/subtidal habitats due to a release of contaminants. Therefore, there would be no likely significant effects. There is also no potential for any changes in hydrodynamic processes or sediment transport and there would be no likely significant effects. .
Fish and shellfish	Construction	Direct disturbance or habitat loss.		✓	The Proposed Scheme does not involve any in-river works up to MHWS. River crossings will be

Receptor /Topic	Phase	Potential impact pathway(s) with the Proposed Scheme	In	Out	Justification
					trenchless and undertaken at depth. Consequently, there is no pathway for any direct effects on fish and shellfish or supporting habitats within the River Thames or any tidal tributaries. Therefore, there would be no likely significant effects.
	Construction	Increased turbidity (SSC) and smothering (sediment deposition) due to sediment disturbance.		✓	As set out in Volume 1, Chapter 2 Proposed Scheme, the pipelines will already be underground at the point that they intercept the River Thames and other tidal tributaries. Therefore, there will be no requirement for any construction compounds or above ground works to occur in the vicinity of the River Thames and tidal tributaries. There is therefore no potential for any works to affect the riverbanks. There will also be no in-river works below MHWS that could affect the seabed. Consequently, there is no potential for the release of any sediment and no pathway for impacts on fish and shellfish from increased SSC and sediment deposition resulting from sediment disturbance. Therefore, there would be no likely significant effects. As discussed above, given that the pipelines are of small dimensions (2.1m diameter compared to other tunnels such as the Lower Thames Crossing Tunnel (16.5m diameter)) and that pipe-jacking (micro

Receptor /Topic	Phase	Potential impact pathway(s) with the Proposed Scheme	In	Out	Justification
					tunnelling bore machine) and HDD techniques are used to minimise environmental impacts from crossing rivers, roads and developed areas, the potential for ground-borne vibrations to exceed levels (PPV) that would trigger any significant effect are negligible. It therefore can be concluded that there will be no likely significant effects on the River Thames from ground borne vibrations and that there is therefore no potential for any disturbance of the riverbed or overlying sediments due to vibrations. Therefore, there is no potential for any impacts on fish and shellfish due to increased turbidity (SSC) and smothering (sediment deposition) and there would be no likely significant effects.
	Construction	Changes in water quality/ release of contaminants.		✓	No direct abstractions or discharges are planned during construction. Consequently, there is no potential for any changes to water quality and no pathway for impacts on fish and shellfish due to changes in water quality. Therefore, there would be no likely significant effects. The Proposed Scheme does not involve any in-river works up to MHWS. River crossings will be trenchless and undertaken at depth. Consequently, given there will be no direct disturbance of any river

Receptor /Topic	Phase	Potential impact pathway(s) with the Proposed Scheme	In	Out	Justification
					sediments and no potential for any contamination release, there is no pathway for any impacts on fish and shellfish due to a release of contaminants. Therefore, there would be no likely significant effects.
	Construction	Noise and vibration.		✓	Fish and shellfish can be impacted by underwater sound and vibrations. There are already several existing sources of underwater noise and vibration in the River Thames including traffic and road infrastructure (several crossings including M25, A2, A282 and Dartford Crossing (Ref 13.43); construction and infrastructure projects (Ref 13.45); commercial and leisure vessels; and industrial and urban activity such as oil refineries and riverside facilities. However, as discussed above, given that there is negligible potential for ground-borne noise and vibrations from the pipe-jacking, there is no potential for any noise or vibration impacts on fish and shellfish and there would be no likely significant effects.
Other notable marine species	Construction	Direct disturbance.		✓	Given that there will be no in-river works there is no potential for any direct disturbance to other notable marine species that could potentially be present in the River Thames and any of the tidal tributaries

Receptor /Topic	Phase	Potential impact pathway(s) with the Proposed Scheme	In	Out	Justification
					within the defined study area for the Proposed Scheme and there would be no likely significant effects.
	Construction	Increased SSC/changes in water quality.		✓	Given that there will be no in-river works there is no potential for any direct disturbance of seabed sediments or associated increased SSC levels or release of any contaminants. There are also no plans for water to be abstracted from or discharged into the River Thames (or other tidal tributaries). Therefore, there is no potential for changes in water quality to impact other notable marine species and there would be no likely significant effects.
	Construction	Noise and vibration.		✓	Other notable marine species can be impacted by underwater sound and vibrations. There are already several existing sources of underwater noise and vibration in the River Thames which marine species will be attuned to, including traffic and road infrastructure (several crossings including M25, A2, A282 and Dartford Crossing (Ref 13.43); construction and infrastructure projects (Ref 13.45); commercial and leisure vessels; and industrial and urban activity such as oil refineries and riverside facilities. However, as discussed above, given that there is negligible potential for ground-borne noise

Receptor /Topic	Phase	Potential impact pathway(s) with the Proposed Scheme	In	Out	Justification
					and vibrations from the pipe-jacking associated with the construction of the tunnel crossings, there is no potential for any noise or vibration impacts on other notable marine species and there would be no likely significant effects.
	Construction	Marine Non-Native Invasive Species.		✓	Given that there will be no in-river works there is no potential for the spread of Invasive and Non-Native Species. Measures to prevent the introduction and spread of non-native species across all project activities will however be included in a Non-Native Species Management Plan.
Marine protected sites	Construction	Same pathways as noted on other topics.		✓	No designated marine sites are present within the defined Study Area. In addition, there is no potential for likely significant effects on designated sites hydrologically linked to the Study Area as set out within the rows above in this table and there would be no likely significant effects.
Navigation / other river users	Construction	Direct obstruction through in-river construction activities and use of river transport.		✓	Given that no surface or in-river construction activities are proposed, and that there are no plans to use the River Thames for the transport of construction materials or any waste materials, there is no potential for any interactions with, or impacts on other users of the River Thames (such as commercial and leisure vessels, fisheries, river boat

Receptor /Topic	Phase	Potential impact pathway(s) with the Proposed Scheme	In	Out	Justification
					residents) and there would be no likely significant effects.
Marine archaeology (historic environment within the tidal Thames)	Construction	Potential effects on submerged archaeological remains due to ground disturbance or vibration from tunnelling.		✓	The Proposed Scheme involves tunnelling beneath the River Thames, with no works proposed within the river, riverbed or intertidal zone. No dredging, piling, excavation or physical disturbance of the riverbed is anticipated. As discussed above, given that the pipelines are of small dimensions (2.1m diameter compared to other tunnels such as the Lower Thames Crossing Tunnel (16.5m diameter)) and that pipe-jacking (micro tunnelling bore machine) and HDD techniques are used to minimise environmental impacts from crossing rivers, roads and developed areas, the potential for ground-borne vibrations to exceed levels (PPV) that would damage, displace or alter the setting of submerged archaeological assets is negligible. It is therefore concluded that there would be no likely significant effects on marine archaeology. Likely significant effects on archaeological features in ground below the River Thames or other tidal tributaries are considered in Volume 1, Chapter 10: Historic Environment.
Water quality	Operation	Impact on water quality (chemical		✓	During operation the Proposed Scheme will function as a closed-loop system and there will be no

Receptor /Topic	Phase	Potential impact pathway(s) with the Proposed Scheme	In	Out	Justification
		/temperature/salinity) due to direct abstraction or discharges from the River Thames.			discharges or abstractions to the River Thames or other tidal tributaries during operation of the Proposed Scheme. Therefore, there would be no impacts on water quality and there would be no likely significant effects. During operation, any surface water runoff from the Proposed Scheme will be subject to appropriate environmental management controls under the Framework Environmental Management Plan (EMP) to prevent any direct run off into the River Thames. Given this, local baseline water quality conditions of the tidal Thames and tidal tributaries are not expected to be impacted by the Proposed Scheme and there would be no likely significant effects.
Intertidal/subtidal habitats and species Fish and shellfish Notable marine species	Operation	Thermal Emissions.		✓	The Proposed Scheme involves the transportation of hot water through underground pipes. The pipelines will be fully insulated and designed to minimise the potential for any heat loss. Taking this into account, the potential for thermal emissions from the Proposed Scheme will be minimal. Furthermore, given the Proposed Scheme will be at least 5m depth below the River Thames and tidal tributaries, there will be negligible potential for thermal emissions to impact intertidal and subtidal

Receptor /Topic	Phase	Potential impact pathway(s) with the Proposed Scheme	In	Out	Justification
					habitats. Therefore, there would be no likely significant effects from thermal emissions.
All marine receptors	Decommissioning	-		✓	The impacts of any decommissioning that is eventually required are expected to be similar or less than impacts identified during construction. Given that no likely significant effects have been identified during construction of the Proposed Scheme it is also concluded that there will be no likely significant effects during any decommissioning.
Cumulative effects (marine)	Decommissioning	Interaction with other plans, projects or land-based activities.		✓	Cumulative effects associated with the marine environment are not anticipated, as the Proposed Scheme does not introduce pathways for effects on tidal river receptors. Any land-based activities with the potential to affect water quality are assumed to be controlled at source or through standard best practice measures.

13.6 Assumptions, Limitations and Uncertainties

13.6.1 The following assumptions have informed the scoping of potential environmental effects on the marine environment, as set out within **Table 13-3**.

- a. No works will be undertaken below MHWS. As set out in within **Volume 1, Chapter 2: Proposed Scheme**, all river crossings will be underground, below the riverbed.
- b. Minimum tunnelling depths will be adhered to (i.e. a minimum depth of 5m).
- c. No river transport will be used.
- d. No in-river geotechnical surveys are planned.
- e. There are no planned intakes from or discharges to the River Thames.
- f. No works are required at the Riverside Campus as part of the Proposed Scheme that have any interactions with intakes from, or discharges to the River Thames.
- g. Land-based activities related to the Proposed Scheme with the potential to pollute controlled waters, including via existing drainage infrastructure, are assumed to be appropriately controlled at source. Control measures to this effect will be included in the Framework CEMP that will be submitted with the DCO Application.
- h. Any emissions (dust, noise, light) from onshore works (above MHWS) associated with construction compounds and tunnel entry and exit locations will be managed in accordance with recognised standard best practice, details of which will be set out in the Framework CEMP that will be submitted with the DCO Application.
- i. All excavated material (from tunnelling) will be managed onshore in accordance with standard industry regulations and best practice. There will be no interaction with the marine environment.
- j. To ensure that the Proposed Scheme operates effectively and efficiently it all pipes/tunnels will be sufficiently insulated to minimise any heat loss. Therefore, there will be negligible thermal loss/emissions.

13.7 References

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Environmental Impact Assessment Scoping Report

Volume 1: Main Report

Chapter 14: Materials and Waste

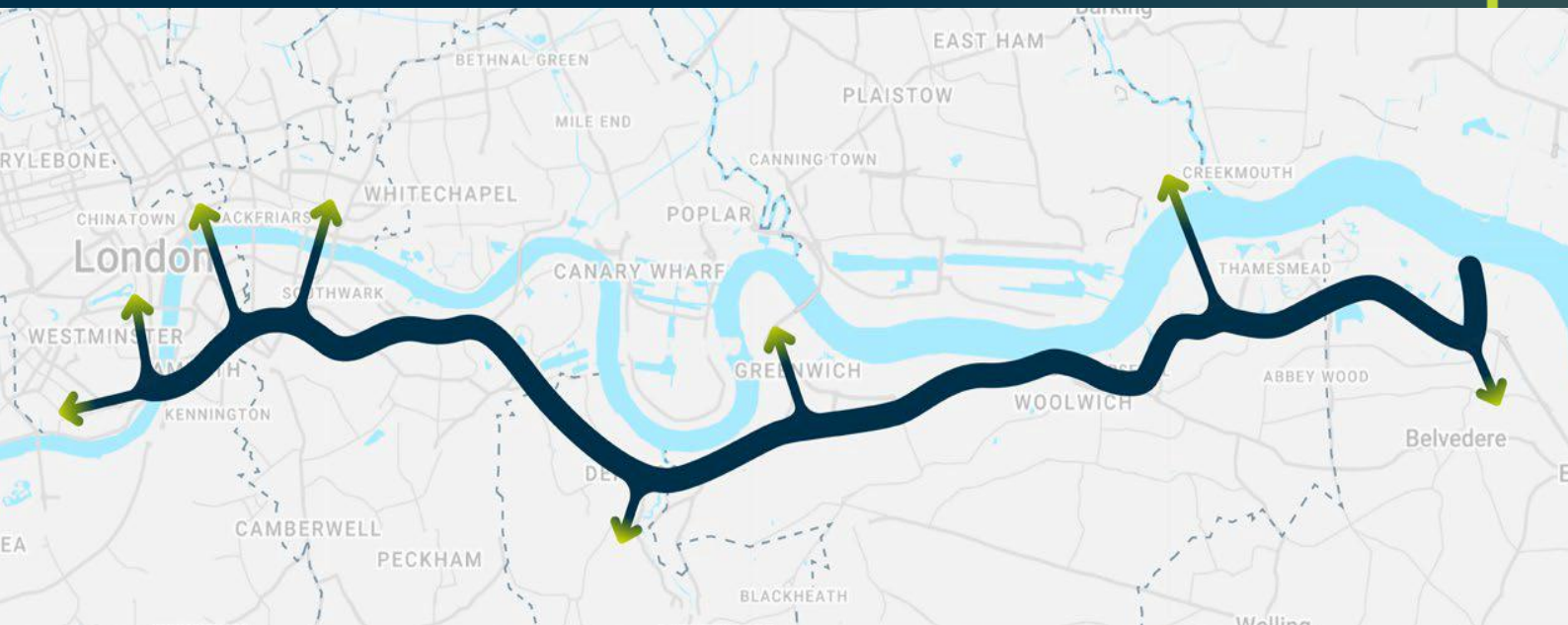


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14. Materials and Waste

14.1 Introduction

- 14.1.1 This chapter identifies the potential for likely significant effects of the Proposed Scheme on materials and waste. It sets out the proposed methodology for the materials and waste assessment in the Environmental Statement (ES) and identifies those impacts which should be scoped into and out of the assessment of likely significant effects.
- 14.1.2 This chapter follows the methodology set out in the Institute of Sustainability and Environmental Professionals (ISEP) (formerly known as Institute of Environmental Management and Assessment (IEMA)) Guide to: Materials and Waste in Environmental Impact Assessment, Guidance for a Proportionate Approach and referred from herein as the 'ISEP Guidance' (Ref 14.1).
- 14.1.3 For the purpose of this Scoping Report, materials and waste comprise:
- a. The consumption of materials (key construction materials only); and
 - b. The generation and management of waste.
- 14.1.4 Materials are defined in the ISEP Guidance as *“physical resources that are used across the lifecycle of a development. Examples include concrete, aggregate, asphalt, bricks, ballast, mortar, glass and timber.”*
- 14.1.5 Other material assets considered in the assessment include built assets (e.g. buildings, infrastructure) including landfill void capacity and safeguarded mineral and waste sites.
- 14.1.6 Mineral Safeguarding Areas (MSA, identified by Mineral Planning Authorities) are areas of potential resource rather than safeguarded mineral sites and are not included in the ISEP Guidance (Ref 14.1) and therefore are not assessed in a materials and waste assessment. The Ground Conditions chapter considers the potential for likely significant effects on MSA, with further detail provided in **Volume 1, Chapter 9: Ground Conditions**. In addition, a Planning Statement submitted as part of the DCO Application will consider the presence of any MSA within the Order limits and will present the assessment of the Proposed Scheme against relevant national and local policy requirements for mineral safeguarding.
- 14.1.7 Waste is defined as per the Waste Framework Directive (2008/98/EC) (Ref 14.2) as *“any substance or object which the holder discards or intends or is required to discard.”*

14.2 Study Area

- 14.2.1 The Study Area for the assessment of likely significant effects related to materials and waste have been defined in line with the ISEP Guidance (Ref

14.1) as the 'Proposed Scheme Study Area' and the 'Expansive Study Area'. These are explained below.

Proposed Scheme Study Area

- 14.2.2 The Proposed Scheme Study Area for the use of construction and operation materials (key construction materials only) and construction and operational waste generation comprises the EIA Scoping Boundary¹ for the purposes of EIA Scoping and will comprise the Order limits within the ES. This includes for the footprint of the proposed works, together with any temporary land requirements during the construction as well as temporary offices, compounds and storage areas (for materials and segregated waste streams).
- 14.2.3 The Proposed Scheme Study Area for the likely significant effects on safeguarded mineral and waste sites are defined by the EIA Scoping Boundary. Impacts on safeguarded waste sites are not included in the ISEP Guidance (Ref 14.1), however, likely significant effects on such sites are considered.

Expansive Study Area

- 14.2.4 As outlined in the Planning Policy Guidance for Waste (Ref 14.3):
- a. *"The principles of self-sufficiency and proximity (commonly referred to as the 'proximity principle') are set out in Article 16 of the Waste Framework Directive (Ref 14.2), Local planning authorities are required, under regulation 18 of the Waste (England and Wales) Regulations 2011 (Ref 14.4), which transposed the Directive, to have regard to these requirements when exercising their planning functions relating to waste management"*.
- 14.2.5 The proximity principle for waste means that wherever possible waste should be managed in one of the nearest appropriate installations, by means of the most appropriate methods and technologies, in order to ensure a high level of protection for the environment and public health. In addition:
- a. *"...though this should be the aim, there is no expectation that each local planning authority should deal solely with its own waste to meet the requirements of the self-sufficiency and proximity principles. Nor does the proximity principle require using the absolute closest facility to the exclusion of all other considerations. There are clearly some wastes which are produced in small quantities for which it would be uneconomic to have a facility in each local authority. Furthermore, there could also be significant economies of scale for local authorities working together to assist with the development of a network of waste*

¹ 'EIA Scoping Boundary' corresponds to the area shown in **Volume 2, Figure 1-1**.

management facilities to enable waste to be handled effectively” (Ref 14.3).

- 14.2.6 An example of a waste type that could be produced in small quantities that may need to be managed outside of the local authority is hazardous waste e.g. waste oil from construction vehicles.
- 14.2.7 The Expansive Study Area for non-hazardous and inert waste management comprises London and the South-East regions as outlined in the Environment Agency’s 2024 Waste Summary Tables for England - Version 1 (Ref 14.5):
- a. London - Central London, East London, North London, South London and West London; and
 - b. South-East - Berkshire, Buckinghamshire, East Sussex, Hampshire, Isle of Wight, Kent, Oxfordshire, Surrey and West Sussex.
- 14.2.8 The Expansive Study Area is defined based on professional judgement and informed by consideration of the proximity principle. The South-East region is included as some waste generated in London is managed in that region.
- 14.2.9 The Expansive Study Area for hazardous waste management is England. This Study Area is also defined based on professional judgement and informed by consideration of the proximity principle.
- 14.2.10 The proximity principle for hazardous waste in England is outlined in Principle 2 - Infrastructure Provision in the Strategy for Hazardous Waste Management in England:
- a. *“We look to the market for the development of hazardous waste infrastructure, which implements the hierarchy for the management of hazardous waste and meets the needs of the UK to ensure that the country as a whole is self-sufficient in hazardous waste disposal, facilities are put in place for hazardous waste recovery in England, and the proximity principle is met” (Ref 14.3).*
- 14.2.11 Planning for hazardous waste management is also undertaken at a national level.
- 14.2.12 The Expansive Study Area for the availability of key construction materials is national (United Kingdom (UK)) for steel requirement and London and the South-East regions for aggregates, asphalt, and concrete. Steel would be sourced at a national or international level; however national requirement is considered in the assessment.

14.3 Relevant Legislation, Planning Policy and Guidance

- 14.3.1 This section provides an overview of the relevant legislation, planning policy and technical guidance relevant to the materials and waste assessment.

Legislation

14.3.2 The applicable legalisation includes:

- a. Waste Framework Directive (Ref 14.2);
- b. Environmental Protection Act (1990) (Ref 14.6);
- c. The Hazardous Waste (England and Wales) Regulations (2005) as amended (Ref 14.7);
- d. The Waste (England and Wales) Regulations (2011) as amended (Ref 14.4);
- e. The Environmental Permitting (England and Wales) Regulations (2016) (Ref 14.8);
- f. Environment Act 2021 (Ref 14.9); and
- g. The Waste (Miscellaneous Amendments) Regulations 2019 (Ref 14.10).

14.3.3 The Waste (England and Wales) Regulations 2011 (as amended) (Ref 14.4) transpose the requirements of the Waste Framework Directive (Ref 14.2) in England and Wales and requires the Secretary of State to establish waste prevention programmes and waste management plans that apply the waste hierarchy. The waste hierarchy (see **Plate 14-1**) is defined in the Waste Framework Directive and prioritises waste prevention, followed by preparing for reuse, recycling, recovery and finally disposal as means of management of waste.

14.3.4 The Waste (England and Wales) Regulations 2011 (as amended) (Ref 14.4) require businesses to apply the waste hierarchy when managing waste, and also requires measures are taken to make sure at least 70% by weight of non-hazardous construction and demolition waste is subjected to material recovery. The target specifically excludes naturally occurring materials with European Waste Catalogue (EWC) Code 17 05 04 (soil and stones other than those mentioned in 17 05 03* (soils and stone containing dangerous substances)). An asterisk (*) at the end of an EWC code indicates that the waste is hazardous.

14.3.5 The following must also be considered if a departure from the waste hierarchy is proposed:

- a. environmental protection principles of precaution and sustainability;
- b. proximity principle for treatment and disposal of waste to be undertaken in one of the nearest appropriate installations;
- c. technical feasibility and economic viability;
- d. protection of resources; and
- e. overall environmental, human health, economic and social impacts.

National Planning Policy

Overarching National Policy Statement for Energy (NPS EN-1)

- 14.3.6 The relevant policies from NPS EN-1 (Ref 14.11) for materials and waste are summarised below and within **Table 14-1**. These documents have informed the assessment methodology, identification of sensitive receptors and Study Area.

Table 14-1: Overarching National Policy Statement for Energy – Materials and Waste

National Reference	Policy	Summary of Requirements	Relevance to the Assessment
5.11.19 and 5.11.28		In relation to safeguarding mineral resources and Mineral Safeguarding Areas (MSA)	MSA are not deemed to be safeguarded mineral sites and are not included in the ISEP Guidance (Ref 14.1) and therefore are not included in a materials and waste assessment. The presence of safeguarded mineral sites within the EIA Scoping Boundary has been reviewed and the Proposed Scheme does not sit within any safeguarded mineral sites.
5.15.6 to 5.15.19		In relation to the assessment and management of waste.	The waste hierarchy will be applied to the Proposed Scheme. Further information on waste management arrangements will be provided in a Framework Site Waste Management Plan (SWMP) which will accompany the DCO Application. The ES will include an assessment of construction waste. Operational waste (five years of operation) is proposed to be scoped out of the assessment as outlined in Section 14.5 since maintenance of the Proposed Scheme is anticipated to use minimal materials and generate minimal waste and in much smaller quantities than construction. Circular economy principles (including eliminating waste and pollution and circulating products and materials) will continue to be considered through the design and construction of the Proposed Scheme.

National Reference	Policy	Summary of Requirements	Relevance to the Assessment
			Sourcing of materials from recycled or reused sources and use of low carbon materials, sustainable sources and local suppliers will be set out within the Framework Construction Environmental Management Plan (CEMP) to be submitted with the DCO Application. The national target for recovery of construction and demolition waste is 70% by weight, as set out in the Waste Framework Directive (Ref 14.2). The target specifically excludes naturally occurring materials with EWC Code 17 05 04 (soil and stones other than those mentioned in 17 05 03* (soils and stone containing dangerous substances)). Recovery is deemed to include reuse, recycling and other recovery, e.g. energy recovery. A good practice landfill diversion target of 90% has been achieved and exceeded by major UK developments as outlined in the ISEP Guidance (Ref 14.1). More information about targets is provided in Section 14.4 Baseline Conditions.

National Planning Policy Framework (NPPF)

14.3.7 The following paragraphs from the NPPF (December 2024 (Ref 14.12)) are considered relevant to the assessment of likely significant materials and waste effects presented in this chapter:

- a. Paragraph 8c an environmental objective including using natural resource prudently and minimising waste; and
- b. Paragraph 223b taking account of the contribution that substitute or secondary and recycled materials and minerals waste can make.

14.3.8 It should be noted that a draft NPPF was published for consultation in December 2025, however it is not expected that this draft will significantly alter the policy context or policy compliance of the materials and waste assessment for the Proposed Scheme.

National Planning Policy for Waste (2014) (Ref 14.13)

14.3.9 The policy states: "...when determining planning applications for non-waste development, local planning authorities should, to the extent appropriate to their responsibilities, make sure:

- a. *The likely impact of proposed, non-waste related development on existing waste management facilities, and on sites and areas allocated for waste management, is acceptable and does not prejudice implementation of the waste hierarchy and/or efficient operation of such facilities;*
- b. *New, non-waste development makes sufficient provision for waste management and promotes good design to secure the integration of waste management facilities with the rest of the development; and*
- c. *The handling of waste arising from construction and operation of development maximises reuse/ recovery opportunities and minimises off-site disposal."*

The Waste Management Plan for England (2021) (Ref 14.14)

14.3.10 Page 7 of the Plan highlights the need for waste to be managed using the proximity principle and confirms England's commitment to recovering at least 70% by weight of non-hazardous construction & demolition (C&D) waste by 2020 (excluding soils and stones). Recovery is assumed in the context of this policy to include reuse, recycling and incineration with energy recovery.

A Green Future: Our 25 Year Plan to Improve the Environment (2018) (Ref 14.15)

14.3.11 The following policies are relevant:

- a. ensuring that resources are used more efficiently and kept in use for longer to minimise waste and reduce its environmental impacts by promoting reuse, remanufacturing and recycling;
- b. working towards eliminating all avoidable waste by 2050 and all avoidable plastic waste by end of 2042;
- c. reducing litter and littering; and
- d. improving management of residual waste.

[Our Waste, Our Resources, A Strategy for England \(Resources and Waste Strategy for England\) \(2018\) \(Ref 14.16\)](#)

14.3.12 Key targets and milestones and targets, which could be relevant to the Proposed Scheme, include:

- a. legislation for mandatory separate food waste collections – completed;
- b. 75% recycling rate for packaging (subject to consultation);
- c. 65% recycling rate for municipal solid waste – 2035; and
- d. municipal waste to landfill 10% or less – 2035.

[Environmental Improvement Plan \(2023\) \(Ref 14.17\)](#)

14.3.13 The Plan builds on the 25 Year Plan to Improve the Environment (Ref 14.15) and confirms that Defra will publish the new maximising resources and minimising waste programme in England. The programme will set out the Government's priorities for action across seven key sectors, including construction, to manage resources and waste in accordance with the waste hierarchy. The Government is working to publish a revised Code of Practice for the sustainable use of soil on construction sites, which will help to reduce the amount of soil sent to landfill. A Soil Reuse and Storage Depot scheme will be developed to help prevent soil that would otherwise be classified as waste going to landfill and encourage remediation and reuse of soil. The scheme is intended to be piloted by Defra by 2026.

Local and Neighbourhood Planning Policy

14.3.14 The local and neighbourhood planning policy listed in **Table 14-2** are considered relevant to the assessment of likely significant materials and waste effects presented in this chapter.

Table 14-2: List of Relevant Local and Neighbourhood Policy – Materials and Waste

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
London Plan 2021 (Ref 14.18)	• Policy SI 7 Reducing waste and supporting the circular economy • Policy SI 8 Waste capacity and net waste self-sufficiency • Policy SI 9 Safeguarded waste sites • Policy SI 10 Aggregates	Supporting the Circular Economy, reducing waste and applying the waste hierarchy is outlined in Section 14.7 Mitigation. Designing in appropriate space for waste management for the Proposed Scheme is outlined in 14.7 Mitigation.
London Borough of Bexley (LBB) Bexley Local Plan Date of Adoption 26 April 2023 (Ref 14.19)	• Policy SP1 Achieving sustainable development – the spatial strategy • Policy SP12 Sustainable Waste Management • Policy DP25 New Waste Management Facilities and Extensions and Alterations to Existing Facilities • Policy DP26 Waste Management in New Development • Policy DP27 Minerals and aggregates	Safeguarding of waste sites including wharves is considered in Table 14-17.
Royal Borough of Greenwich (RBG) Royal Greenwich Local Plan: Core Strategy with Detailed Policies 30 July 2014 (Ref 14.20)	• Policy DH1 Design • Policy IM2 Waste Apportionment	

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
RBG Royal Borough of Greenwich Draft Local Plan December 2025 (Ref 14.21)	• Policy E2 Protected Industrial Land • Policy EN7 Strategic Waste Management • Policy DH1 Principles for High Quality Design • Policy CE1 Climate Resilient and Net Zero Design Principles • Policy CE4 Whole Life Carbon and Circular Economy	
London Borough of Lewisham (LBLe) Lewisham Local Plan Adopted July 2025 (Ref 14.22)	• Policy SD1 Responding to the climate emergency • Policy SD2 Sustainable design and retrofitting • Policy SD12 Reducing and sustainably managing waste	
London Borough of Southwark (LBS) The Southwark Plan 2019-2036 Adopted 23 February 2022 (Ref 14.23)	• Policy P62 Reducing Waste • Policy P63 Land for waste management	
London Borough of Lambeth (LBLa) Lambeth Local Plan 2020–2035 Adopted September 2021 (Ref 14.24)	• Policy EN7 Sustainable Waste Management	
London Borough of Lambeth (LBLa) South Bank & Waterloo Neighbourhood Plan 2017-2032 (Ref 14.25)	• No policies from this Neighbourhood Plan are relevant to the assessment in this Scoping Chapter	
London Borough of Lambeth (LBLa)	• No policies from this Neighbourhood Plan	

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
Kennington Oval and Vauxhall Neighbourhood Plan 2035 (Ref 14.26)	are relevant to the assessment in this Scoping Chapter	
London Borough of Barking and Dagenham (LBBD) London Borough of Barking and Dagenham Local Plan 2020-2037 September 2024 (Ref 14.27)	Policy DMSI 8 Demolition, construction and operational waste	
London Borough of Tower Hamlets (LBTH) Tower Hamlets Local Plan 2031 Adopted January 2020 (Ref 14.28)	- Policy D.SG4 Planning and construction of new development - Policy S.DH1 Delivering high quality design - Policy S.MW1 Managing our waste - Policy D.MW3 Waste collection facilities in new development	
City of London (CoL) City of London Local Plan January 2015 (Ref 14.29)	- Core Strategic Policy CS17 Waste - Policy DM 17.1 Provision for waste in development schemes - Policy DM 17.2 Designing out construction waste - Policy DM 17.4 Development affecting waste management sites	
CoL City Plan 2040, Revised Proposed Submission Draft April 2024(Ref 14.30)	- Strategic Policy S16 Circular Economy and Waste - Policy CE1 Sustainable Waste Facilities and Transport	

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	Policy DE1 Sustainable Design	
City of Westminster (CoW) City Plan 2019-2040 (Ref 14.31)	Policy 41 Waste management	
City of Westminster (CoW) Victoria Neighbourhood Plan 2025 - 2040 (Ref 14.32)	No policies from this Neighbourhood Plan are relevant to the assessment in this Scoping Chapter	
Royal Borough of Kensington and Chelsea (RBKC) New Local Plan Review July 2024 (Ref 14.33)	- Policy GB2 Circular Economy - Policy GB17 Waste Management	

Relevant guidance

14.3.15 This scoping exercise and the materials and waste assessment in the ES will be carried out in accordance with the following guidance:

- a. ISEP Guidance (Ref 14.1);
- b. Contaminated Land: Applications in Real Environments (CL:AIRE) Definition of Waste: Development Industry Code of Practice (DoWCoP), v2 (2011) (Ref 14.34);
- c. Waste and Resources Action Programme (WRAP) Designing Out Waste: A Design Team Guide for Civil Engineering (Ref 14.35);
- d. National Planning Policy Guidance (PPG) for Minerals (2014) (Ref 14.36) and Waste (2015) (Ref 14.3);
- e. Waste Duty of Care Codes of Practice (Ref 14.37); and
- f. Guidance on Applying the Waste Hierarchy (2011) (Ref 14.38).

14.4 Baseline Conditions and Future Baseline

Existing Baseline

14.4.1 This section provides a summary of the baseline conditions in respect of materials and waste.

Availability of Key Construction Materials

- 14.4.2 At the time of writing, the exact quantities of key construction materials (aggregate, asphalt concrete, and steel) required for the Proposed Scheme are unknown as the design is in early development.
- 14.4.3 **Table 14-3** summarises national steel requirement in 2024 and regional sales in 2024 for aggregates, asphalt and concrete (the most recent years for which data is available). Requirement and sales serve as proxies for availability.
- 14.4.4 It is anticipated that most key construction materials would be sourced locally or regionally e.g. aggregate, asphalt, concrete, considering the proximity principle and value for money. Other materials, including steel would be sourced at a national or international level.

Table 14-3: Regional and National Availability

Construction Material	National availability (million tonnes, year)	London availability (million tonnes, year)	South East availability (million tonnes, year)	Total for London and the South East	Baseline data year	Data description
Steel	16	Not applicable. Steel will be assessed at the national level.			2024	UK's steel requirement 2024, UK Steel Statistics 2025 (Ref 14.39)
Crushed rock (million tonnes)	Not applicable. These materials will be assessed at the regional level.	26.3*		26.3	2024	Minerals and mineral products sales in Great Britain, Profile of the UK Mineral Products Industry 2025 (Ref 14.40)
Sand and gravel) (million tonnes)		14.9**		14.9		
Ready mixed concrete (converted to million tonnes from m ³ using a density of 2.4 t / m ³ (Ref 14.41)		8.4	7.7	16.1		
Asphalt (million tonnes)		2.4	1.9	4.3		

*value only available for the South of England, which includes London, the South East, South West and East of England.

** value only available for London and the South East combined.

- 14.4.5 Potential recycled contents for the main construction materials are outlined in **Table 14-4**. These “good practice” rates are derived from the Waste and Resources Action Programme’s (WRAP) Designing Out Waste Tool for Civil Engineering (Ref 14.41) and relevant to the selection of receptor sensitivity for materials.

Table 14-4 Potential Recycled Content

Material Type	Potential Recycled Content (% by weight)
Concrete	16
Asphalt	25
Aggregates	50
Steel reinforcement	100
Structural steel	60

Permitted Waste Sites, Waste Site Applications and Waste Exemptions

- 14.4.6 It is assumed within this Scoping Report that all permitted waste sites are deemed to be safeguarded by the local authority in which they sit.
- 14.4.7 Two installations (Ref 14.42) have been identified within the EIA Scoping Boundary. The sites are the Riverside Resource Recovery Facility and Riverside Energy Park, both located at Norman Road, Belvedere, Bexley, Kent, DA17 6JY (i.e. Riverside 1 and Riverside 2). These facilities are owned and operated by the Applicant and the Riverside Campus is designated as a Strategic Waste Management Site within the Bexley Local Plan. There is also a safeguarded wharf (Middleton Jetty) within the EIA Scoping Boundary at the same location, which serves Riverside 1 and Riverside 2. As built assets, the EfW facilities and Middleton Wharf are unlikely to be permanently affected; works and transport movements related to the Proposed Scheme in this area would not prejudice the waste sites and wharf’s continued role, operation or effective, beneficial use.
- 14.4.8 There are no permitted waste sites (Ref 14.43) or waste site applications (Ref 14.44) within the EIA Scoping Boundary.
- 14.4.9 Nine waste exemptions (Ref 14.45) across seven sites have been identified in the EIA Scoping Boundary, with some sites holding multiple exemptions. All waste exemptions are associated with built assets and are unlikely to be impacted by the Proposed Scheme.

Historic and Permitted Landfill Sites

- 14.4.10 Historic landfill sites are potentially relevant to this assessment as excavations in such facilities can give rise to waste that would require management. The

Environment Agency's Historic Landfill Sites spatial data (Ref 14.46) identifies six historic landfill sites in the EIA Scoping Boundary of the Proposed Scheme. Additional information on these former facilities is presented in **Table 14-5**. **Volume 1, Chapter 9: Ground Conditions** provides more information on historic landfills as a potential cause of contamination.

14.4.11 There are no permitted landfill sites (Ref 14.47) within the EIA Scoping Boundary.

Table 14-5 Historic Landfill Sites in the EIA Scoping Boundary

Site Name	Site Address	Holder Reference/Site Reference	Licence Holder	Licence Issued	Licence Surrendered	Waste Type
Renwick Road Landfill Site	Renwick Road	EAHLD1104/ DL369, CR 043, 8BD004	London Borough of Barking and Dagenham	1977	1993	Inert, industrial, commercial, household, special
Area 4J and 4K Thamesmead	Thamesmead	EAHLD11261/ CR056, 8GR003	Greater London Council	1977	1994	Inert, special
Riverside Golf Course	Thamesmead, Bexley, London	EAHLD11278/ 8BX026, DL408	Casemore Engineering Limited	1992	1993	Inert
Dagenham Dock	Dagenham, Essex	EAHLD11427/ DL329, 8BD008	ARC Aggregates	1990	1991	Industrial, special
Old Canal Filling	Lewisham, London	EAHLD11496/ 8LE003, LEW003	London Borough of Lewisham	1994	No information provided.	Inert, commercial, household
Coalite Site (POR020)	Greenwich	EAHLD34189/ DL585	Port Greenwich Limited	1977	No information provided.	Inert

Landfill Capacity

14.4.12 Baseline information consists of the current landfill capacity in London and the South East for non-hazardous and inert waste and England for hazardous waste, as outlined in the Environment Agency's 2024 Waste Summary Tables for England – Version 1 (Ref 14.5) and **Table 14-6**.

14.4.13 For non-hazardous and inert waste, total landfill capacity in London and the South East was approximately 45.7 million m³.

14.4.14 For hazardous waste, total merchant landfill capacity in England at the end of 2024 was approximately 9.2 million m³. Hazardous restricted sites are not included as capacity may not be available to the Proposed Scheme. Restricted landfill sites only accept waste from a limited set of sources and producers, commonly the site operator, e.g. a manufacturing site.

Table 14-6 Landfill Capacity (2024) in London, the South-East and England

Material Type	London Landfill Capacity (000m ³)	South East Landfill Capacity (000m ³)	Total landfill capacity in London and the South East (000m ³)	England Landfill Capacity (000m ³)
Hazardous Merchant	Not applicable. Hazardous waste is assessed at the England level.			9,167
Non-hazardous with Stable Non-reactive Hazardous Waste (SNRHW) cell	0	9,001	9,001	Not applicable, non-hazardous and inert waste are assessed at a regional level.
Non-hazardous	3,318	15,646	18,963	
Inert	1,017	16,695	17,712	
Total non-hazardous and inert	4,334	41,342	45,676	

14.4.15 The ISEP Guidance (Ref 14.1) (page 14) “*does not consider waste processing and recovery facilities as sensitive receptors, rather: they are part of a system*”

that has the potential to reduce the magnitude of adverse impacts associated with waste generation and disposal. Waste processing and recovery facilities are, hence, different to landfills, in that the latter are finite resources.” Therefore, a full list of waste management infrastructure is not included in the baseline.

Targets

14.4.16 The national target for recovery of construction and demolition waste is 70% by weight, as set out in the Waste Framework Directive (Ref 14.2) and the Waste Management Plan for England (Ref 14.14). The target specifically excludes naturally occurring materials with EWC Code 17 05 04 (soil and stones other than those mentioned in 17 05 03* (soils and stone containing dangerous substances)). EWC Codes with asterisk are hazardous. Recovery is deemed to include reuse, recycling and other recovery, e.g. energy recovery.

14.4.17 The London Plan (Ref 14.18) targets are to meet or exceed the targets for each of the following waste and material streams:

- a. construction and demolition – 95% reuse/ recycling/recovery; and
- b. excavation – 95% beneficial use (all inert excavation waste should be used for beneficial uses).

14.4.18 A good practice landfill diversion target of 90% has been achieved and exceeded by major UK developments as outlined in the ISEP Guidance (Ref 14.1). In 2022, England generated 63 million tonnes of non-hazardous C&D waste, of which 59.4 million tonnes were recovered. This represents a recovery rate of 94.3% (Ref 14.48).

14.4.19 Standard, good and best practice recovery rates by material are provided by WRAP (0). Recovery rates for key construction materials and other construction wastes relevant to the Proposed Scheme are provided in **Table 14-7**.

Table 14-7 Standard, Good and Best Practice Recovery Rates by Material

Material	Standard practice recovery (%)	Good Practice Recovery	Best Practice Recovery
Metals	95	100	100
Packaging	60	85	95
Concrete	75	95	100
Inert	75	95	100
Plastics	60	80	95

Material	Standard practice recovery (%)	Good Practice Recovery	Best Practice Recovery
Miscellaneous	12	50	75
Electrical equipment	Limited information	70	95
Cement	Limited information	75	95
Liquids and oils	100	100	100
Hazardous	50	Limited information cannot be 100% since some hazardous waste (e.g. asbestos must be landfilled)	

Future Baseline

- 14.4.20 There is no publicly available information on any potential long-term changes to the national and regional construction material demand by the time of construction of the Proposed Scheme. Construction material demand, including ready mixed concrete is closely aligned to both the quantity of construction taking place and the general economy; therefore, it is deemed inappropriate to forecast future demand as it is unlikely to be linear. It is therefore not possible to set a future baseline for materials. Consequently, future consumption is assumed to be the same as the current baseline.
- 14.4.21 There is no publicly available information regarding any potential changes to landfill capacity by the time of the Proposed Scheme's construction.
- 14.4.22 Due to the cyclic nature of inert and hazardous landfill capacity (e.g. landfill capacity decreasing, and then new sites or landfill cells being opened with landfill capacity increasing), it is not realistic to forecast future landfill capacity. Therefore, inert and hazardous landfill capacity is assumed to remain the same as the current baseline as outlined in **Table 14-6**.
- 14.4.23 For non-hazardous waste, using the current rate of decline of landfill capacity and forecasting into the future would lead to the inevitable conclusion that there would be no void space remaining. However, this is not a credible scenario as if there is still a need for landfill, then the Waste Planning Authorities (WPA) will need to consent new landfill capacity to replace that which has been used up. Therefore, non-hazardous landfill capacity is assumed to remain the same as the current baseline, as outlined in **Table 14-6**.

14.5 Potential for Likely Significant Effects

Overview

14.5.1 **Table 14-8** summarises the main types of materials that would be used and the wastes that are likely to arise during the construction and operation phases of the Proposed Scheme.

Table 14-8 Estimated Types of Material Use and Waste Arising from the Construction of the Proposed Scheme

Activity	Material Use	Waste Arising
Site remediation, preparation and earthworks, including excavation.	• Fill material for construction purposes. • Primary/secondary/ recycled aggregates for ground stabilisation. • Topsoil and subsoil for landscaping and restoration.	• Surplus excavated materials including from tunnelling. • Surplus topsoil and subsoil. • Vegetation from site clearance.
Construction	• Main construction materials including: • Aggregates (including well graded materials, granular fill, backfill, pipe bedding and drainage media). • Asphalt and bituminous materials. • In-situ cast concrete. • Steel reinforcing bar (for reinforced concrete). • Precast concrete products (components, kerbs, drainage pipes, chambers and channels)	• Excess, offcuts and broken/damaged construction materials. • Packaging from materials delivered. • Construction worker wastes from offices and rest areas/ canteens. • Waste oils from construction plant.
Operation	• Materials required in the maintenance and replacement of plant/ equipment as a result of general wear and	• Excess, offcuts and broken/damaged materials used in the maintenance of

Activity	Material Use	Waste Arising
	tear and life expectancy.	replacement of plant/equipment. • Packaging from materials delivered. • Worker wastes from maintenance staff.
Decommissioning	• Materials required in the removal of above ground infrastructure.	• Excess, offcuts and broken/damaged materials used in the removal of above ground infrastructure. • Packaging from materials delivered. • Worker wastes from maintenance staff.

Construction Phase

14.5.2 On the basis of the expected materials requirements and waste arisings for the construction of the Proposed Scheme, as summarised within **Table 14-8**, the following potential effects have been identified which would require further assessment in the ES:

- a. changes in demand for materials; and
- b. changes in available landfill void capacity (non-hazardous, inert and hazardous).

Operation Phase

14.5.3 On the basis of the expected materials requirements and waste arisings for the operation of the Proposed Scheme, changes in demand for materials and changes in available landfill void capacity during operation are considered negligible in relation to the scale and nature of the Proposed Scheme. During operation the pipeline will require minimal maintenance and replacement of plant/equipment using minimal quantities of material and generating minimal quantities of waste. Therefore, a materials and waste assessment for operation has been scoped out.

Decommissioning

14.5.4 The Proposed Scheme is intended to become part of London's critical infrastructure with no decommissioning proposed. However, if

decommissioning were to be required, it is likely that minor works would be needed to remove above ground infrastructure. Underground pipelines are expected to be left in-situ to minimise adverse environmental effects. Standard good practice management measures and compliance with the relevant waste legislation at the time would avoid any likely significant effects, considering the small scale of works required. The likely quantities and types of materials that may be required are considered negligible in relation to the scale and nature of the Proposed Scheme. Therefore, a materials and waste assessment for decommissioning has been scoped out.

14.6 Assessment Methodology

14.6.1 This section outlines the methodology that will be employed for assessing the likely significant effects associated with materials and waste. The ISEP Guidance (Ref 14.1) offers two methods for the assessment of waste:

- a. Method W1 – void capacity has been selected as this is a more detailed methodology and is appropriate for larger and more complex projects.
- b. Method W2 – landfill diversion is a simpler approach and deemed to be less robust than Method W1. Developments are compared to a good practice landfill diversion rate of 90% (as achieved and exceeded by major UK developments and organisations).

14.6.2 Method W1 will be used in the assessment.

Methodology for Determining Construction and Operational Effects

Materials

14.6.3 Effects upon materials during construction and operation of the Proposed Scheme are assessed by:

- a. establishing the baseline for national or regional availability of key construction materials by weight;
- b. assessing the sensitivity of materials as related to the availability and types to be consumed by the Proposed Scheme during construction;
- c. establishing the quantities of key construction materials required for the construction and operation of the Proposed Scheme; and
- d. comparing the total quantities of key construction materials with the material availability (utilising a percentage approach).

Waste

14.6.4 Effects upon waste during construction and operation of the Proposed Scheme are assessed by:

- a. establishing the baseline landfill void capacity in the Expansive Study Area;
- b. assessing the sensitivity of landfill void capacity;
- c. establishing the quantities of waste to be generated during construction and operation of the Proposed Scheme; and
- d. comparing the total waste arising from the Proposed Scheme against the landfill void capacity (using a percentage approach) assuming a worst-case scenario that all waste goes to landfill.

Sensitive Receptors

14.6.5 The sensitive receptors for this assessment are:

- a. materials, national (steel) and regional (aggregates, asphalt and concrete) availability of key construction materials – as outlined in the ISEP Guidance (Ref 14.1): *“Materials are, in their own right, sensitive receptors. Consuming materials impacts upon their immediate and (in the case of primary material) long-term availability; this results in the depletion of natural resources and adversely impacts the environment.”*;
- c. landfill void capacity in the Expansive Study Area of London and the South East (non-hazardous landfill void capacity) and England (hazardous landfill void capacity) – as defined in the ISEP Guidance (Ref 14.1): *“Landfill is a finite resource, and hence – through the ongoing disposal of waste – there is a continued need to expand existing and develop new facilities. This requires the depletion of natural and other resources which, in turn, adversely impacts the environment.”*; and
- d. safeguarded mineral sites (as stated in paragraph 1.4.1.14, the ISEP Guidance (Ref 14.1)) and waste sites.

14.6.6 The sensitivity of materials relates to the availability and type of construction materials to be consumed by the Proposed Scheme. The ISEP Guidance (Ref 14.1) criteria described in **Table 14-9** will be used to determine the sensitivity of materials.

Table 14-9 Materials Receptor Sensitivity

Sensitivity	Criteria for Materials Receptor Sensitivity
Very High	On balance, the key materials required for the construction and operation of the Proposed Scheme are forecast are known to be insufficient in terms of production, supply and/or stock. <i>and/or</i>

Sensitivity	Criteria for Materials Receptor Sensitivity
	Comprise no sustainable features and benefits compared to industry-standard materials.
High	On balance, the key materials required for the construction and operation of the Proposed Scheme are forecast (through trend analysis and other information) to suffer from known issues regarding supply and stock. <i>and/or</i> Comprise little or no sustainable features and benefits compared to industry-standard materials.
Medium	On balance, the key materials required for the construction and operation of the Proposed Scheme are forecast (through trend analysis and other information) to suffer from some potential issues regarding supply and stock. <i>and/or</i> Are available comprising some sustainable features and benefits compared to industry-standard materials.
Low	On balance, the key materials required for the construction and operation of the Proposed Scheme are forecast (through trend analysis and other information) to be generally free from known issues regarding supply and stock. <i>and/or</i> Are available comprising a high proportion of sustainable features and benefits compared to industry-standard materials.
Negligible	On balance, the key materials required for the construction and operation of the Proposed Scheme are forecast (through trend analysis and other information) to be free from known issues regarding supply and stock <i>and/or</i> Are available comprising a very high proportion of sustainable features and benefits compared to industry-standard materials*.
* Subject to supporting evidence, sustainable features and benefits could include, for example, materials or products that: comprise reused, secondary or recycled content (including excavated and other arisings);	

Sensitivity	Criteria for Materials Receptor Sensitivity
	support the drive to a circular economy; or in some other way reduce lifetime environmental impacts.

- 14.6.7 The sensitivity of waste relates to availability of landfill capacity in the absence of the Proposed Scheme. As outlined in the ISEP Guidance (Ref 14.1) “*landfill capacity is recognised as an unsustainable and increasingly scarce option for managing waste*”. The sensitivity of landfill capacity is assessed based on a review of historic landfill void capacity trends where available and information from relevant policy documents.
- 14.6.8 The criteria described within **Table 14-10** and **Table 14-11** will be used to determine the sensitivity of landfill capacity.

Table 14-10 Inert and Non-hazardous Landfill Capacity Sensitivity

Sensitivity	Criteria for Inert and Non-hazardous Landfill Capacity Sensitivity
Very High	Across the construction and operation phases, the baseline/future baseline (i.e. without the Proposed Scheme) of regional inert and non-hazardous landfill capacity is: • expected to reduce very considerably (by >10%); • expected to end during construction or operation; • already known to be unavailable; or • would require new capacity or infrastructure to be put in place to meet forecast demand.
High	Across construction and operation phases, the baseline/future baseline (i.e., without the Proposed Scheme) of regional inert and non-hazardous landfill capacity is expected to reduce considerably: by 6-10% as a result of wastes forecast.
Medium	Across the construction and operation phases, the baseline/future baseline (i.e. without the Proposed Scheme) of regional inert and non-hazardous landfill capacity is expected to reduce noticeably by 1-5% as a result of wastes forecast.
Low	Across the construction and operation phases, the baseline/future baseline (i.e. without the Proposed Scheme) of regional inert and non-hazardous landfill capacity is expected to reduce minimally by <1% as a result of wastes forecast.
Negligible	Across the construction and operation phases, the baseline/future baseline (i.e. without the Proposed Scheme) of regional inert and non-hazardous landfill capacity is expected to

Sensitivity	Criteria for Inert and Non-hazardous Landfill Capacity Sensitivity
	remain unchanged or is expected to increase through a committed change in capacity.

Table 14-11 Hazardous Landfill Capacity Sensitivity

Sensitivity	Criteria for Hazardous Landfill Capacity Sensitivity
Very High	Across the construction and operation phases, the baseline/future baseline (i.e., without the Proposed Scheme) of regional (or where justified, national) hazardous landfill capacity is: • expected to reduce very considerably (by >1%); • expected to end during construction or operation; • already known to be unavailable; or • would require new capacity or infrastructure to be put in place to meet forecast demand.
High	Across the construction and operation phases, the baseline/future baseline (i.e. without the Proposed Scheme) of regional (or where justified, national) hazardous landfill capacity is expected to reduce considerably by 0.5-1% as a result of wastes forecast.
Medium	Across the construction and operation phases, the baseline/future baseline (i.e. without the Proposed Scheme) of regional (or where justified, national) hazardous landfill capacity is expected to reduce noticeably by 0.1-0.5% as a result of wastes forecast.
Low	Across the construction and operation phases, the baseline/future baseline (i.e. without the Proposed Scheme) of regional (or where justified, national) hazardous landfill capacity is expected to reduce minimally by <0.1% as a result of wastes forecast.
Negligible	Across the construction and operation phases, the baseline/future baseline (i.e. without the Proposed Scheme) of regional (or where justified, national) hazardous landfill capacity is expected to remain unchanged or is expected to increase through a committed change in capacity.

Impact Assessment Methodology

Magnitude

- 14.6.9 The magnitude of impact describes the degree of variation from the baseline conditions as result of the Proposed Scheme. The methodology for assessing the magnitude of impact from materials comprises a percentage-based approach that determines the influence of construction materials use on the baseline national demand from the construction of the Proposed Scheme. The ISEP Guidance (Ref 14.1) criteria used to assess the magnitude of impact for materials are provided within **Table 14-12**.

Table 14-12 Materials Magnitude of Impacts

Magnitude	Criteria for Materials Magnitude of Impacts
Major	Consumption of one or more materials is >10% by volume of the national* or regional baseline availability. <i>and/or</i> More than one allocated mineral site is substantially sterilised by the Proposed Scheme rendering it inaccessible for future use.
Moderate	Consumption of one or more materials is between 6-10% by volume of the national* or regional baseline availability. <i>and/or</i> One allocated mineral site is substantially sterilised by the Proposed Scheme rendering it inaccessible for future use.
Minor	Consumption of one or more materials is between 1-5% by volume of the national* or regional baseline availability. <i>and/or</i> The Proposed Scheme has potential to adversely and substantially impact access to one or more allocated mineral site (in their entirety), placing their future use at risk.
Negligible	Consumption of no individual material type is equal to or greater than 1% by volume of the national* or regional baseline availability.
No change	Consumption of no materials is required.
*A national baseline is used in the absence of regional construction material consumption data.	

14.6.10 The methodology for assessing the magnitude of impact for waste comprises a percentage-based approach that determines the influence of waste generation from constructing the Proposed Scheme on the baseline landfill capacity. The ISEP Guidance criteria (Ref 14.1) used to assess the magnitude of impact for materials and waste are provided within **Table 14-13** and **Table 19-14**.

Table 14-13 Inert and Non-hazardous Waste - Magnitude of Impact

Magnitude	Criteria for Waste Magnitude of Impacts
Major	Waste generated by the Proposed Scheme will reduce Expansive Study Area landfill capacity baseline [#] by >10%.
Moderate	Waste generated by the Proposed Scheme will reduce Expansive Study Area landfill capacity baseline [#] by 6-10%.
Minor	Waste generated by the Proposed Scheme will reduce Expansive Study Area landfill capacity baseline [#] by 1-5%.
Negligible	Waste generated by the Proposed Scheme will reduce Expansive Study Area landfill capacity baseline [#] by <1%.
No change	Zero waste generation and disposal from the Proposed Scheme.
# Forecast as the worst-case scenario, during a defined construction and/or operation phase.	

Table 14-14 Hazardous Waste - Magnitude of Impact

Magnitude	Criteria for Hazardous Waste Magnitude of Impacts
Major	Waste generated by the Proposed Scheme will reduce Expansive Study Area landfill capacity baseline [#] by >10%.
Moderate	Waste generated by the Proposed Scheme will reduce Expansive Study Area landfill capacity baseline [#] by 6-10%.
Minor	Waste generated by the Proposed Scheme will reduce Expansive Study Area landfill capacity baseline [#] by 1-5%.
Negligible	Waste generated by the Proposed Scheme will reduce Expansive Study Area landfill capacity baseline [#] by <1%.
No change	Zero waste generation and disposal from the Proposed Scheme.
# Forecast as the worst-case scenario, during a defined construction and/or operation phase.	

Significance of Effects

14.6.11 **Table 14-15** describes the effect thresholds used in determining the significance of potential effects and **Table 14-16** shows the significance of the effects (Ref 14.1).

Table 14-15 Effect Thresholds

		Magnitude of Impact				
		No change	Negligible	Minor	Moderate	Major
Sensitivity of Receptor	Very High	Neutral	Slight	Moderate or large	Large or very large	Very large
	High	Neutral	Slight	Slight or moderate	Moderate or large	Large or very large
	Medium	Neutral	Neutral or slight	Slight	Moderate	Moderate or large
	Low	Neutral	Neutral or slight	Neutral or slight	Slight	Slight or moderate
	Negligible	Neutral	Neutral	Neutral or slight	Neutral or slight	Slight

Table 14-16 Significance of Effect

Effects	Materials	Waste
Moderate	Significant	Significant
Large		
Very large		
Neutral	Not significant	Not significant
Slight		

14.7 Design, Mitigation and Enhancement Measures

14.7.1 The following mitigation measures will be considered and implemented where practicable during the design phases and subsequent construction work and reported on in the ES:

- a. Design for reuse and recovery: identifying, securing and using materials that already exist on-site, or can be sourced from other local projects e.g. within London.

- b. Design for materials optimisation: simplifying layout and form to minimise material use, using standard design parameters, balancing cut and fill, maximising use of renewable materials e.g. wood and materials with recycled content.
- c. Design for off-site construction: maximising use of prefabricated structure and components, encouraging a process of assembly rather than construction.
- d. Design for the future (deconstruction and flexibility): identify how materials can be designed to be more easily adapted over an asset lifetime and how deconstructability of elements can be maximised at end of first life.
- e. Design for waste and material asset efficient procurement: identify and specify materials that can be acquired responsibly, in accordance with a recognised industry standard.
- f. Engineering plan configurations and layouts that show how the most effective use of materials and arisings can be achieved.

14.7.2 A Framework CEMP will be prepared for submission with the DCO Application, setting out the key measures to be employed during the Proposed Scheme's construction phase to control and minimise the likely significant effects on the environment. A Framework SWMP will also accompany the DCO Application; setting out how waste would be managed during construction and identifying practicable opportunities to apply circular economy principles and to prevent, reuse and recycle waste.

14.7.3 A CEMP and SWMP would be prepared by the construction contractor in accordance with the Framework CEMP and Framework SWMP prior to construction.

14.7.4 The following standard construction practices would be applied to the Proposed Scheme where practicable to reduce material use and waste generated:

- a. agreements with material suppliers to reduce the amount of packaging or to participate in a packaging take-back scheme;
- b. implementation of a 'just-in-time' material delivery system where possible to avoid materials being stockpiled, which can increase the risk of damage and subsequent disposal as waste;
- c. attention to material quantity requirements to avoid over-ordering and the generation of waste materials due to surplus;
- d. reuse of materials on-site where practicable, e.g. reuse of excavated materials;

- e. off-site prefabrication, where practicable, including the use of prefabricated structural elements;
 - f. segregation of waste at source, where practicable, to facilitate a high proportion and high-quality recycling; and
 - g. off-site reuse, recycling and recovery of materials and waste where reuse on-site is not practicable, e.g. through use of an off-site waste segregation or treatment facility or for direct reuse or reprocessing offsite.
- 14.7.5 Excavated material would be managed in accordance with a Waste Framework Directive (Ref 14.2) exclusion, exemption, environmental permit or a Materials Management Plan (MMP) developed under the CL:AIRE Definition of Waste: Development Industry Code of Practice (Ref 14.34). The construction contractor will determine the regulatory route to support the reuse of excavated materials, minimise off-site disposal; and to demonstrate the necessary lines of evidence to support the proper reuse/off-site disposal of materials and comply with regulatory guidance.
- 14.7.6 Embedded measures will be considered prior to the assessment of effects to avoid considering assessment scenarios that are unrealistic in practice, i.e. do not take account of measures even though they are likely to be standard practice (tertiary mitigation) and/or form part of the design of the Proposed Scheme (mitigation by design). These will then be followed through the assessment to make sure realistic likely environmental effects are identified. Where likely significant adverse effects are identified after considering these embedded measures, additional mitigation will be considered, developed and proposed, where practicable.
- 14.7.7 The Proposed Scheme will aim to apply circular economy principles and
- 14.7.8 prioritise waste prevention, followed by preparing for reuse, recycling and recovery and lastly disposal to landfill as per the waste hierarchy (**Plate 14-1**).

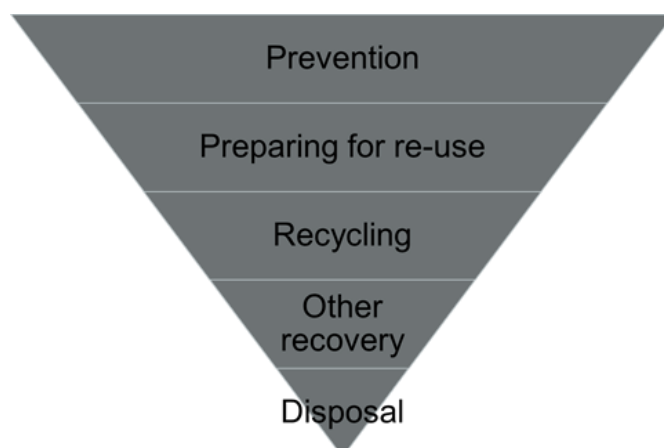


Plate 14-1: The Waste Hierarchy, from Defra's Guidance on Applying the Waste Hierarchy (Ref 19.37), recreated by AECOM

- 14.7.9 During operation management of waste will be in accordance with the relevant regulations and waste will be transported by licensed waste hauliers to waste management sites, which hold necessary regulatory authorisation and/or permits for those wastes consigned to them.

14.8 Assumptions, Limitations and Uncertainties

- 14.8.1 The following limitations and assumptions have been identified in relation to materials and waste:

- a. Waste producers have a legal duty of care to manage their waste in accordance with regulations and to make sure any waste leaving the site where it is generated is transferred to a suitably licensed facility for further treatment or disposal.
- b. Facilities transferring, treating or disposing of waste must be either licensed or apply for an exemption from a licence, and impacts arising from the operation of waste management facilities are considered as part of the planning and permitting process for these facilities themselves.
- c. As part of their planning function, WPA are required to make sure sufficient land is available to accommodate facilities for the treatment of all waste arising in the area, either within the WPA area, or through export to suitable facilities in other areas.
- d. Minerals Planning Authorities (MPA) are similarly required to make sure an adequate supply of minerals, sufficient to meet the needs of national and regional supply policies, and local development needs.
- e. The materials and waste scoping has been undertaken on the basis of information available at the time of the writing.

14.9 Summary of Elements Scoped in or Scoped Out

- 14.9.1 A summary of the elements scoped in or out of the materials and waste assessment is presented in **Table 14-17**.

Table 14-17 Summary of scope for materials and waste assessment

Likely Significant Effect	Phase	Scoped In	Scoped Out	Justification
Changes in demand for materials	Construction	✓		The quantities and types of construction materials to be used are not yet known at this stage. Given this, on a precautionary basis, potential likely significant effects on demand for materials have been scoped into the EIA.
Changes in demand for materials	Operation		✓	Forecast effects are (using professional judgement on the likely quantities and types of materials) considered negligible.
Changes in demand for materials	Decommissioning		✓	Specific assessment of decommissioning effects from materials and waste is scoped out on the basis that the Proposed Scheme is likely to be operated indefinitely. Should decommissioning be required, it is anticipated that only minor works would be necessary to remove above ground infrastructure. Consequently, the likely quantities and types of materials that may be required are considered negligible.
Changes in available landfill void capacity	Construction	✓		The quantities and types of waste to be generated are not yet known at this stage. Therefore, on a precautionary basis, potential likely significant effects on landfill capacity have been scoped into the EIA.
Changes in available landfill void capacity	Operation		✓	During operation the pipeline will require minimal maintenance and replacement of plant/equipment, generating minimal volumes of waste in relation to the scale and nature of the Proposed Scheme and has been scoped out of the EIA.
Changes in available landfill void capacity	Decommissioning		✓	A specific assessment of decommissioning effects from materials and waste is scoped out on the basis that the Proposed Scheme is likely to be operated indefinitely. Should decommissioning be required, it is anticipated that only minor works would be necessary to remove above ground

Likely Significant Effect	Phase	Scoped In	Scoped Out	Justification
				infrastructure. Consequently, minimal volumes of waste are expected relative to the scale and nature of the Proposed Scheme, and these effects have therefore been scoped out of the EIA.
Changes to safeguarded mineral sites	Construction, Operation and Decommissioning		✓	No safeguarded mineral sites have been identified to date in the EIA Scoping Boundary. Given this, likely significant effects on safeguarded mineral sites are scoped out of the EIA.
Changes to safeguarded allocated waste sites	Construction, Operation and Decommissioning		✓	Two installations have been identified within the EIA Scoping Boundary. Both are owned and operated by the Applicant, and the whole Riverside Campus which includes Riverside 1 and Riverside 2 is designated as a Strategic Waste Management Site. This includes the safeguarded wharf (Middleton Jetty) within the EIA Scoping Boundary at the same location. Since the waste sites and wharf are built assets, none are likely to be permanently affected; Proposed Scheme works in this area would not prejudice the sites and wharf's continued role, operation or effective, beneficial use.
Waste arising from extraction, processing and manufacture of construction components and products	Construction, Operation and Decommissioning		✓	This assumes that these products and materials are being developed in a manufacturing environment with their own waste management plans, facilities, and supply chain, which are potentially in different regions of the UK or the world and therefore outside of the geographical scope of this study. Such matters cannot be accurately predicted and assessed in the ES as they relate to procurement decisions that cannot be assured.

Likely Significant Effect	Phase	Scoped In	Scoped Out	Justification
Other environmental likely significant effects associated with the management of waste from the Proposed Scheme e.g., on water resources, air quality, noise or traffic resulting from the generation, handling, on-site temporary storage or off-site transport of materials and waste	Construction, Operation and Decommissioning		✓	These are addressed separately in other relevant chapters of this EIA Scoping Report (refer to Volume 1, Chapter 11: Human Health , Volume 1, Chapter 9: Ground Conditions , Volume 1, Chapter 15: Noise and Vibration , Volume 1, Chapter 18: Transport and Volume 1, Chapter 19: Water Environment and Flood Risk).
Off-site environmental likely significant effects at waste management facilities	Construction, Operation and Decommissioning		✓	ISEP Guidance (Ref 14.1) states: <i>“the indirect impacts of off-site waste management facilities and material production facilities are generally assumed to be assessed (and where necessary mitigated) under the planning and permitting regime for those sites and thus do not normally require assessment as part of an EIA for a development that uses such facilities for material supply or waste management”</i>. This approach is considered applicable for the Proposed Scheme, and no likely significant indirect effects are anticipated to arise specifically from the management of the Proposed Scheme’s waste at off-site waste facilities,

Likely Effect	Significant	Phase	Scoped In	Scoped Out	Justification
					which will already hold the relevant consents and permits for the management of waste.

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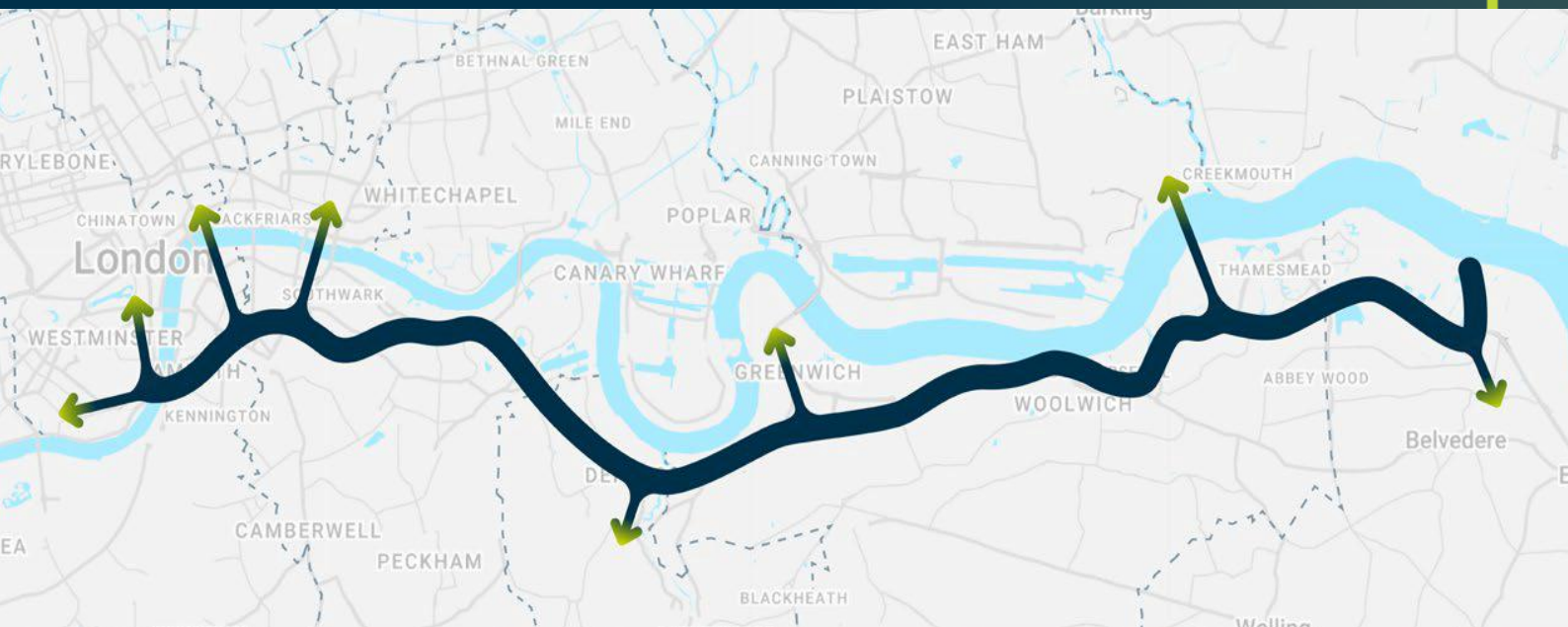
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Environmental Impact Assessment Scoping Report

Volume 1: Main Report

Chapter 15: Noise and Vibration



Cory Environmental Holdings Limited

July 2026

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15. Noise and Vibration

15.1 Introduction

- 15.1.1 This chapter identifies the potential for likely significant effects of the Proposed Scheme on noise and vibration. It sets out the proposed methodology for the noise and vibration assessment in the Environmental Statement (ES) and identifies those impacts that can be scoped into or out of the assessment of likely significant effects.
- 15.1.2 This chapter sets out the methodology for assessing noise and vibration effects on human receptors and vibration effects on structures. The consideration of noise and vibration impacts on heritage receptors forms part of the scope of assessment included within **Volume 1, Chapter 10: Historic Environment**. The consideration of noise and vibration impacts on ecological receptors forms part of the scope of assessment included within **Volume 1, Chapter 8: Ecology**. However, historic environment and ecological receptors will be included in the noise and vibration assessment to inform these chapters, where required.

15.2 Study Area

- 15.2.1 For the purposes of identifying potential likely significant airborne construction noise effects, a Study Area has been defined to include noise-sensitive receptors (NSR) within 300m of the EIA Scoping Boundary¹. This is based on BS 5228-1:2009+A1:2014 (Ref 15.1), which states that at “*distances over 300m noise predictions have to be treated with caution, especially where a soft ground correction factor has been applied, because of the increasing importance of meteorological effects.*”
- 15.2.2 The Study Area is illustrative for the purposes of EIA Scoping. An updated Study Area will be provided within the ES following the same methodology of applying a 300m buffer from above ground works.
- 15.2.3 BS 5228-2 (Ref 15.2) does not contain any information on distances that construction vibration should be assessed up to. Given this, reference is made to Design Manual for Roads and Bridges (DMRB) LA 111 (Ref 15.3), which identifies a distance of 100m as sufficient to encompass ground-borne vibration (and noise) effects for residential and non-residential receptors.
- 15.2.4 To account for likely significant ground-borne noise and vibration effects at very sensitive receptors (e.g. laboratories, sound recording/broadcast studios, theatres, concert halls), a Study Area is set at a distance of 200m from the EIA Scoping Boundary. This Study Area is based on the screening distances for

¹ All references to ‘EIA Scoping Boundary’, correspond to the area shown in **Volume 2, Figure 1-1**.

tunnel boring activities (considered to be the scheme works that could cause the largest amount of noise and vibration) from the HS2 scope and methodology report (Ref 15.4). In lieu of relevant National Policy or British Standards this is accepted as best practice for large infrastructure projects of this nature.

- 15.2.5 Construction road traffic noise effects will be assessed with reference to guidance presented in the Design Manual for Road and Bridges (DMRB) LA 111 Noise and vibration (Ref 15.3) and will cover all affected links identified in the transport assessment (as described **Volume 1, Chapter 18: Transport**). In accordance with this guidance, impacts will be considered where noise emissions from a given link are expected to increase by more than 1 decibel (dB).

15.3 Relevant Legislation, Planning Policy and Guidance

- 15.3.1 Legislation, planning policy and guidance relevant to the noise and vibration assessment is outlined below.

Legislation

- 15.3.2 The applicable legislation includes:
- Control of Pollution Act 1974 (CoPA) (Ref 15.5) - Aimed at controlling and preventing a wide range of environmental pollution including construction noise. CoPA covers section 61 consents in relation to construction noise impacts; and
 - Environmental Protection Act 1990 (EPA) (Ref 15.6) - The EPA is designed to improve the control of pollution by providing a legal framework for addressing and taking action against noise that is prejudicial to health or significantly interferes with the reasonable enjoyment of property. It includes provisions for the service of abatement notices and investigation of complaints.

National Planning Policy

Overarching National Policy Statement for Energy (NPS EN-1)

- 15.3.3 The relevant national policies from NPS EN-1 for noise and vibration are summarised within **Table 15-1**. These documents have informed the assessment methodology and criteria set out in this chapter.

Table 15-1: Overarching National Policy Statement for Energy

National Policy	Summary of Requirements	Relevance to the Assessment
Overarching National Policy	Assess and control noise impacts, including	Construction and operational effects will be assessed.

National Policy	Summary of Requirements	Relevance to the Assessment
Statement for Energy (NPS EN-1) (Ref 15.7)	cumulative effects, for both construction and operation. Avoid significant adverse effects where possible. Mitigate and minimise adverse effects using all reasonable measures (section 5.12).	Mitigation will be provided to reduce adverse effects and avoid significant effects, where possible.

National Planning Policy Framework (NPPF)

15.3.4 The following paragraphs from the NPPF (Ref 15.8) are considered relevant to the assessment of potential noise and vibration effects presented in this chapter:

- a. Paragraph 187 with regards to preventing development that would give rise to unacceptable levels of noise; and
- b. Paragraph 198 with regards to mitigating and reducing to a minimum potential adverse impact resulting from noise from new development and avoiding noise giving rise to significant adverse effects on health and quality of life.

15.3.5 The following paragraphs from Section 17-P3: Living conditions and pollution of the December 2025 draft NPPF, if adopted, would also be considered relevant:

- a. Paragraph 1c with regards to not giving rise to, or contributing to, unacceptable levels of noise on or beyond the site;
- b. Paragraph 2a with regards to mitigating the effects of existing pollution where necessary to secure acceptable conditions for occupiers, users and the wider area, taking cumulative effects into consideration; and
- c. Paragraph 2c with regards to preventing levels of noise exposure which would have a significant observed adverse effect and to maintain the character of tranquil areas.

15.3.6 The ES will demonstrate how unacceptable levels of noise are avoided. Mitigation will be provided to reduce adverse effects and avoid significant effects, where possible.

Noise Policy Statement for England (NPSE) (Ref 15.9)

15.3.7 NPSE requires the effective management and control of environmental, neighbour and neighbourhood noise by:

- a. avoiding significant adverse effects on health and quality of life;
- b. mitigating and minimising adverse impacts on health and quality of life; and
- c. where possible, contributing to the improvement of health and quality of life.

15.3.8 The ES will demonstrate how these three aims of the NPSE are achieved by the Proposed Scheme.

Local and Neighbourhood Planning Policy

15.3.9 The local and neighbourhood planning policy listed in **Table 15-2** are considered relevant to the assessment of potential noise and vibration impacts presented in this chapter.

Table 15-2: List of Relevant Local and Neighbourhood Policy – Noise and Vibration

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
The London Plan (Ref 15.10)	Policy D14 'Noise'	The ES will consider the likely significant effects of noise on health and quality of life, and present measures for reduction through good design and mitigation.
London Borough of Bexley (LBB)	Bexley Local Plan (Ref 15.11) – Policy DP11 'Achieving High-Quality Design'	The ES would describe measures embedded within the Proposed Scheme, so that no unacceptable effects on neighbouring residents, businesses and community facilities occur.
Royal Borough of Greenwich (RBG)	Royal Greenwich Local Plan (Ref 15.12) - Policy E(a) 'Pollution'	The ES would demonstrate that amenity is protected and unacceptable emissions of noise or vibration are prevented by the Proposed Scheme.
	Draft Local Plan Regulation 18 (Ref 15.13) - Policy EN5 'Local Environmental Impacts'	The ES would demonstrate that the Proposed Scheme avoids exposure to unacceptable effects of noise and vibration.

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
London Borough of Lewisham (LBLe)	Local Plan Policy (Ref 15.14) – QD26 ‘Amenity and agent of change’	The ES would demonstrate that noise and vibration is effectively managed to reduce impacts.
London Borough of Southwark (LBS)	Southwark Plan (Ref 15.15) - Policy P66 ‘Reducing Noise Pollution and Enhancing Soundscapes’	The ES would demonstrate that the Proposed Scheme avoids unacceptable noise effects and would implement appropriate mitigation.
London Borough of Lambeth (LBLa)	Lambeth Local Plan (Ref 15.16) - Policy Q2 ‘Amenity’	The ES would demonstrate that unacceptable noise impacts are reduced in line with London Plan policy D14.
	South Bank & Waterloo Neighbourhood Plan 2017-2032 (Ref 15.17)	N/A No policies from this Neighbourhood Plan are relevant to the assessment in this Scoping Chapter
	Kennington Oval and Vauxhall Neighbourhood Plan 2035 (Ref 15.18)	N/A No policies from this Neighbourhood Plan are relevant to the assessment in this Scoping Chapter
London Borough of Barking and Dagenham (LBBD)	Barking and Dagenham Local Plan (Ref 15.19) – Policy DMSI3 ‘Nuisance’	The ES would demonstrate that the Proposed Scheme manages mitigates noise to protect neighbouring amenity.
London Borough of Tower Hamlets (LBTH)	Tower Hamlets Local Plan (Ref 15.20) – Policy D.ES9 ‘Noise and Vibration’	The ES would demonstrate that environmental noise is effectively controlled and managed by the Proposed Scheme.
City of London (CoL)	City Plan (Ref 15.21) - Policy DM 15.7 ‘Noise and Light Pollution’	The ES would demonstrate that noise impacts on surrounding uses are

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	City Plan 2040 (Ref 15.22) - Policy HL3 'Noise'	assessed, minimised and mitigated such that unacceptable effects on amenity are avoided.
City of Westminster (CoW)	Westminster City Plan (Ref 15.23) - Policy 37 'Local environmental impacts'	The ES would demonstrate that noise and vibration environmental impacts are minimised by the Proposed Scheme to an acceptable level.
	Victoria Neighbourhood Plan 2025 - 2040 (Ref 15.24)	N/A No policies from this Neighbourhood Plan are relevant to the assessment in this Scoping Chapter
Royal Borough of Kensington and Chelsea (RBKC)	Kensington and Chelsea Local Plan (Ref 15.25) Policy GB8 'Noise and Vibration'	Residential amenity will be assessed with appropriate and noise and vibration mitigation proposed where necessary.

Relevant guidance

15.3.10 The following guidance is considered relevant to the assessment of noise and vibration:

- a. Planning Practice Guidance: Noise (PPGN) Ref 15.26) advises on how planning can manage potential noise impacts in new development by exploring how noise impacts can be observed, what the effects are and how they can be addressed.
- b. BS 7445 'Description, measurement and assessment of environmental noise — Part 1: Basic quantities and assessment procedures' (Ref 15.27) provides guidance on the description and measurement of environmental noise, including standard acoustic indices and monitoring procedures.
- c. BS 5228-1 'Code of practice for noise and vibration control on construction and open sites. Noise' (Ref 15.1) provides a 'best practice' guide for noise control and includes Sound Power Level (Lw)

data for individual plant as well as a calculation method for noise from construction activities.

- d. BS 5228-2 'Code of practice for noise and vibration control on construction and open sites. Vibration' (Ref 15.2) provides comparable 'best practice' for vibration control, including guidance on the human response to vibration.
- e. BS 4142:2014+A1:2019 'Methods for rating and assessing industrial and commercial sound' (Ref 15.28) can be used for assessing the effect of sound of an industrial nature (such as from electrical equipment) on residential dwellings. The method compares the difference between 'rating level' of the industrial sound, with the 'background sound level' at the receptor position.
- f. BS 7385-2 'Evaluation and measurement for vibration in buildings. Guide to damage levels from ground-borne vibration' (Ref 15.29) presents guide values for transient and continuous vibration, above which there is a likelihood of cosmetic damage. The standard establishes the basic principles for carrying out vibration measurements and processing the data, with regard to evaluating vibration effects on buildings.
- g. Calculation of Road Traffic Noise (CRTN) 1988 (Ref 15.30) describes the procedures for measuring and calculating noise from road traffic.
- h. DMRB LA 111 (Ref 15.3) sets out the requirements for road projects. Although DMRB LA 111 is only relevant for road projects, it has been referenced when defining the construction traffic noise Study Area and setting construction traffic noise criteria.

15.4 Baseline Conditions and Future Baseline

Existing Baseline

- 15.4.1 When defining the existing baseline, DEFRA Round 4 (2022) strategic noise maps (Ref 15.31) have been referenced. The EIA Scoping Boundary mostly follows major roads, so the baseline sound environment tends to be dominated by noise generated by road traffic, rail traffic and air traffic.
- 15.4.2 Noise Important Areas (NIA) are locations identified as being most affected by high levels of environmental noise. They contain the top 1% of the population exposed to high levels of noise. The EIA Scoping Boundary passes through a number of road and rail NIA, which have been referenced from DEFRA Round 4 (2022) strategic noise maps (Ref 15.31). Identified NIA are presented in **Table 15-3**.

Table 15-3 Noise Important Areas

Noise Receiving Authority	Noise Important Area(s)
LBB	None
RBG	1115, 771, 14031, 13666, 13667, 770, 13678, 14884, 595, 574, 13584
LBLe & LBS	13757
LBLe & RBG	681
LBS	13716, RI_1370, 682, RI_114, 13717, 13762, 13756, 656, 655, 13764, 14773, RI_112, 847, 13765
LBLa & LBS	14786
LBLa	13766, 13797, 13799, RI_1369, 653, 14776
CoL	13786
CoL & LBTH	13785 & 14930
CoL & CoW	14779 & 14778
CoL & LBC	13788
CoW	14775, 13795, 14267, 13800 & RI_108
RBKC & CoW	RI_261, 13801, 13827
RBKC	13825, 13826, 14785, 13823, RI_260, RI_259, 13767

15.4.3 The urban location of the EIA Scoping Boundary means that, in addition to rail and road noise sources, a number of additional noise sources contribute to the baseline noise environment. These sources include:

- a. construction;
- b. commercial activity; and
- c. people and general urban activity.

Future Baseline

15.4.4 The future baseline noise takes into account expected changes such as traffic growth, infrastructure projects (including rail and London Underground) and urban development. The identified dominant sources of noise are road, air and rail traffic. It is not expected that road and rail sources would change materially due to limited capacity for growth on road and rail networks.

15.4.5 No new above ground rail infrastructure is currently proposed that would affect the intensity of train noise with the exception of the proposed Docklands Light

Railway to Beckton Riverside and Thamesmead. This would increase ambient noise conditions at receptors along its route.

- 15.4.6 No underground rail infrastructure upgrades would affect future surface baseline noise levels at sensitive receptors. The Bakerloo Line Extension would generate ground-borne vibration; however, it is expected that the project design would suitably control vibration emissions such that they would not influence the future baseline at sensitive receptors.
- 15.4.7 Increases in aircraft noise may occur in the EIA Scoping Boundary due to airport expansion projects. This is only likely to occur within the project lifespan due to increased aircraft movements at London City Airport (LCY), which has been consented to expand from 6.5 million passengers per annum (mppa) to 9 mppa.
- 15.4.8 Although LCY is allowed to operate with increased capacity, Condition 27 of the decision notice² secures the continuing reduction in size of the 57 dB $L_{Aeq,16h}$ noise contour. The current consent for a 57 dB $L_{Aeq,16h}$ noise contour of no greater than 9.1 km² has been retained and this will reduce to 7.2 km² from the time when the airport reaches 9 mppa. The reduction in noise contour area would be achieved through old aircraft being phased out and the fleet transitioning to new, quieter aircraft. Given this, the future expansion of LCY would not affect future $L_{Aeq,T}$ noise levels.
- 15.4.9 In developing the ES, consideration will be given to the emerging position in respect of the expansion of Heathrow Airport, as more information becomes available for that project (noting that there are currently two potential proposals).

15.5 Potential for Likely Significant Effects

Construction Phase

- 15.5.1 Construction is anticipated to commence in 2030 with the earliest operational date being in 2034. Continuous construction noise and vibration impacts are anticipated at all hours of the day across the Proposed Scheme (as a worst-case assumption) for the entirety of the construction phase.
- 15.5.2 Noise and vibration during the construction phase of the Proposed Scheme have the potential to result in disturbance at nearby NSR. It is proposed that the following potential noise and vibration effects during construction of the Proposed Scheme are scoped into the ES:

²MHCLG & DfT (2024) Appeal Decision, Application Ref. 22/03045/VAR. Available at: https://assets.publishing.service.gov.uk/media/66c33ed4057d859c0e8fa728/24-08-19_-_LONDON_CITY_AIRPORT__HARTMANN_ROAD__SILVERTOWN__LONDON_E16_2PX_-_App_No_3326646.pdf [Accessed 05/06/2026]

- a. temporary noise from construction activities;
- b. temporary vibration from construction activities;
- c. temporary noise from construction related traffic along the local road network, including Heavy Goods Vehicles (HGV); and
- d. temporary ground-borne noise and vibration from tunnelling underground.

15.5.3 Although construction activities and construction traffic are temporary, the length of the construction programme means that they have the potential to result in significant effects for a period of no less than four years. However, works at any one location will likely last for a shorter duration, meaning that significant effects at any given individual receptor will occur for a much shorter period of time.

15.5.4 Road traffic can also cause vibration; however, DMRB LA 111 (Ref 15.3) states: “*operational vibration is scoped out of the assessment methodology as a maintained road surface will be free of irregularities as part of project design and under general maintenance, so operational vibration will not have the potential to lead to significant adverse effects*”. Whilst this quote relates to the assessment of a highway scheme, it is relevant as it provides information about how significant vibration effects may be generated by traffic movements on a road with an irregular surface. Local Authorities and Transport for London (TfL) are responsible for maintaining good quality conditions for highways used to access the Proposed Scheme. Therefore, no significant construction traffic vibration effects are expected, and an assessment of construction traffic vibration has been scoped out.

Operation Phase

15.5.5 Details of expected noise and vibration emissions of operational plant within each MAP are currently unknown at this early stage in the project. As a precautionary approach, all potential noise sources in the operation phase are considered to have the potential to result in significant noise effects. It is therefore proposed that permanent noise impacts due to operational plant should be scoped into the ES.

15.5.6 Moving parts in operational plant that may generate vibration are pumps, valves, pipework and electrical plant. These plants generate low levels of vibration that is only likely to be perceptible when in very close proximity to the plant. Given this, no operational plant to be included in the MAP associated with the Proposed Scheme would generate perceptible levels of vibration outside the EIA Scoping Boundary and so, there will be no associated operational vibration effects. It is proposed that operational ground-borne vibration is scoped out of any further assessment.

- 15.5.7 Once in operation, the Proposed Scheme would employ up to eight staff, who are anticipated to be located at Riverside Campus, with occasional maintenance at MAP along the Proposed Scheme as required. This activity is not anticipated to constitute a significant change in road traffic noise levels along the local road network at the operation phase (refer **Volume 1, Chapter 18: Transport**). It is therefore proposed that operational traffic noise is scoped out.

Decommissioning

- 15.5.8 The Proposed Scheme is intended to become part of London's critical infrastructure with no decommissioning proposed. Underground pipelines are expected to be left in-situ to minimise adverse environmental effects. Standard good practice measures would likely be utilised to avoid any likely significant effects, considering the small scale of any works required.
- 15.5.9 Similarly, it is not expected that decommissioning would require significant vehicle movements or large-scale earthworks or demolition. Given this, a detailed assessment of decommissioning stage is proposed to be scoped out.

15.6 Assessment Methodology

Sensitive Receptors

- 15.6.1 The type of noise-sensitive receptors that may experience significant effects due to the construction, operation and decommissioning of the Proposed Scheme are identified in **Table 15-4** as either residential or non-residential.

Table 15-4 Sensitive Receptor Type

Receptor Group	Receptors in Group
Residential	Individual dwellings and private open spaces (e.g. gardens)
Non-residential	Non-residential community facilities such as theatres/auditoria, sound recording/ broadcast studios, educational establishments, places of worship, museums, libraries, hospitals, care homes and designated quiet outdoor spaces/parks

- 15.6.2 Sensitive receptors within the Study Area will be identified using AddressBase Plus data (Ref 15.32), which will then be confirmed during baseline noise surveys, land referencing and consultation responses, including those from relevant local authorities.

Impact Assessment Methodology

- 15.6.3 To assess the potential likely significant effects of the Proposed Scheme, it is necessary to determine the existing noise levels, resources and sensitive

receptors that exist within the Study Area. These are known as baseline conditions and have been considered in this chapter.

- 15.6.4 A survey will be undertaken to define baseline noise levels to support the assessment of construction and operation phase noise effects. Measurement locations shall be focused on sensitive receptor locations (including locations determined in discussion with the authors of the Ecology and Cultural Heritage Chapters of the ES) within the Study Areas around MAP, Riverside Campus, thermal storage areas and construction compounds.
- 15.6.5 At this stage of the project, baseline noise monitoring locations have not been determined. Consultation with relevant local authorities outside of the scoping process will be undertaken regarding the location of noise monitoring equipment.
- 15.6.6 The monitoring procedures will follow guidance from BS 7445-1 (Ref 15.27). Additionally, monitoring procedures set out in BS 4142 (Ref 15.28) will be referenced where data would be used to assess operational noise sources.
- 15.6.7 All noise effects are assumed to be local within the defined Study Area, only affecting receptors within the Study Area, and to be direct in nature; however, defining a likely effect and whether it is significant or not depends on the nature of a noise source.
- 15.6.8 Likely effects have been defined based on guidance set out in the NPSE. The NPSE (Ref 15.9) sets definitions for 'significant adverse effects' and 'adverse effects' using the concepts:
- a. Lowest Observed Adverse Effect Level (LOAEL) – the level above which, as an average response, adverse effects on health and quality of life can be detected; and
 - b. Significant Observed Adverse Effect Level (SOAEL) – the average response level above which, as an average response, significant adverse effects on health and quality of life occur.
- 15.6.9 A new source of noise is assessed through the absolute noise level it generates at sensitive receptors. Where an exceedance of the defined SOAEL for each noise source occurs, it is an indication of a likely significant effect. However, where an existing noise source is changed (i.e. construction traffic changing road traffic noise levels) the assessment of the effect level is defined by the change in noise level.
- 15.6.10 Government policy for noise is based on community exposure response relationships and noise insulation of a typical residential dwelling. Consequently, an assessment based on LOAEL and SOAEL cannot be applied to non-residential sensitive receptors that are sensitive to noise (such as places of worship, theatres, schools etc.). Given this, the approach to the

assessment of non-residential receptors differs from that adopted for residential receptors. Non-residential receptors are considered on a case-by-case basis by considering the applicable design criteria for good internal noise (see paragraph 15.6.27).

Construction Noise and Vibration

- 15.6.11 Noise from construction activities will be calculated using the approach presented in BS 5228-1 (Ref 15.1).
- 15.6.12 Prediction of vibration levels associated with the construction works will be carried out following the procedure identified in Transport Research Laboratory (TRL) Report 429 (Ref 15.33) on ground-borne vibration caused by mechanised construction works, which is specified in BS 5228-2 (Ref 15.2).
- 15.6.13 Noise increases at sensitive receptors due to construction traffic on public roads will be calculated according to the methods given in CRTN and assessed with reference to guidance in DMRB LA 111 (Ref 15.3).
- 15.6.14 Ground-borne noise and vibration will be generated by tunnelling. The empirical methods specified in BS 5228-2 (Ref 15.2) for predicting ground-borne noise and vibration from tunnelling activities (obtained from TRL Report 429 (Ref 15.33)) are not geology-specific. In this work, data for the appropriate geology (clay) from TRL Report 429 will be used to predict the ground-borne noise and vibration from the tunnelling operation.
- 15.6.15 Prediction methodologies for all construction impacts will form part of the technical engagement with local authorities.

Operational Noise

- 15.6.16 The impact of the proposed plant associated with the Proposed Scheme will be assessed following guidance from BS 4142:2014+A1:2019 (Ref 15.28), based on available information on the anticipated operating conditions and the levels of noise generated by the plant. If a schedule of operational plant is not available, suitable criteria for operational noise limits will be defined using baseline noise measurements.

Classification of Effect & Significance Criteria

- 15.6.17 The likely significant effects on noise and vibration will be determined with reference to the guidelines published in relevant British Standards. The significance of an effect is derived from the magnitude of impact and other parameters in relation to the type of receptor and its sensitivity.
- 15.6.18 The number of receptors impacted, duration of impact and sensitivity of receptor all contribute to determining the significance of an effect in addition to the magnitude of the impact. Therefore, the impact criteria refer to 'potential significance' as magnitude of impact alone does not necessarily determine whether a receptor is subject to a significant effect.

Construction Noise Effect Levels

15.6.19 Criteria for assessing enabling works and construction noise effects are presented in **Table 15-5** and have been defined with reference to the London Good Practice Guide – Noise & Vibration Control for Demolition and Construction (Ref 15.34). The values in **Table 15-5** would be adjusted if exceeded by the representative measured ambient noise level at a receptor.

Table 15-5 LOAEL and SOAEL Values

Period	dB L _{Aeq,T} Noise Level	
	LOAEL	SOAEL
Daytime	65	75
Evening	55	65
Night	45	55

Construction Vibration Effect Levels

15.6.20 Vibration levels affecting building occupants arising from surface construction activities will be compared to the criteria shown in **Table 15-6**, adapted from Annex B of BS 5228-2 (Ref 15.2). A potentially significant effect is identified where Peak Particle Velocity (PPV) vibration levels exceed 1.0 mms⁻¹.

Table 15-6 Construction Vibration Assessment Criteria

Effect Level	Vibration Level PPV mms ⁻¹	Description of Effect
LOAEL	0.3	Increasing likelihood of perceptible vibration in residential environments.
SOAEL	1.0	Increasing likelihood of complaint in residential environments but can be tolerated at the lower end of the scale if prior warning and explanation has been given to residents.

15.6.21 BS 7385-2 (Ref 15.29) provides guidance on vibration levels likely to result in cosmetic damage (i.e. much lower than structural damage) and is referenced in BS 5228-2 (Ref 15.2). Guide values for transient vibration, above which cosmetic damage could occur, are reproduced in **Table 15-7**. For continuous vibration, the standard recommends reducing the guide values by half.

Table 15-7 Transient Vibration Guide Values for Cosmetic Building Damage

Type of Building	Peak Component Particle Velocity in Frequency Range of Predominant Pulse	
	4 Hz to 15 Hz	15 Hz and above
Reinforced or framed structures	50 mms-1 at 4 Hz and above	50 mms-1 at 4 Hz and above
Industrial and heavy commercial buildings	15 mms-1 at 4 Hz increasing to 20 mms-1 at 15 Hz	20 mms-1 at 15 Hz increasing to 50 mms-1 at 40 Hz and above
NOTE 1: Values referred to are at the base of the building. NOTE 2: For un-reinforced or light framed structures and residential or light commercial buildings, a maximum displacement of 0.6 mm (zero to peak) is not to be exceeded.		

15.6.22 The probability of building damage tends to zero for transient vibration levels less than 12.5 mms⁻¹ PPV. Criteria for ensuring no risk of building damage due to ground-borne vibration has been defined in **Table 15-8**. A lower level of vibration has been set for potentially vulnerable buildings on a precautionary basis.

Table 15-8 Magnitude of Impact for Building Vibration

Impact Category	Vibration Level, PPV mm/s (continuous)	
	Structurally sound buildings	Potentially vulnerable buildings
High	> 15	> 10
Medium	1 – 15	5–10
Low	5–10	3–5
Very Low	< 5	< 3

15.6.23 Ground-borne noise may be generated by tunnelling. There are no relevant national or international standards setting criteria for ground-borne noise. Therefore, criteria drawn from major infrastructure projects (e.g. Thames Tideway Tunnel; CrossRail; Jubilee Line; High Speed 1 and 2) have been referenced in this scoping report to define LOAEL and SOAEL. **Table 15-9** presents appropriate criteria for residential receivers.

Table 15-9 Effect Levels for Ground-borne Noise - Residential

Effect Level	Ground-borne Noise Level dB L _{pA,S,max}
LOAEL	35
SOAEL	45

Construction Traffic Noise Effect Levels

15.6.24 CRTN (Ref 15.30) presents a procedure for the prediction of road traffic noise. The change in road traffic noise is typically identified as a potentially significant effect where the change is greater than 3 dB i.e. Moderate or Major. Changes in noise level and their resulting magnitudes of impact are presented in **Table 15-10**.

Table 15-10 Effect Levels for Changes in Traffic Noise

Effect Level	Change in Noise Level
Major	5.0 dB or more
Moderate	3.0 – 4.9 dB
Minor	1.0 – 2.9 dB
Negligible	0.1 – 0.9 dB
No change	0.0dB

Operational Noise Effect Levels

15.6.25 The impact of the proposed operational plant will be assessed following guidance from BS 4142 (Ref 15.28). Reference is also made to the Association of Noise Consultants (ANC) 'Guide to BS 4142' (Ref 15.35) and BS 8233:2014 (Ref 15.36) when defining minimum values for LOAEL and SOAEL.

15.6.26 The assessment criteria for noise from fixed plant installations are summarised in **Table 15-11**. The assessment will be based on available information on the operating conditions and the levels of noise generated by plant. Typical background noise levels used to define assessment criteria will be determined based on guidance within BS 4142 (Ref 15.28).

Table 15-11 Operational Noise Assessment Criteria

Effect Level	Rating Level (External) at Receptor, L _{Ar,Tr}	
	Daytime (07:00-19:00) and Evening (19:00-23:00)	Night-time (23:00-07:00)
LOAEL	Less than or equal to the typical background level (L _{A90,T}) – minimum of 35 dB L _{Ar,Tr}	Less than or equal to the typical background level

Effect Level	Rating Level (External) at Receptor, $L_{Ar, Tr}$	
	Daytime (07:00-19:00) and Evening (19:00-23:00)	Night-time (23:00-07:00)
		($L_{A90,T}$) – minimum of 30 dB $L_{Ar, Tr}$
SOAEL	Greater than 10 dB above the typical background noise level – minimum of 45 dB $L_{Ar, Tr}$	Greater than 10 dB above the typical background noise level – minimum of 40 dB $L_{Ar, Tr}$

Non-residential Receptors

15.6.27 The assessment of noise effects at non-residential receptors is based on acoustic design criteria referenced from with BS 8233 (Ref 15.36), BB93 (Ref 15.38) and HTM08-01 (Ref 15.37). The external noise threshold assumes that building envelopes will attenuate noise by at least 30 dB.

Table 15-12 Design Criteria for Non-Residential Receptors

Category of Building	Design Criterion $L_{Aeq,T}$ dB	External Noise Threshold $L_{Aeq,T}$ dB
Theatres / large auditoria	25	55
Sound recording / broadcast studios	20	50
Educational facilities	30-35	65
Places of worship	30-35	65
Hospitals / Hotels	35 day 30 night	65 day 60 night
Museums / Libraries	40-50	80
Offices	35-40	70
Designated outdoor quiet space	50-55	55

15.6.28 In terms of ground-borne noise, criteria for non-residential receptors are presented in **Table 15-13** and have been referenced from major infrastructure projects as per paragraph 15.6.24.

Table 15-13 Threshold of Impact for Ground-borne Noise – Non-Residential

Category of Building	Ground-borne Noise Level dB LpA,S,max
Theatres / large auditoria and concert halls	25
Sound recording / broadcast studios	30
Places of meeting for religious worship / courts / cinemas lecture theatres / museums / small auditoria or halls	35
Offices / schools / colleges / hospitals / hotels / libraries	40

15.6.29 Vibration effects on non-residential buildings will be undertaken with reference to criteria for effects on building occupiers in **Table 15-6** and for building damage in **Table 15-7**.

15.7 Design, Mitigation and Enhancement Measures

- 15.7.1 Mitigation for noise and vibration impacts will be considered where necessary for the protection of sensitive receptors in the vicinity of the Proposed Scheme.
- 15.7.2 Where impacts are predicted during the construction phase, guidance taken from BS 5228-1 (Ref 15.1) and BS 5228-2 (Ref 15.2) will be adopted where appropriate. Furthermore, the DCO will be accompanied by a Framework Construction Environmental Management Plan (CEMP) that will set out the specific measures that will be adopted by the appointed contractor.
- 15.7.3 As set out in **Volume 1, Chapter 5: EIA Approach and Methodology** the DCO Application for the Proposed Scheme will include mechanisms to allow for a one scheme approach to mitigation measures and their approval. This will apply to noise and vibration matters (including the interaction with the provisions of the CoPA and EPA).
- 15.7.4 Where impacts are predicted during the operation phase, this will be reviewed with the wider design team and noise mitigation measures will be provided in accordance with the mitigation hierarchy (avoid, reduce, mitigate).

15.8 Assumptions, Limitations and Uncertainties

- 15.8.1 The following limitations and assumptions have been identified:
- There is no detailed design information available at the time of preparing this Scoping Report. Therefore, the opportunities for mitigation, where required, will be assessed once data becomes available. The assessment presented in the ES will include the latest design information available at the time of submission. In cases where

design information is not available, worst-case assumptions will be made.

- b. Operational noise sources and the acoustic performance of above ground partitions/enclosures that may influence the propagation of operational noise have not yet been defined. Due to these uncertainties, an operational noise assessment is scoped in.
- c. Plant associated with the Proposed Scheme is not expected to generate perceptible vibration at receptors beyond the redline boundary. On this basis, an operational vibration assessment has been scoped out.

15.9 Summary of Elements Scoped In or Scoped Out

15.9.1 A summary of the noise and vibration items scoped in or out of the ES is provided in **Table 15-14**.

Table 15-14: Summary of Scope for Noise and Vibration Assessment

Impacts	Phase	Scoped In	Scoped Out	Justification
Construction Noise	Construction Phase	✓		Long-term construction project in proximity to sensitive receptors – potential for significant effects.
Construction Vibration	Construction Phase	✓		Long-term construction project in proximity to sensitive receptors – potential for significant effects.
Construction Traffic Noise	Construction Phase	✓		HGV and LGV will pass near to sensitive receptors on a daily basis – potential for significant effects.
Construction Traffic Vibration	Construction Phase		✓	It is assumed that local authorities and TfL will maintain good quality conditions for highways used to access the Proposed Scheme and no significant effects will arise.
Operational Noise	Operation Phase	✓		Unknown details of operational plant and proximity to sensitive receptors – potential for significant effects.
Operational Vibration	Operation Phase		✓	No anticipated perceptible levels of operational vibration outside the EIA Scoping Boundary.
Operational Traffic Noise and Vibration	Operation Phase		✓	The Proposed Scheme will be maintained but operational traffic movements will be limited and will not have a significant impact on the road-traffic noise or vibration levels.
Decommissioning Noise and Vibration (all sources)	Decommissioning Phase		✓	Scoped out due to the minor scale of works required, which are unlikely to generate significant levels of noise and vibration with the implementation of standard good practice measures.

15.10 References

- Ref 15.1 British Standards Institute (2014) BS 5228-1:2009+A1:2014 – Code of practice for noise and vibration control on construction and open sites – Part1: Noise. London: BSI.
- Ref 15.2 British Standards Institute (2003) BS 5228-2:2009+A1:2014 – Code of practice for noise and vibration control on construction and open sites - vibration. London: BSI.
- Ref 15.3 Highways England (2020); Design Manual for Road and Bridges LA111: Noise and Vibration, Revision 2. Available at:
<https://www.standardsforhighways.co.uk/tses/attachments/by-attachment-id/4b6c3ac3-c00d-41f2-8531-4744d1ed0a7c?inline=true> [Accessed 6 May 2026]
- Ref 15.4 High Speed Two (HS2) Limited (2012) HS2 London to West Midlands Environmental Impact Assessment Scope and Methodology Report. London: HS2 Ltd. Available at:
[https://unece.org/DAM/env/pp/compliance/C2014-100/Correspondence with Party concerned/frPartyC100_09-10.02.2015/Annex 26 Draft EIA Scoping and Methodology Report on High Speed 2 London to West Midlands .pdf](https://unece.org/DAM/env/pp/compliance/C2014-100/Correspondence%20with%20Party%20concerned/frPartyC100_09-10.02.2015/Annex_26_Draft_EIA_Scoping_and_Methodology_Report_on_High_Speed_2_London_to_West_Midlands_.pdf) [Accessed 6 May 2026]
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- Ref 15.6 Her Majesty's Stationery Office (1995); Environmental Protection Act.
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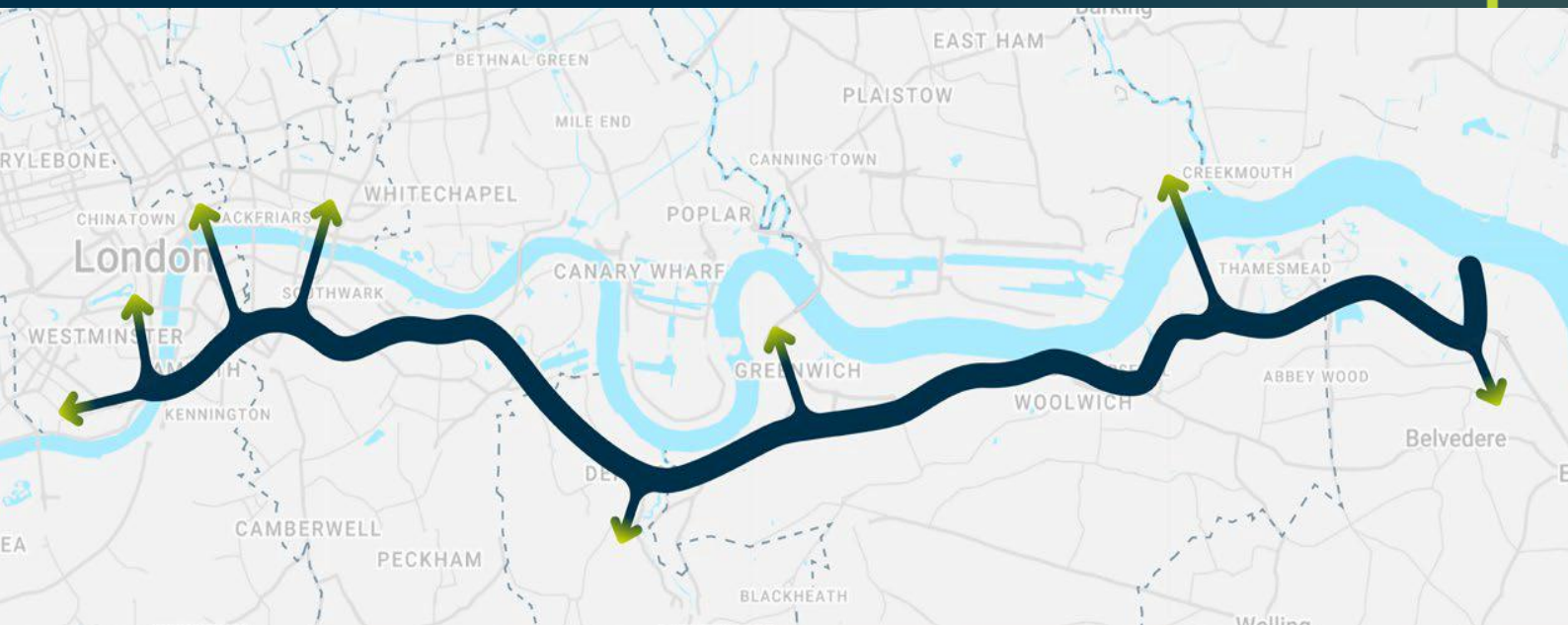
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Environmental Impact Assessment Scoping Report

Volume 1: Main Report

Chapter 16: Socio-Economics



Cory Environmental Holdings Limited

July 2026

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16. Socio-economics

16.1 Introduction

- 16.1.1 This chapter identifies the potential for likely significant effects of the Proposed Scheme on socio-economics. It sets out the proposed methodology for the socio-economic assessment in the Environmental Statement (ES) and identifies those impacts that should be scoped into or out of the assessment of likely significant effects.
- 16.1.2 The chapter considers the potential for likely significant effects of the Proposed Scheme on the following receptors and topics:
- a. direct and indirect employment;
 - b. gross value added (GVA);
 - c. training and apprenticeship opportunities;
 - d. local and private assets (including residential properties, development land, local businesses, community facilities, open space, recreation and leisure, and visitor attractions);
 - e. users of Public Rights of Way (PRoW) and recreational routes; and
 - f. tourism.

16.2 Study Area

- 16.2.1 The Study Area for socio-economics varies depending on the effect or type of resource being assessed. Distinct study areas have been defined for (i) local and site-specific receptors and (ii) wider economic effect receptors, reflecting the different spatial extent over which effects are likely to occur. This approach is consistent with Institute of Environmental Management and Assessment (IEMA - now the Institute of Sustainability and Environmental Professionals (ISEP)) - good practice on proportionate EIA, whereby study areas are defined to reflect the spatial extent of likely significant effects, using professional judgement and a clear understanding of impact pathways.
- 16.2.2 The EIA Scoping Boundary¹ crosses ten boroughs:
- a. London Borough of Bexley (LBB);
 - b. Royal Borough of Greenwich (RBG);
 - c. London Borough of Lewisham (LBLe);
 - d. London Borough of Southwark (LBS);
 - e. London Borough of Lambeth (LBLa);
 - f. London Borough of Barking and Dagenham (LBBD);

¹ All references to 'EIA Scoping Boundary' correspond to the area shown in **Volume 2, Figure 1-1**.

- g. London Borough of Tower Hamlets (LBTH);
- h. City of London (CoL);
- i. City of Westminster (CoW); and
- j. Royal Borough of Kensington and Chelsea (RBKC).

16.2.3 Baseline socio-economic profile data for the ten local planning authorities set out above is presented as the socio-economic profile data collation area within Section 16.4. This administrative geography is used to establish baseline conditions and provide context for the assessment but does not define the spatial extent of impact assessment (which is set out in paragraphs 16.2.4 to 16.2.6).

Local Socio-economic Study Area

16.2.4 For local and site-specific receptors, the assessment will assess direct effects within the DCO Order Limits and adjacent land. Receptors include recreation routes such as the National Cycle Network, PRoW and National Trails (e.g. the Thames Path), residential properties, businesses, visitor attractions and community facilities. Indirect effects on communities will also be assessed where access or severance changes arise, including along PRoW and recreational routes.

16.2.5 The Local Socio-economic Study Area will be defined using the study areas of inter-related technical assessments (e.g. transport, air quality, noise and vibration, and townscape and visual impact). This approach ensures consistency across topics and focuses the assessment on areas where likely significant effects may arise. The extent of the Study Area will reflect the nature and spatial scale of potential effects for different receptor groups, including access changes, severance, and amenity impacts. It will be informed by professional judgement, relevant guidance (including IEMA on proportionate EIA), and the characteristics of the Proposed Development. The Study Area will be kept under review and refined as the assessment progresses and the design evolves, and may vary between receptor groups to reflect differences in the scale and nature of potential effects.

Wider Socio-economic Study Area

16.2.6 Economic, employment and accommodation effects will be assessed across the London Travel to Work Area (TTWA), which defines the principal labour market and the extent of the Wider Socio-economic Study Area.

16.3 Relevant Legislation, Planning Policy and Guidance

16.3.1 Legislation, planning policy and guidance relating to socio-economics assessments are outlined below.

Legislation

- 16.3.2 The applicable legislation is the Infrastructure Planning (Environmental Impact Assessment (EIA)) Regulations 2017 (as amended) (Ref 16.1). There is no specific legislation that prescribes the scope or methodology for the assessment of socio-economic effects.

National Planning Policy

Overarching National Policy Statement for Energy

- 16.3.3 The relevant policies from the Overarching National Policy Statement for Energy (NPS EN-1) for socio-economics are summarised within **Table 16-1**. These documents have informed the assessment methodology, identification of sensitive receptors and the Study Area for the socio-economic assessment.

Table 16-1: National Policy Statement – Socio-economics

National Policy	Summary of Requirements	Relevance to the Assessment
Overarching National Policy Statement for Energy (NPS EN-1) (2025) (Ref 16.2)	Paragraphs 4.1.5 to 4.1.6 - in relation to taking into account environmental, social and economic benefits and adverse impacts. Section 5.13 Socio-economic Impacts – Focuses on the assessment of socio-economic impacts within an ES, including which socio-economics impacts should be considered and whether mitigation measures are necessary to mitigate any adverse impacts. Paragraphs 5.13.1 to 5.13.2 – in relation to undertaking an assessment of socio-economic impacts as part of the ES.	The socio-economics assessment will assess the likely significant effects arising from the Proposed Scheme. A cumulative effects assessment will also be undertaken and presented within the ES and, where adverse socio-economic effects are identified, mitigation will be considered for affected receptors.

National Planning Policy Framework (NPPF)

16.3.4 The following sections from the NPPF (December 2024) (Ref 16.3)) are considered particularly relevant to the assessment of likely significant socio-economic effects presented in this chapter:

- a. Section 6: Building a strong, competitive economy - focuses on economic growth and local business needs. This is relevant to the assessment that will consider effects of the Proposed Scheme on GVA and business premises.
- b. Section 12: Achieving well designed places – focuses on how good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities. The socio-economics assessment will consider effects of the Proposed Scheme on GVA, employment and changes to amenity for local communities.
- c. Section 15: Conserving and enhancing the natural environment - notes that development which improves local environmental conditions can have economic benefits. The assessment will consider how the Proposed Scheme could have socio-economic benefits such as employment and GVA creation.

16.3.5 The following sections from the NPPF draft text for consultation (December 2025) (Ref 16.4) are considered particularly relevant to the assessment of likely significant socio-economic effects presented in this chapter:

- a. Section 7: Building a strong, effective economy - focuses on economic growth, business development and challenges, informing assessment of effects on GVA and business premises.
- b. Section 10: Securing clean energy and water – highlights the importance of renewable and low-carbon energy in supporting economic development, relevant to potential GVA benefits.
- c. Section 14: Achieving well designed places – emphasises design informed by economic, social and environmental context, relevant to effects on GVA, employment and local amenity.
- d. Section 19: Conserving and enhancing the natural environment - recognises the role of natural capital in sustainable growth, informing assessment of potential GVA benefits.

Local and Neighbourhood Planning Policy

16.3.6 The local and neighbourhood planning policies listed in **Table 16-2** are considered particularly relevant to the assessment of likely significant socio-economic effects presented in this chapter.

Table 16-2: List of Relevant Local and Neighbourhood Policy – Socio-economics

Local Planning Authorities	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
London Plan 2021 (Ref 16.5)	• Policy GG5 - Growing a good economy • Policy D1- London's form, character and capacity for growth • Policy E8 - Sector growth opportunities and clusters • Policy E10 - Visitor infrastructure • Policy E11 - Skills and opportunities for all • Policy G4 – Open space	The assessment will consider effects of the Proposed Scheme on open space, GVA, employment, skills, visitor accommodation and the tourism sector.
Bexley Local Plan (2023) (Ref 16.6)	• Policy SP1: Achieving sustainable development – the spatial strategy • Policy SP3: Employment growth, innovation and enterprise • Policy SP7: Social and community services and facilities • Policy DP15: Providing and protecting social and community infrastructure	The assessment will consider effects of the Proposed Scheme on employment, GVA and community facilities.
Royal Borough of Greenwich Core Strategy with Detailed Policies (2014) (Ref 16.7)	• Policy EA1 Economic Development • Policy EA 5 Tourism • Policy CH(a) Loss of Community Facilities	The assessment will consider effects of the Proposed Scheme on employment, skills, the tourism sector and community facilities.

Local Planning Authorities	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
Royal Borough of Greenwich Draft Local Plan (2025) (Ref 16.8)	• Policy E1: Inclusive Economy • Policy E5: Local Employment, Skills and Training • Policy E6: The Visitor Economy • Policy TC7: Social and community infrastructure • Policy EN2: Open Space • Policy T1: Active Travel and Cycle Parking	The assessment will consider effects of the Proposed Scheme on employment and training opportunities, the tourism sector, community facilities, open space and PRoW.
Lewisham Local Plan 2020–2040 (Ref 16.9)	• Policy EC1 A thriving and inclusive local economy • Policy EC10 Workplace training and job opportunities • Policy EC21 Visitor accommodation • Policy CI1 Safeguarding and securing community infrastructure	The assessment will consider effects of the Proposed Scheme on employment and training opportunities, visitor accommodation and community facilities.
Southwark Plan 2022 (Ref 16.10)	• Policy P28 Access to employment and training • Policy P47 Community uses • Policy P51 Walking	The assessment will consider effects of the Proposed Scheme on employment and training opportunities, community facilities and PRoW.
Lambeth Local Plan (2021) (Ref 16.11)	• Policy ED15: Employment and training • Policy S1: Safeguarding existing social infrastructure	The assessment will consider effects of the Proposed Scheme on employment and training opportunities and community facilities.

Local Planning Authorities	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
South Bank & Waterloo Neighbourhood Plan 2017 - 2032 (Ref 16.12)	• Policy P1: Green infrastructure, open space & air quality • Policy P2: Green infrastructure, open space & air quality • Policy P14: Social infrastructure & culture	The assessment will consider effects of the Proposed Scheme on open space and community facilities.
Kennington, Oval and Vauxhall Neighbourhood Plan 2035 (Ref 16.13)	• Policy KOV 1: Local Green Spaces • Policy KOV 3: Local Shops And Services • Policy KOV 4: Community Infrastructure Premises	The assessment will consider effects of the Proposed Scheme on open space, business premises and community facilities.
Barking and Dagenham 2037 Local Plan (Ref 16.14)	• Policy DMS 1: Protecting and enhancing existing facilities • Policy SP5: Promoting inclusive economic growth • Policy DME 4: Visitor accommodation	The assessment will consider effects of the Proposed Scheme on community facilities, GVA, and visitor accommodation.
Tower Hamlets Local Plan 2031 (Ref 16.15)	• Policy S.CF1 Supporting community facilities • Policy S.OWS1 – Creating a Network of Open Spaces • Policy D.OWS3 – Open Space and Green Grid Networks	The assessment will consider effects of the Proposed Scheme on community facilities and open space.
City of London Local Plan 2015 (Ref 16.16)	• Policy CS19 – Open Spaces and Recreation	The assessment will consider effects of the Proposed Scheme on community

Local Planning Authorities	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	- Policy DM 22.1 Location and protection of social and community facilities - Policy CS22: Social Infrastructure and Opportunities	facilities and open spaces and community facilities.
Draft City Plan 2040 (Ref 16.17)	- Policy HL5: Location and protection of social and community facilities - Policy CV2: Provision of Arts, Culture and Leisure Facilities - Policy CV3: Provision of Visitor Facilities - Policy CV4: Hotels - Strategic Policy S14: Open Spaces & Green Infrastructure	The assessment will consider effects of the Proposed Scheme on community facilities, the tourism sector, visitor accommodation, and open space.
City of Westminster: City Plan 2019–2040 (Ref 16.18)	- Policy 19. Visitor Economy - Policy 21. Community infrastructure and facilities	The assessment will consider effects of the Proposed Scheme on the tourism sector and community facilities.
Victoria Neighbourhood Plan 2025-2040 (Ref 16.19)	Policy VNL-02: Social and Community Facilities	The assessment will consider effects of the Proposed Scheme on community facilities.
Kensington and Chelsea Local Plan 2024 (Ref 16.20)	Policy TC8: Hotels and other forms of tourist accommodation	The assessment will consider effects of the Proposed Scheme on accommodation facilities.

Relevant Guidance

16.3.7 Relevant national guidance and standards used to inform the scoping process are listed below and will also be taken into account as part of the EIA. These include:

- a. Ministry of Housing, Communities & Local Government (MHCLG) and Department for Levelling Up, Housing and Communities (DLHC) (2024) Planning Practice Guidance (Ref 16.21) sets out the government's planning policies for England that will be considered in the assessment;
- b. MHCLG (2025) Appraisal Guide (Ref 16.22) sets out the default assumptions, theoretical framework and metrics to be adopted for appraisals in the assessment;
- c. Homes and Communities Agency (HCA) (2014) Additionality Guide (Ref 16.23) explains how to assess the additional impact or additionality of local economic growth interventions for the assessment;
- d. HM Treasury (2026). The Green Book (Ref 16.24) will guide in assessing the costs, benefits and risks for achieving government objectives as part of the assessment;
- e. National Highways (2026) Design Manual for Roads and Bridges (Ref 16.25) includes guidance of relevance to the assessment of likely significant socio-economic effects; and
- f. Institute of Sustainability and Environmental Professionals (ISEP) (2025) Social Impact Assessment in Environmental Impact Assessment in the UK (Ref 16.26) informs the methodology for assessing likely significant socio-economic effects.

16.4 Baseline Conditions and Future Baseline

16.4.1 This section provides a summary of the baseline conditions in respect of socio-economics. The baseline is separated into two sections: the socio-economic profile and local receptors.

Socio-economic Profile

16.4.2 The key socio-economic indicators used to establish an overview of the baseline conditions have been collected at the national, regional and local planning authority level. As noted in section 16.2 there are ten local planning authorities within the EIA Scoping Boundary. These ten local authorities together make up the socio-economic profile data collation area (as set out in paragraph (as set out in paragraph 16.2.3).

Population

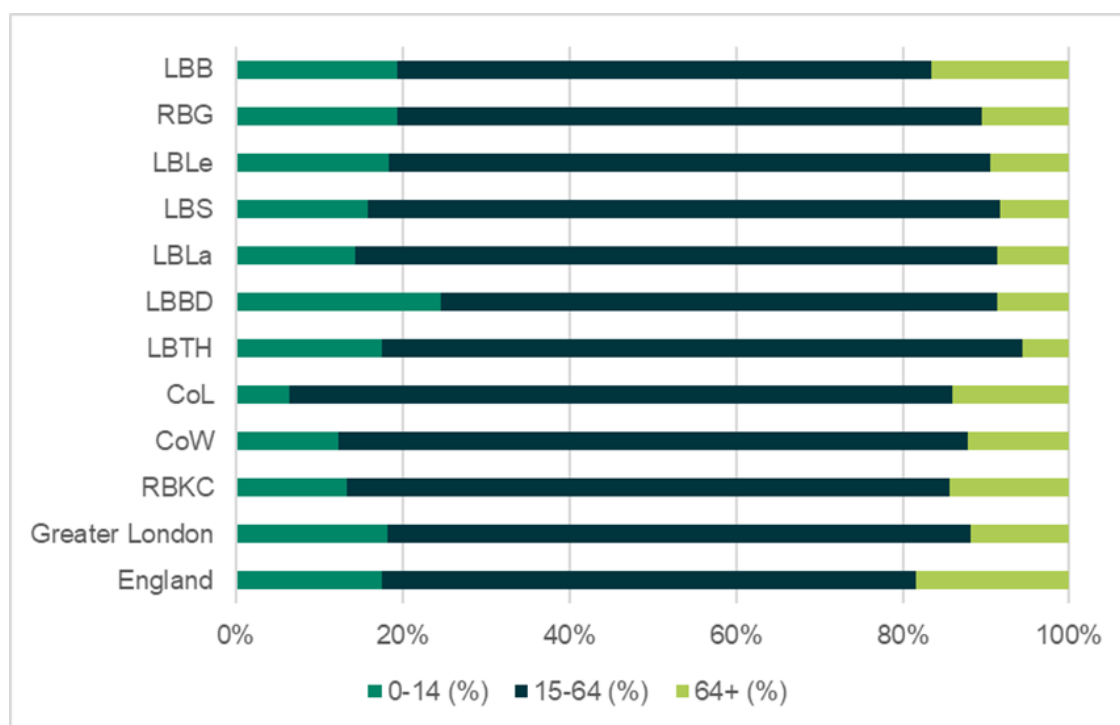
16.4.3 **Table 16-3** below shows the population data from the Census 2021 (Ref 16.27). A total of 2,346,746 people reside within the local planning authorities that fall within the socio-economic profile data collation area, representing approximately 4.2% of England's population (~56.5 million). Of these local planning authorities, LBLa has the largest population (317,651), slightly higher than the second largest in LBTH (310,306). The CoL is the least populated local planning authority, with a population of 8,580.

Table 16-3: Population by Local Planning Authority

Local planning authority	Population
LBB	246,472
RBG	289,068
LBLe	300,553
LBS	307,637
LBLa	317,654
LBBD	218,869
LBTH	310,306
CoL	8,583
CoW	204,236
RBKC	143,376
Socio-economic Profile Data Collation Area Average	234,675
Greater London	8,799,728
England	56,490,048

Source: Office for National Statistics (ONS) (2022) Census 2021

16.4.4 **Plate 16-1** below shows the age profile of the local authorities within the socio-economic profile data collation area, which can help to indicate future trends and signs of an ageing population. The average for all these local authorities is broadly in line with the proportion of people aged 0-14 compared to England (17.3%), with exactly half being greater than this average and half being lower. All ten of the local authorities have a lower proportion of people aged 65+ compared to England (18.4%); with the average across them being 10.0%. The largest working age population proportion is in the CoL, where 79.5% of the population are aged between 15-64, greater than England's average of 64.1%.

Plate 16-1: Population Cohorts by Age Group

Source: ONS (2022) Census 2021

Economic Activity

- 16.4.5 The Census 2021 also provides data on economic activity, which indicates trends in employment, unemployment, self-employment, and economic inactivity. In the socio-economic profile data collation area, the proportion of economically active individuals ranged from 59.1% in RBKC to 70.7% in LBLa, averaging 64.3% across the socio-economic profile data collation area. This is a greater proportion than the Greater London and England average, where, on average, 63.5% and 58.6% of the population respectively are considered economically active. Half of the local planning authorities within the socio-economic profile data collation area had higher economic activity levels compared to the Greater London average and all local authorities within the socio-economic profile data collation area had higher economic activity levels compared to the England average, as shown in **Table 16-4**.

Table 16-4: Economic Activity

Local planning authority	Economically active (excl. full-time students) (%)	Employee: Part-time (%)	Employee: Full-time (%)	Self-employed (%)	Unemployed (%)	Economically Active Full-time Student (%)	Economically Inactive (%)
LBB	61.9	11.8	37.0	9.9	3.8	2.1	36.0
RBG	64.5	10.6	38.6	10.8	5.3	3.0	32.4
LBLe	67.0	11.4	38.9	11.8	5.7	3.0	30.0
LBS	67.3	10.2	42.0	10.5	5.6	3.5	29.3
LBLa	70.7	9.7	45.2	11.3	5.3	2.6	26.7
LBBd	60.5	12.9	30.8	12.1	5.6	3.6	35.9
LBTH	63.4	10.1	39.8	8.8	6.0	4.0	32.6
CoL	69.4	5.5	47.0	13.3	4.1	1.5	29.1
CoW	59.6	7.5	36.2	11.9	4.8	2.6	37.9
RBKC	59.1	7.2	33.5	14.5	4.6	1.9	39.0
Socio-Economic Profile Data Collation Area Average	64.3	9.7	38.9	11.5	5.1	2.8	32.9
Greater London	63.5	10.7	36.5	12.2	4.8	2.7	33.8
England	58.6	11.9	34.3	9.5	3.5	2.3	39.1

Source: ONS (2022) Census 2021. Note: Economic activity measures if an individual was an active participant in the labour market during this period. Unemployed individuals are considered economically active and are those who are looking for employment but unable to acquire it. Economically inactive individuals are those who do not participate in the labour market and include individuals who are retired, students, disabled etc.

Qualifications

- 16.4.6 **Table 16-5** shows the educational attainment of the socio-economic profile data collation area's population based on Census 2021 data. The average proportion of the socio-economic profile Study Area local authorities' populations with no qualifications was 14.6%, lower than the England average (18.1%). The socio-economic profile data collation area had a higher proportion of individuals with level 4 and above qualifications (51.3%)

compared to the England average (33.9%). There was however a large variation between the local authorities comprising the socio-economic profile data collation area: CoL is relatively highly educated, with 74.2% of the population with level 4+ qualifications and only 6.6% with no qualifications; whereas for example, within LBB 31.6% of the population is educated to level 4+; however, this is only slightly less than the England average.

Table 16-5: Qualifications

Local authority	No qualifications (%)	Level 1 and entry level qualifications (%)	Level 2 qualifications (%)	Level 3 qualifications (%)	Level 4 qualifications or above (%)
LBB	18.2	10.9	14.6	16.6	31.6
RBG	16.7	8	10.3	13.1	45.7
LBLe	14.6	7.3	9.7	13	49.8
LBS	13.9	6.2	7.9	12.3	54.9
LBLa	13.1	6	7.8	11.9	56.3
LBBD	22.7	10.4	12.6	13.5	33.3
LBTH	16.2	6.8	8.5	13.2	50.3
CoW	6.6	2.8	4.9	8.8	74.2
CoW	12.9	4.9	6.9	12.4	57.7
RBKC	11.4	4.4	7.2	12.5	59.5
Socio-economic Profile Data Collation Area Average	14.6	6.8	9.0	12.7	51.3
Greater London	16.2	7.7	10	13.2	46.7
England	18.1	9.7	13.3	16.9	33.9

Source: ONS (2022) Census 2021

Industries

- 16.4.7 The Business Register and Employment Survey 2024 (Ref 16.28) provides data on the levels of employment across industries in the socio-economic profile data collation area, as can be seen in **Table 16-6**. Across the ten local authorities, the largest industries, on average, are: health (12.6%); professional, scientific and technical activities (11.9%); business administration and support services (9.4%); and accommodation and food

services (8.2%). Similarly, across England, the largest employment industry is also health (13.5%) followed by professional, scientific & technical (9.7%) and then business administration & support services (8.7%). Notably, the employment concentration of these three industries is higher in the socio-economic profile data collation area than in England. The concentration of industries within the socio-economic profile data collation area is also greater than in Greater London for health (10.7%) but lower than Greater London for professional, scientific & technical (14.2%) and administration & support services (9.8%).

Table 16-6: Industry Employment Distribution (%)

Industry	LBB	RBG	LBLe	LBS	LBLa	LBBD	LBTH	CoL	CoW	RBKC	Data collation area Average	Greater London	England
Agriculture, forestry & fishing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Mining, quarrying & utilities	1.4	1.3	0.2	0.4	0.9	1.4	0.3	0.4	0.6	0.5	0.7	0.6	1.1
Manufacturing	6.1	3.2	1.8	1.2	1.2	6.8	0.9	0.4	0.6	1.4	2.4	1.9	7.0
Construction	8.1	4.8	4.3	1.5	2.8	7.6	1.7	1.6	2.2	2.0	3.7	3.5	5.0
Motor trades	2.4	0.7	1.1	0.2	0.4	2.5	0.2	0.0	0.1	0.2	0.8	0.7	1.8
Wholesale	4.7	2.1	1.8	1.5	1.6	6.8	2.0	1.3	2.4	2.0	2.6	2.9	3.7
Retail	10.8	10.6	11.4	4.0	7.5	8.5	4.0	1.0	6.2	15.6	8.0	7.1	8.2
Transport & storage	9.5	5.3	4.3	5.4	3.1	7.6	2.0	0.6	1.3	1.4	4.1	4.1	5.1
Accommodation & food services	6.8	8.5	10.0	6.7	10.0	5.9	5.1	3.0	11.6	14.8	8.2	7.6	7.6
Information & communication	2.4	3.2	2.9	11.4	6.9	1.7	12.3	14.5	12.2	5.5	7.3	9.4	4.7
Financial & insurance	0.7	0.4	0.6	2.7	1.1	0.6	20.9	33.3	8.1	2.7	7.1	7.7	3.3
Property	2.4	2.7	2.1	3.4	3.1	1.4	2.6	2.2	5.6	6.2	3.2	3.4	2.2
Professional, scientific & technical	4.7	4.8	5.0	22.6	7.5	3.4	18.3	26.8	15.8	10.2	11.9	14.2	9.7
Business administration & support services	9.5	8.5	8.6	11.8	9.4	13.6	8.9	9.5	8.0	6.2	9.4	9.8	8.7

Industry	LBB	RBG	LBLe	LBS	LBLa	LBBD	LBTH	CoL	CoW	RBKC	Data collation area Average	Greater London	England
Public administration & defence	4.1	5.3	6.4	4.4	6.9	5.9	4.9	0.3	9.4	2.7	5.0	4.5	4.4
Education	10.8	12.8	14.3	7.1	5.6	11.9	5.7	1.0	4.5	5.5	7.9	6.9	8.4
Health	10.8	19.1	20.0	11.4	25.0	10.2	7.4	2.1	5.0	14.8	12.6	10.7	13.5
Arts, entertainment, recreation & other services	3.4	6.4	5.7	5.1	6.2	5.1	2.6	2.1	6.3	8.6	5.2	5.0	4.5

Source: ONS (2025) Business Register and Employment Survey 2024

Deprivation

- 16.4.8 The Index of Multiple Deprivation (IMD) (Ref 16.29) provides a standardised measure of relative deprivation based on weighted indicators across seven domains. IMD data is available at both local authority and neighbourhood levels.
- 16.4.9 As seen in **Table 16-7** below, out of the ten socio-economic profile data collation area local authorities, LBBD has the lowest rank (9th), which shows it is the most deprived. Conversely, the CoL is ranked 267th of the 296 local authorities measured, depicting the low levels of deprivation in this administrative area. Furthermore, LBB, RBG, LBS and the CoL all have no Lower Layer Super Output Area² (LSOA) in the most deprived 10% nationally. However, the proportion of LBTH LSOA in the most deprived 10% nationally is 13.0%.

Table 16-7: Deprivation in the Socio-economic Profile Data Collation Area

Local planning authority	IMD Rank (Based on Average LSOA Rank)	Proportion of LSOA in Most Deprived 10% Nationally
LBB	200	0.0%
RBG	74	0.0%
LBLe	46	1.7%
LBS	67	0.0%
LBLa	70	0.6%
LBBD	9	1.7%
LBTH	20	13.0%
CoL	267	0.0%
CoW	87	8.9%
RBKC	130	3.0%

Source: MHCLG (2025) *Indices of Multiple deprivation 2025*

² Lower Layer Super Output Areas are a small geographical area usually comprising of between 1,000 and 3,000 people.

Gross Value Added

16.4.10 **Table 16-8** shows data from the ONS on the GVA³ across sectors in the socio-economic profile data collation area in 2023 (Ref 16.30)⁴. Across the local authorities within the socio-economic data collation area, the largest sector by GVA on average is real estate⁵, which accounts for 17.5% of total GVA, followed by financial and insurance and professional, scientific and technical with 12.5% and 9.7% respectively. There is considerable variation across sectors between the local authorities of the Study Area; for example, in LBB real estate activities makes up 35.8% of total GVA, whereas in the CoL it was only 2.2% of total GVA.

³ GVA is a measure of economic output that represents the value of goods and services produced in an area, industry or sector, minus the cost of inputs and raw materials used in production. It captures the additional value generated by economic activity and is commonly used to assess the contribution of a project, business or sector to the economy.

⁴ Sectors are identified by their Standard Industrial Classification (SIC) code, a classification system used to identify businesses by their type of economic activity.

⁵ It should be noted that a large proportion of real estate GVA reflects imputed rents (the estimated rental value of owner-occupied housing), which do not arise from market transactions or employment activity. As a result, this component does not represent additional economic output that a project would typically influence.

Table 16-8: GVA by Sector

Sector	LBB	RBG	LBLe	LBS	LBLa	LBBD	LBTH	CoL	CoW	RBKC	Data Collection Area Average
Production sector (%)	8.9	4.4	2.7	3.1	2.1	17.7	2.4	1.5	2.1	3.0	4.8
Construction (%)	11.8	9.6	5.8	3.0	3.6	8.2	1.7	1.3	2.4	1.8	4.9
Wholesale and retail trade; repair of motor vehicles (%)	8.4	8.0	5.8	3.3	19.0	11.4	3.4	1.1	10.7	14.5	8.5
Accommodation and food service activities (%)	1.8	3.7	4.5	2.7	3.7	2.4	1.3	0.8	4.7	7.2	3.3
Information and communication (%)	1.9	2.9	2.0	9.9	11.2	1.9	11.3	9.3	15.7	11.2	7.7
Financial and insurance activities (%)	0.5	2.5	0.8	2.9	2.6	1.6	42.8	55.0	15.3	0.7	12.5
Real estate activities (%)	35.8	20.9	33.1	10.9	13.0	18.7	6.1	2.2	8.6	26.0	17.5
Professional, scientific and technical activities (%)	3.8	3.2	2.0	23.4	8.9	3.1	14.6	19.2	14.1	4.6	9.7
Administrative and support service activities (%)	4.0	4.0	3.1	14.5	4.8	6.7	4.6	6.8	5.3	4.3	5.8
Public administration and defence (%)	3.6	6.6	6.4	5.0	7.3	5.1	2.6	0.3	8.0	2.3	4.7
Education (%)	5.3	10.7	13.3	5.6	3.8	7.9	2.9	0.5	4.0	5.4	5.9
Human health and social work activities (%)	6.7	12.9	12.3	5.4	13.0	5.9	3.5	0.5	2.5	11.2	7.4
Arts, entertainment and recreation (%)	0.6	2.5	3.0	1.6	2.3	1.5	0.5	0.2	3.2	2.4	1.8

Sector	LBB	RBG	LBL _e	LBS	LBL _a	LBB _D	LBTH	CoL	CoW	RBKC	Data Collection Area Average
Other service activities (%)	1.2	1.9	1.6	3.9	2.4	1.3	0.6	0.9	1.6	1.8	1.7
Activities of households (%)	0.1	0.2	0.4	0.1	0.1	0.2	0.0	0.0	0.0	0.1	0.1

Source: ONS (2023) GVA by Industry

Local Receptors

- 16.4.11 This section of the baseline presents an overview of the types of local receptors found within the area surrounding the EIA Scoping Boundary. This is not an exhaustive account but does present the types of local receptors that will be included within the scope of the socio-economic assessment. Receptors that have been identified to be within or adjacent to the EIA Scoping Boundary are considered to have the potential for direct effects associated with the Proposed Scheme. Receptors identified at a wider distance have the potential to be affected by indirect effects such as severance.
- 16.4.12 The Proposed Scheme passes through ten boroughs including large parts of central London. The Proposed Scheme is, therefore, surrounded by built up areas including residential receptors throughout.
- 16.4.13 There are many business premises in close proximity to the EIA Scoping Boundary including large industrial estates, business parks and shopping centres. There are also many offices particularly in the Local Socio-economic Study Area for the branch passing through the CoL.
- 16.4.14 There are important visitor attractions within close range, particularly in CoW and other areas of central London. This includes Buckingham Palace, Westminster Abbey, the London Eye, museums and art galleries, all of which draw large numbers of visitors each year. An array of businesses aimed at serving visitors of these attractions are also in proximity to the Proposed Scheme including hotels and visitor accommodation.
- 16.4.15 Community facilities include major hospitals (e.g. St Bartholomew's Hospital and St Thomas' Hospital) and train stations (e.g. Liverpool Street Station and Waterloo Station). There are also a significant number of schools near the EIA Scoping Boundary as well as community centres, churches and other places of worship.
- 16.4.16 Four different National Cycle Network routes cross or pass within 50m of the Proposed Scheme. A network of PRow, including the Thames Path that runs along the River Thames, and a significant number of open spaces (e.g. Hyde Park and Greenwich Park) are also found within and in proximity to the EIA Scoping Boundary.
- 16.4.17 The full network of PRow within the Local Socio-economic Study Area will be established as part of the ES. The presence of any development land along the route will also be established in the ES through a review of planning applications and Local Plan allocations.

Future Baseline

16.4.18 The ONS provides data on population projections at local authority level (Ref 16.31). Anticipated population change in the socio-economic profile data collation area is shown in **Table 16-9**. The average projected population growth across these local authorities between 2022 and 2040 is 13.6%, higher than the England average (9.0%). Within the socio-economic profile data collation area, the CoL has the highest projected population growth (36.8%), followed by LBTH (22.4%). LBB, LBLe, LBLa and LBBD, are projected to experience population growth below the England average.

16.4.19 With regard to the local economy, ONS data on labour market and skills projections (Ref 16.32) shows that employment in London is expected to increase by 9.2% from 5,937,000 in 2020 to 6,481,000 in 2035. It would be reasonable to expect that employment and GVA would increase across the socio-economic profile data collation area, associated with the expected increase in population.

Table 16-9: Population Projections

Geography	2022	2040	Percentage Change (%)
LBB	247,754	268,169	7.6%
RBG	291,879	330,611	11.7%
LBLe	299,023	324,696	7.9%
LBS	311,492	355,272	12.3%
LBLa	316,700	343,449	7.8%
LBBD	220,039	234,479	6.2%
LBTH	323,854	417,284	22.4%
CoL	11,457	18,138	36.8%
CoW	209,866	240,083	12.6%
RBKC	146,392	164,242	10.9%
Socio-economic Profile Data Collation Area Average	237,846	269,642	13.6%
Greater London	8,869,043	9,772,157	9.2%
England	57,112,542	62,787,650	9.0%

Source: ONS (2025) Population Projections

16.4.20 It is expected that businesses and community facilities may open and close prior to the completion of the Proposed Scheme. However, these changes are not considered to constitute significant changes to baseline. It is not expected that there will be any perceptible changes to the local economic baseline assessment and the Proposed Scheme will be assessed against current baseline conditions and policies.

16.5 Potential for Likely Significant Effects

16.5.1 The likely significant socio-economic effects under consideration during both the construction and operation phases of the Proposed Scheme are set out below, as well as consideration of potential for likely significant effects during decommissioning.

Construction Phase

16.5.2 The scale of construction activities for the Proposed Scheme has the potential for significant beneficial effects within the Wider Socio-economic Study Area (London TTWA). This includes job creation, temporary training and upskilling opportunities. Construction activities may also have significant adverse effects on local and private assets via land take and disruption/reduced access.

16.5.3 All the likely significant effects under consideration during the construction phase set out within the list below have, therefore, been scoped into the socio-economic assessment.

- a. Employment and economic effects:
 - i. employment generation;
 - ii. GVA generation; and
 - iii. provision of training, skills development and apprenticeship opportunities.
- b. Socio-economic effects on local and private assets (including residential properties, local businesses, community facilities, open space/recreation and visitor attractions), including:
 - i. land take, and the loss or displacement of residential properties, businesses, and community facilities;
 - ii. reduced access, severance, or disruption affecting residential properties and businesses, including effects on business continuity and performance;
 - iii. effects on community facilities, local services, and social infrastructure, including changes in access, use, capacity, or amenity;

- iv. effects on open space, recreation, and visitor attractions, including changes in access, use, or amenity;
 - v. effects on residential amenity and quality of life arising from construction activities; and
 - vi. indirect effects on communities, including changes to connectivity, accessibility and community cohesion.
- c. Socio-economic effects arising from land-use change, including land take effects on planned and proposed schemes.
 - d. Changes to PRow and recreational routes (temporary diversions, reduced access or severance).
 - e. Effects associated with the construction workforce, including:
 - i. increased demand for temporary accommodation, with the potential to reduce available capacity and displace visitors; and
 - ii. increased demand for residential housing (rented and owner-occupied) and potential effects on local housing market conditions.
- 16.5.4 Due to the Proposed Scheme being located entirely within an urban area, potential agricultural land effects will not be considered as a likely significant effect for any phase of the Proposed Scheme.

Operation Phase

- 16.5.5 It is anticipated that up to eight staff, likely to be based at the Riverside Campus, would be required to support the operation and maintenance of the Proposed Scheme. Activities during the operation phase, such as routine maintenance, are expected to be limited in scale and unlikely to result in significant effects. GVA, training, skills development and apprenticeship opportunities generated from this employment are, therefore, also expected to be limited in scale and unlikely to result in significant effects.
- 16.5.6 Likewise, operational effects on amenity are expected to be negligible and spatially limited. The Proposed Scheme will not generate substantial operational traffic, emissions, or built form changes, and is expected to require only a small workforce, largely drawn from the existing Riverside Campus. As set out in the relevant chapters (including air quality, noise and vibration, townscape and visual, and transport), operational effects are predicted to be minimal and not significant, with embedded mitigation further reducing any residual effects on local receptors.
- 16.5.7 Similarly, no land take or effects on PRow are expected during the operation phase, therefore effects are not likely to be significant.

16.5.8 While heat networks have the potential to influence energy costs for connected users, any effects on business energy bills would be specific to the Proposed Scheme and influenced by factors such as tariff structures, commercial arrangements, energy sources, and wider market conditions. Heat networks can offer benefits in terms of price stability and, in some cases, cost savings compared to alternative heating solutions. Any effects on energy costs are likely to be limited to connected users, are inherently uncertain, and would be difficult to assess at the Wider Socio-economic Study Area level. Accordingly, socio-economic effects related to energy costs will not be assessed within the ES.

16.5.9 On this basis, socio-economic effects associated with the operation phase are unlikely to be significant and are scoped out of the assessment. Further justification aligned to each potential effect is set out within **Table 16-11**.

Decommissioning Phase

16.5.10 The Proposed Scheme is intended to become part of London's critical infrastructure with no decommissioning proposed. However, if decommissioning were to be required, it is likely that minor works would be needed to remove above ground infrastructure that would not require a significant workforce. Underground pipelines are expected to be left in-situ to minimise adverse environmental effects. Therefore, an assessment of decommissioning is proposed to be scoped out.

16.6 Assessment Methodology

Sensitive Receptors

16.6.1 The following sensitive receptors have been identified:

- a. residents of the local area;
- b. local construction workforce who may be involved in the construction of the Proposed Scheme;
- c. publicly accessible open spaces, recreational routes and PRow within the vicinity of the Proposed Scheme;
- d. private assets and business premises within the vicinity of the Proposed Scheme;
- e. tourism receptors, including visitors and visitor assets and attractions within the vicinity of the Proposed Scheme;
- f. visitor and residential accommodation;
- g. community facilities and social infrastructure within the vicinity of the Proposed Scheme; and

- h. land allocated for development within the vicinity of the Proposed Scheme.

Impact Assessment Methodology

Establishing Baseline Conditions

- 16.6.2 Baseline data illustrating the existing socio-economic conditions within the Study Area, including employment and the economic characteristics, will be collected through desk-based research using publicly available sources, documents, and web-based applications. Data sources will include the ONS (Ref 16.33) and MHCLG (Ref 16.34).

Assessment Methodology

- 16.6.3 An assessment of likely significant effects will be undertaken to determine the resulting socio-economic effects of the Proposed Scheme on baseline conditions. The methodology for assessing likely significant socio-economic effects will follow specific guidance on socio-economic assessments (including Green Book and ISEP Guidance) and standard EIA guidance and will entail:
- a. an assessment of the likely scale, permanence and significance of effects associated with socio-economics; and
 - b. an assessment of the likely cumulative effects with other schemes within the surrounding area (as part of the socio-economics input to the cumulative effects assessment (**Volume 1, Chapter 20**)).
- 16.6.4 The assessment will be carried out using a number of recognised data sources, and where possible, the effects of the socio-economic assessment will be appraised against relevant national standards such as those provided in the HM Treasury Green Book (Ref 16.24).
- 16.6.5 Where relevant standards do not exist, professional experience and expert judgement will be applied and justified.

Assessment Criteria

- 16.6.6 The assessment of likely significant socio-economic effects will use policy thresholds and expert judgment to assess the scale and nature of the resulting socio-economic effects of the Proposed Scheme when compared against baseline conditions. For socio-economics, there is no accepted definition of what constitutes a significant (or not significant) socio-economic effect. It is however recognised that effects are categorised based upon the relationship between the scale (or magnitude) of effect and the sensitivity (or value) of the affected resource or receptor.
- 16.6.7 As such, the socio-economic effects will be assessed on the basis of:

- a. Consideration of sensitivity to impact: specific values in terms of sensitivity are not attributed to socio-economic resources/receptors due to their diverse nature and scale, however the assessment takes account of the qualitative (rather than quantitative) 'sensitivity' of each receptor and, in particular, their ability to respond to change based on recent rates of change and turnover (if appropriate); and
- b. Scale of effect: this entails consideration of the size of the effect on people or business in the context of the area in which effects will be experienced.

16.6.8 The assessment aims to be objective and quantify effects as far as possible. However, some effects can only be evaluated on a qualitative basis. Effects are defined as follows:

- a. Beneficial classifications of effect: indicate an advantageous or beneficial effect on a receptor, which may be minor, moderate, or major in effect;
- b. Negligible classifications of effect: indicate imperceptible effects on an area;
- c. Adverse classifications of effect: indicate a disadvantageous or adverse effect on a receptor, which may be minor, moderate or major in effect; and
- d. No effect classifications: indicate that there are no effects on a receptor.

16.6.9 Based on consideration of the above, where an effect is assessed as being beneficial or adverse, the scale of the effect will be assigned using the criteria set out below. This classification of effects and those which are significant follows the approach set out in the significance matrix in **Volume 1, Chapter 5: EIA Approach and Methodology**:

- a. Major: all or a large number of receptors are beneficially or adversely affected. The effect will make a measurable positive or negative difference on receptors at the relevant area(s) of effect;
- b. Moderate: a noticeable number of receptors are beneficially or adversely affected. The effect will make a measurable positive or negative difference on receptors at the relevant area(s) of effect;
- c. Minor: a small number of receptors are beneficially or adversely affected. The effect will make a small measurable positive or negative difference on receptors at the relevant area(s) of effect; and
- d. Negligible: effects, which will always be deemed as 'not significant'.

16.6.10 Those effects that are found to be moderate or major will be considered to be 'significant' and those which are minor or negligible are 'not significant'.

16.6.11 Duration of impact is also considered, with more weight given to reversible long-term or permanent changes than to temporary ones. Temporary effects are considered to be those associated with the construction works. Long-term reversible effects are generally those associated with the completed and operational development.

Economic Effects

16.6.12 **Table 16-10** sets out specific details of the quantitative economic impact assessment methodology, which will be applied to the assessment of construction effects, and indirectly to the assessment of GVA. Additionality factors have been informed by the Homes and Communities Agency (HCA) Additionality Guidance (Ref 16.23).

Table 16-10: Additionality Factors

Additionality Factor	Explanation
Leakage: The proportion of employment or economic benefits generated by the Proposed Scheme that accrue to residents or businesses outside the identified target area.	Relating to employment from outside the target area – this is the proportion of jobs taken by people who live outside of the principle labour catchment area.
Displacement: The proportion of jobs or economic activity generated by the Proposed Scheme that reduce or replace existing jobs or activity elsewhere within the identified target area.	Displacement relates to jobs that would not occur elsewhere due to the Proposed Scheme, for example construction workers being unavailable for other projects.
Multipliers: Further economic activity associated with the additional local income/expenditure, supplier purchase and longer-term development effects.	The multiplier is a composite figure which takes into account both the indirect jobs created across the Study Area based on supply chain activity but also the induced employment created through increased spending across the Study Area. The HCA Additionality Guidance provides a 'ready reckoner' of composite multipliers.

16.6.13 At this stage, no significant land take from existing receptors or allocated development land is anticipated to be required to support the Proposed Scheme. It is therefore assumed at the scoping stage that no jobs will be displaced from employment-generating premises. This assumption will be reviewed as the design of the Proposed Scheme is further developed. Should any displacement of existing or future employment occur as a result of land take, this will be considered as part of the employment assessment.

Socio-economic Effects on Local and Private Assets

16.6.14 In-combination effects identified by other technical assessments that are relevant to socio-economic effects will be considered alongside direct effects. This will include effects on local and private assets such as residential properties, local businesses, community facilities, open spaces and recreational areas, and tourism receptors (including visitor attractions and accommodation). Consideration will be given to changes in amenity (e.g. from noise, air quality, and visual effects) and potential severance or changes in accessibility affecting these receptors.

16.7 Design, Mitigation and Enhancement Measures

16.7.1 Mitigation and measures (some of which may have already been considered through the early development of the proposals, such as avoiding local receptors through route options) will be considered during the assessment. Additional mitigation will be developed, where required, as the design is progressed and will be included in the ES, as appropriate. Where significant adverse effects are found, additional mitigation will be provided.

Construction Phase

16.7.2 Mitigation to address construction disturbance, where this is necessary to minimise likely significant effects, will be set out within a Framework Construction Environmental Management Plan and a Framework Construction Logistics Plan to be submitted with the DCO Application.

Operation Phase

16.7.3 Mitigation measures for minimising operational disturbance will be included in the design where practicable to help avoid, prevent or reduce effects on socio-economic resources and receptors during the operation phase. Further details of specific measures will be set out in relevant chapters of the ES.

16.8 Assumptions, Limitations and Uncertainties

16.8.1 The following limitations and assumptions have been identified:

- a. The baseline analysis will be carried out against a benchmark of current socio-economic baseline conditions prevailing in the vicinity of the Proposed Scheme, as far as is practicable within the limitations of individual datasets. Baseline data is subject to a time lag between collection and publication. As with any dataset, these conditions may be subject to change over time which may influence the findings of the assessment.
- b. It will be assumed that the data collated is accurate and that conditions will have not materially changed since the time of data collection. Where appropriate, the baseline will be supplemented with additional data collected as part of the EIA process.
- c. A precautionary approach has been taken and professional judgement, based on experience of similar linear projects, has been used where required to inform the scope of the assessment.

16.9 Summary of Elements Scoped In or Scoped Out

16.9.1 A summary of the socio-economics items scoped in or out of the ES is provided in **Table 16-11**.

Table 16-11: Summary of Scope of Socio-economic Assessment

Element	Phase	Scoped In	Scoped Out	Justification
Employment generation	Construction	✓		The Proposed Scheme will create direct and indirect jobs, as well as safeguard jobs in existing supply chains during the construction phase.
	Operation		✓	While the Proposed Scheme is likely to generate beneficial effects on employment, these are not likely to be significant. Operation and maintenance is expected to have limited staffing requirements that could be drawn from the existing Riverside Campus workforce.
GVA generation	Construction	✓		The Proposed Scheme will result in economic effects during construction.
	Operation		✓	Due to the likely low levels of operational employment, GVA generation would be minimal during operation and is not likely to be significant.
Provision of training, skills development and apprenticeship opportunities	Construction	✓		The Proposed Scheme may offer temporary training and upskilling opportunities such as apprenticeships.
	Operation		✓	While the Proposed Scheme is likely to generate beneficial effects in terms of training and apprenticeship provision, these are not likely to be significant.
Socio-economic effects on local and private assets (including residential)	Construction	✓		The Proposed Scheme may result in land take from and disruption/ reduced access to existing assets and future developments as well as effects on the amenity of these assets.

Element	Phase	Scoped In	Scoped Out	Justification
properties, local businesses, community facilities, open space/recreation and visitor attractions)				As outlined in Volume 1, Chapter 18: Transport , temporary increase in traffic and road or walking/cycling route closures could generate likely significant effects on severance for local assets.
	Operation		✓	Effects on amenity are expected to be minimal and spatially limited, reflecting the low likelihood of significant effects in relation to factors such as noise, townscape and visual character, and air quality (as outlined in Volume 1, Chapter 6: Air Quality; Chapter 15: Noise and Vibration; Chapter 17: Townscape and Visual; and Chapter 18: Transport). Mitigation measures identified within these chapters of the Scoping Report will help to reduce any likely significant effects on local receptors relevant to socio-economic considerations. On this basis, socio-economic effects on local and private assets arising during the operation phase have been scoped out of the assessment.
Socio-economic effects arising from land-use change on planned and Proposed Schemes	Construction	✓		The Proposed Scheme may impact ongoing development activity and take up or impact access to development land.
	Operation		✓	Socio-economic effects arising from land-use change on planned and Proposed Schemes are unlikely during operation as operational activities such as maintenance are likely to be minimal and no land take is expected, therefore effects are not likely to be significant.

Element	Phase	Scoped In	Scoped Out	Justification
Changes to PRow and recreational routes	Construction	✓		The Proposed Scheme may result in temporary disruption/reduced access to PRow for users through diversions and temporary closures during construction.
	Operation		✓	Effects on PRow (including any permanent effects) are likely to occur during construction and would be assessed as construction phase effects. Any effects on PRow arising from maintenance activities would be minimal and not likely to be significant.
Effects on visitor accommodation including displacement of visitors	Construction	✓		The peak daily construction workforce may put temporary demand pressure/ impact upon the hotels, bed and breakfast temporary accommodation sector, this could displace visitors, particularly when vacancy rates are low.
	Operation		✓	The operation of the Proposed Scheme is not likely to require a large workforce, and therefore any effects on accommodation facilities, are likely to be minimal.
Effects on residential accommodation	Construction		✓	During construction, the workforce will be largely drawn from the London TTWA. Any non-local workers are expected to be temporary and to primarily use visitor accommodation (e.g. hotels), rather than the housing market. As a result, any additional demand would be limited, short-term and dispersed, with no material effect on housing availability or affordability.

Element	Phase	Scoped In	Scoped Out	Justification
	Operation		✓	During operation, the Proposed Scheme will require only a small workforce and is not expected to generate additional housing demand.
All impact pathways during the decommissioning phase	Decommissioning		✓	The Proposed Scheme is intended to become part of London's critical infrastructure with no decommissioning proposed. However, if decommissioning were to be required, it is likely that minor works would be needed to remove above ground infrastructure that would not require a significant workforce. Underground pipelines are expected to be left in-situ to minimise adverse environmental effects. Therefore, a detailed assessment of decommissioning stage is proposed to be scoped out.

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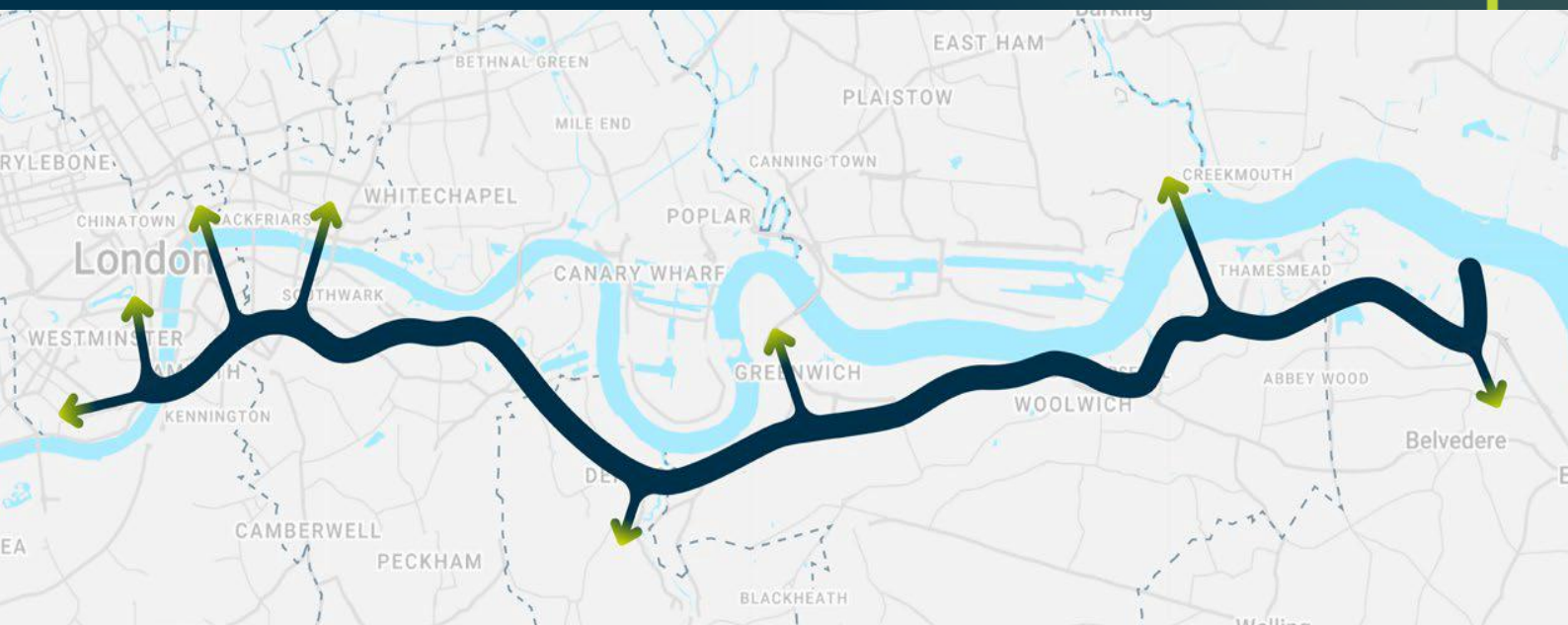
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Environmental Impact Assessment Scoping Report

Volume 1: Main Report

Chapter 17: Townscape and Visual



Cory Environmental Holdings Limited

July 2026

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17. Townscape and Visual

17.1 Introduction

- 17.1.1 This chapter identifies the potential for likely significant effects of the Proposed Scheme on townscape character and visual amenity. It sets out the proposed methodology for the townscape and visual impact assessment (TVIA) in the Environmental Statement (ES) and identifies those impacts that should be scoped into or out of the assessment of likely significant effects.
- 17.1.2 Townscape and visual effects are interrelated with other environmental effects but will be assessed separately. Townscape effects associated with the Proposed Scheme relate to the changes to the fabric, character and quality of the townscape and how it is experienced. Visual effects relate closely to changes to the townscape but also concern changes in people's views as a result of the introduction of the Proposed Scheme.
- 17.1.3 This chapter is supported by the following figures in **Volume 2** of this Scoping Report:
- a. **Figure 17.1: Topography;**
 - b. **Figure 17.2: Townscape Context;**
 - c. **Figure 17.3: Townscape Character Context; and**
 - d. **Figure 17.4: Visual Context.**

17.2 Study Area

- 17.2.1 An initial TVIA Study Area of 500m from the Environmental Impact Assessment (EIA) Scoping Boundary¹ has been identified, plus an additional 2km from the Proposed Scheme's infrastructure at the Riverside Campus.
- 17.2.2 The extent of the Study Area has been informed by a review of the maximum parameters of the Proposed Scheme (refer **Volume 1, Chapter 2: Proposed Scheme**), desk-based research, knowledge of the area and professional judgement. The TVIA Study Area is shown on **Volume 2, Figures 17.1 - 17.4**.
- 17.2.3 The Study Area will be reviewed once the geographical location of the Proposed Scheme components has been refined further. This would encompass further on-site survey and consultation with key stakeholders to ensure a proportionate approach that focuses on likely significant effects within the ES.

¹ All references to 'EIA Scoping Boundary', correspond to the area shown in Volume 2, Figure 1-1.

- 17.2.4 A Zone of Theoretical Visibility (ZTV) plan would be produced for the ES. The ZTV plan would also be used to further refine the Study Area and would assist in the identification of townscape and visual receptors.

17.3 Relevant Legislation, Planning Policy and Guidance

- 17.3.1 Key legislation, planning policy and guidance relating to TVIA is outlined below. For further information, **Volume 1, Chapter 4: Legislative and Planning Policy Context** provides an overview of the legislation and planning policy context relevant to the Proposed Scheme as a whole.

Legislation

- 17.3.2 The applicable legislation is the Infrastructure Planning (Environmental Impact Assessment (EIA)) Regulations 2017 (as amended) (Ref 17.1). There is no specific legislation that prescribes the scope or methodology for the assessment of TVIA effects.

National Planning Policy

Overarching National Policy Statement for Energy (EN-1)

- 17.3.3 The relevant policies from the Overarching National Policy Statement for Energy (NPS EN-1) (Ref 17.2) for TVIA are summarised within **Table 17-1**. These policies have informed the assessment methodology, identification of sensitive receptors and the Study Area.

Table 17-1: National Policy Statement - TVIA

National Policy	Summary of Requirements	Relevance to the Assessment
Overarching National Policy Statement (NPS) for Energy (EN-1) 2025 (Ref 17.2)	Relevant sections include 4.3: Environmental Effects/Considerations, 4.6: Environmental and Biodiversity Net Gain, 4.7: Criteria for good design for Energy Infrastructure, 5.4: Biodiversity and Geological Conservation and 5.10: Landscape and Visual (references to landscape should be taken as covering townscape where appropriate).	Key aspects of the NPS relevant to the TVIA include the requirement for an ES to describe aspects likely to be significantly affected, the importance of 'good design' including input into routeing and siting, having regard to the historic environment and designations, consideration of published studies in the baseline and review of opportunities for

National Policy	Summary of Requirements	Relevance to the Assessment
		enhancement of townscape quality.

National Planning Policy Framework (NPPF)

17.3.4 The following paragraphs from the NPPF (December 2024 (Ref 17.3)) are considered relevant to the assessment of potential townscape and visual effects presented in this chapter:

- a. Paragraph 135; and
- b. Paragraph 187.

17.3.5 It should be noted that a draft NPPF was published for consultation in December 2025, however it is not expected that this draft will significantly alter the policy context or policy compliance of the Proposed Scheme. The potential revisions relating to valued landscapes (or townscapes) will be reviewed.

Local and Neighbourhood Planning Policy

17.3.6 The local and neighbourhood planning policy listed in **Table 17-2** is considered relevant to the assessment of potential townscape and visual effects presented in this chapter.

17.3.7 The TVIA will also be undertaken in accordance with relevant policies outlined in the applicable neighbourhood plans.

Table 17-2: List of Relevant Local and Neighbourhood Policy – TVIA

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
Greater London Authority (GLA)	London Plan (2021) (Ref 17.4): Relevant policies include Policy D4: Delivering good design, Policy HC3: Strategic and Local Views, Policy HC4: London View Management Framework, Policy G1: Green infrastructure, Policy G3 Metropolitan Open Land and Policy G5: Urban Greening.	Importance of ensuring a high quality of design which is retained through to completion, protection and a positive contribution to strategic and local views including those identified through the London View Management Framework and the provision of green infrastructure and urban greening including contributing to London's wider green infrastructure network.

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
London Borough of Bexley (LBB)	Bexley Local Plan (2023) (Ref 17.5): Relevant policies include Policy SP1: Achieving sustainable development – the spatial strategy, Policy SP5: Placemaking through good design, Policy DP11: Achieving high-quality design, Policy DP13: Protecting local views, Policy SP8: Green Infrastructure including designated Green Belt and Policy DP21: Greening of development sites.	Importance of reviewing the Local Character Study, good design including development which contributes positively to the local environment and conserves character, shaping of the public realm, the protection of local views including reference to landmarks, conserving and enhancing green infrastructure and maximising the potential for planting where appropriate.
Royal Borough of Greenwich (RBG)	Royal Greenwich Local Plan: Core Strategy with Detailed Policies (2014) (Ref 17.6): Relevant policies include Policy DH1: Design, Policy DH(g): Local Views and Policy DH(l): Areas of Special Character.	Importance of providing a positive relationship between the proposed and existing urban context such as reviewing the existing townscapes, local landmarks, views and skylines, promoting local distinctiveness, protecting local views and protecting views to and from Areas of Special Character (if relevant).
	(Draft) Royal Borough of Greenwich Draft Local Plan (2025) (Ref 17.7): Relevant policies include Policy DH1: Principles for high quality urban design, Policy DH6: Strategic and Local Views and Policy EN1: Green and blue infrastructure.	Importance of high-quality, inclusive and sustainable urban design which reinforces and enhances local character and distinctiveness, the protection and enhancement of strategic London views and local views and also reviewing opportunities for urban planting.

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
London Borough of Lewisham (LBLe)	Lewisham Local Plan 2020-2040 (2025) (Ref 17.8): Relevant policies include Policy OL1: Delivering an Open Lewisham (spatial strategy), Policy QD1: Delivering high-quality design in Lewisham, Policy QD5: View management, Policy GR1: Green Infrastructure and Lewisham's Green Grid, Policy GR4: Lewisham Links and Policy GR5: Urban greening and trees.	Importance of celebrating local identity, contributing to a greener borough, the protection of strategic views, promoting opportunities to maximise opportunities to enhance green infrastructure and consideration of the Lewisham Links network.
London Borough of Southwark (LBS)	The Southwark Plan 2019-2036 (2022) (Ref 17.9): Relevant policies include Policy P13: Design of places, Policy P14: Design quality, Policy P22: Borough views and Policy P59: Green Infrastructure.	Importance of development to respond positively to the existing townscape, character and context, design solution to respond to the site's historic context, preserve and where possible enhance borough views of significant landmarks and townscape and provide green infrastructure.
London Borough of Lambeth (LBLa)	Lambeth Local Plan 2020-2035 (2021) (Ref 17.10): Relevant policies include Policy EN1: Open space, green infrastructure and biodiversity, Policy Q5: Local distinctiveness, Policy Q9: Landscaping and Policy Q25: Views.	Importance of protecting and maintaining open spaces, green infrastructure and their function, development to respond to the positive aspects of the locality and historic character, providing landscaping where appropriate and protecting strategic views.

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	South Bank & Waterloo Neighbourhood Plan 2017 - 2032 (Ref 17.11): Relevant policy includes Policy P16: Streetscape & transport.	Whilst the policy focuses on the creation of new public realm of a scale which requires pedestrian way finding, which is not directly relevant to the Proposed Scheme, the 'other guidance' relating to the topic highlights the importance of improving public realm for pedestrians and increasing the levels of green infrastructure.
	Kennington, Oval and Vauxhall Neighbourhood Plan 2035 (Ref 17.12): Relevant policy includes KOV 5: Important Local Views.	Importance of protecting the composition and character of Important Local Views from harm.
London Borough of Barking and Dagenham (LBBD)	London Borough of Barking and Dagenham Local Plan 2020-2037 (2024) (Ref 17.13): Relevant policies include Policy SP2: Delivering a high-quality and resilient built environment, Policy DMD 1: Securing high-quality design, Policy SP6: Green and blue infrastructure and Policy DMNE 2: Urban Greening.	Importance of the promotion of high-quality design which responds to local context and character, the protection and enhancement of the natural environment and maximising opportunities for urban greening.
London Borough of Tower Hamlets (LBTH)	Tower Hamlets Local Plan 2031: Managing Growth and Sharing Benefits (2020) (Ref 17.14): Relevant	Importance of good design and preserving or enhancing the character and setting of the area, protecting important views of and from landmark

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	policies include Policy S.SG2: Delivering sustainable growth in Tower Hamlets, Policy S.DH1: Delivering high quality design, Policy D.DH4: Shaping and managing views, Policy S.ES1: Protecting and enhancing our environment and Policy D.ES3: Urban greening and biodiversity.	buildings and vistas, protection of the quality of the natural environment and protecting and enhancement of biodiversity.
City of London (CoL)	City of London Local Plan (2015) (Ref 17.15): Relevant policies include Policy CS10: Design, Policy DM 10.4: Environmental enhancement, Policy CS13: Protected Views and Policy DM 19.2: Biodiversity and urban greening.	Importance of promoting a high standard of design to respond to the historic and local character of the CoL, enhancement of the public realm, protect and enhance protected views and promoting biodiversity and contribution to urban greening.
	(Draft) City of London City Plan 2040 (2024) (Ref 17.16): Relevant policies include Policy S8: Design, Policy DE2: Design Quality, Policy S13: Protected Views and Policy OS2: Urban Greening.	Importance of conserving and enhancing the townscape character of the CoL which includes consideration of the design quality, protecting and enhancing strategic London views and maximising opportunities for urban greening.
City of Westminster (CoW)	City of Westminster: City Plan 2019-2040 (2026) (Ref 17.17): Relevant policies include Policy 38:	Importance of protecting and enhancing green infrastructure, incorporating high quality design including positively contributing to

Local Authority	Relevant Local and Neighbourhood Policy	Relevance to the Assessment
	Green infrastructure, Policy 42: Design principles and Policy 45: Townscape and architecture.	Westminster's townscape, sensitive design responding to the prevailing townscape context such as scale, character and uniformity and contributing positively to strategic and local views.
	Victoria Neighbourhood Plan 2025-2040 (Ref 17.18): Relevant policies include Policy VNV-01: Victoria Street, Policy VNG-01: Biodiversity and urban greening and Policy VND-01 Locally important views.	Importance of development along Victoria Street to enhance the attractiveness of the public realm and which improves the quality of the pedestrian environment, introduction of green infrastructure and responding sensitivity to protected views.
Royal Borough of Kensington and Chelsea (RBKC)	Royal Borough Kensington and Chelsea Local Plan (2024) (Ref 17.19): Relevant policies include Policy GB14: Green and Blue Infrastructure, Policy CD2: Design Quality, Character and Growth and Policy CD15: Views.	Importance of contributing to the greening of the borough, development to meet the highest standards of design including to improve the local area including its character and the protection and enhancement of key views which contribute to the character and quality of an area.

Relevant Guidance

- 17.3.8 The applicable national guidance includes the National Planning Practice Guidance (PPG) (Ref 17.20) which provides more in-depth guidance to the NPPF. The parts of the PPG relevant to the TVIA include the 'Natural Environment', which includes reference to the importance of the integration of development into the local character such as with the use of green infrastructure where relevant, and 'Light Pollution', which notes the need to consider the sensitivity of receptors to levels of artificial lighting where it is proposed as part of a development.

17.3.9 Furthermore, the TVIA will be carried out in accordance with the following good practice guidance documents:

- a. Landscape Institute and Institute of Environmental Management and Assessment (2013). Guidelines for Landscape and Visual Impact Assessment (GLVIA3), Third Edition (Ref 17.21);
- b. Landscape Institute (2018). Townscape Character Assessment Technical Information Note 05/2017 (Ref 17.22);
- c. Landscape Institute (2019) Visual Representation of Development Proposals, Technical Guidance Note 06/19 (Ref 17.23);
- d. Landscape Institute (2021). Technical Guidance Note 02/21, Assessing landscape value outside national designations (Ref 17.24); and
- e. Landscape Institute (2024) Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third edition (GLVIA3) Technical Guidance Note - 2024-01 (Ref 17.25).

17.4 Baseline Conditions and Future Baseline

Overview of Baseline Conditions

- 17.4.1 An initial study of the baseline environment has been undertaken through desk-based research to establish the existing conditions of the townscape and visual resources of the Study Area, to inform the options appraisal process, and to inform the ongoing design of the Proposed Scheme.
- 17.4.2 The topography is shown on **Volume 2, Figure 17.1: Topography**. This indicates that the topography of the Study Area is generally flat, closely following the River Thames and its immediate surroundings. There are localised areas of relatively higher land including within RBG at Woolwich and also within CoW to the north of Oxford Circus.
- 17.4.3 The Proposed Scheme would be located predominately within a dense urban environment where the townscape baseline will be informed by the presence of relevant designations, including Conservation Areas (CA) (refer **Volume 1, Chapter 10: Historic Environment**), World Heritage Sites (WHS), Registered Parks and Gardens (RPG), Metropolitan Open Land (MOL) and Ancient Woodland (AW) (see **Volume 2, Figure 17.2: Townscape Context**). The following provides a description of the townscape for each of the boroughs that the EIA Scoping Boundary² falls within:
- a. LBB: The EIA Scoping Boundary and Study Area falling within this borough are characterised by areas of industrial land use including at Lower Belvedere. They include brownfield areas allocated for

² All references to 'EIA Scoping Boundary' correspond to the area shown in **Volume 2, Figure 1-1**.

development and industrial uses including the energy from waste (EfW) facilities at Riverside Campus. This part of the Study Area includes the residential area of Belvedere which is characterised primarily by pre-war Victorian and Edwardian development with two storey terraced properties. It also includes areas of grassland including Crossness Nature Reserve and Southmere Park, parts of which are designated as MOL. There is also part of Lesnes Abbey Woods Ancient Woodland located approximately 450m to the south of the EIA Scoping Boundary.

- b. RBG: The EIA Scoping Boundary and Study Area falling within this borough comprise residential areas including at Thamesmead, Woolwich and Greenwich. There are also pockets of commercial and industrial land uses including at New Charlton and on the Greenwich Peninsula. There are several CA around Woolwich including Charlton Riverside CA, Royal Arsenal CA, Thames Barrier and Bowater Road CA, Westcombe Park CA and Woolwich CA. The Maritime Greenwich WHS and Greenwich Park RPG are also located within the borough. There are areas designated as MOL including Maryon Park, Central Park and Southern Park.
- c. LBL: The EIA Scoping Boundary and Study Area falling within this borough comprise residential areas including in Deptford. There are several CA, including Deptford High Street and St Paul's Church CA and St Mary's CA, which comprise a mixture of historic buildings and postwar redevelopment across the borough. Areas of green space include Deptford Park and Pepys Park.
- d. LBS: The EIA Scoping Boundary and Study Area falling within this borough comprise residential areas including Bermondsey and Southwark. There are numerous CA including Bermondsey Street CA, Trinity Church Square CA, Borough High Street CA and West Square CA, which comprise a mixed character including medieval scale with industrial detail, grand squares and evidence of evolution of the townscape over time across the borough. Southwark Park, designated as MOL and RPG, is also located within the borough as well as Geraldine Mary Harmsworth Park and King Stairs Gardens also designated as MOL.
- e. LBLa: The EIA Scoping Boundary and Study Area falling within this borough comprise built form in mixed usage including residential, commercial and industrial within Lambeth and Waterloo. There are numerous CA including Lambeth Palace CA, Lower Marsh CA and South Bank CA. Jubilee Gardens (designated as MOL) and Lambeth Palace (RPG) are both located in this area.

- f. LBBD: The EIA Scoping Boundary and Study Area falling within this borough extend into parts of the Dagenham industrial area to the north of the Thames.
- f. LBTH: The EIA Scoping Boundary and Study Area falling within this borough comprise built form in Wapping. This includes Wapping Wall CA and Wapping Pierhead CA that comprise former docks, 19th century riverside wharf and warehouse developments and historic settlements across the borough. There are several areas of green space including Wapping Gardens.
- g. CoL: The EIA Scoping Boundary and Study Area falling within this borough comprise dense built form comprising residential and office blocks including within Blackfriars and Farringdon. This area hosts landmarks including St Paul's Cathedral. There are numerous CA including Bank CA, Finsbury Circus CA and Queen Street CA. The Barbican RPG, Finsbury Circus RPG and Inner Temple RPG are also located within the area.
- h. CoW: The EIA Scoping Boundary and Study Area falling within this borough comprise a variety of building typologies including within Pimlico, Westminster, Belgravia, Soho, Marylebone and Paddington. This area hosts landmarks including Buckingham Palace. There are numerous CA across the borough including Soho CA, Belgravia CA and Harley Street CA. The Palace of Westminster, Westminster Abbey and St. Margaret's Church WHS are located within the area. Several RPG lie within the area including Victoria Embankment Gardens RPG, Hyde Park RPG, St James's Park RPG, Buckingham Palace RPG and Landscape to Churchill Gardens Estate RPG. There are also several areas designated as MOL including St James Park and Hyde Park.
- i. RBKC: The EIA Scoping Boundary and Study Area falling within this borough comprise a variety of building typologies including within Chelsea and Kensington. There are several designated RPG including the Royal Hospital, Chelsea and Ranelagh Gardens RPG, Hans Place RPG and Cadogan Place RPG.

17.4.4 The National Character Areas (NCA) (Ref 17.21) within the Study Area are shown on **Volume 2, Figure 17.3: Townscape Character Context**. Those that the EIA Scoping Boundary falls within are described as follows:

- a. **NCA 81: Greater Thames Estuary** is located in the central and eastern part of the Study Area. The relevant key characteristics as stated within the published assessment include a predominantly flat, low-lying landscape, highly urbanised within London with increasing development pressures and major historic and current transport links along the River Thames; and

- b. **NCA 112: Inner London** is located across the majority of the Study Area. The relevant key characteristics as stated within the published assessment include a wide flood plain, hills to the north providing highly valued views, natural feature of the River Thames, extensive network of parks and open spaces providing recreation, extensive urban forest including small woodlands and street trees, remnant sites of former industry, historic buildings and designed landscapes and a network of blue infrastructure providing recreational opportunities and important views.

17.4.5 There are several Designated Views identified as part of the London View Management Framework (LVMF) (Ref 17.26) which cross or are in close proximity to the EIA Scoping Boundary (as displayed on **Volume 2, Figure 17.4: Visual Context**). This comprises the following:

- a. 1. London Panorama: Alexandra Palace;
- b. 2. London Panorama: Parliament Hill;
- c. 3. London Panorama: Kenwood;
- d. 4. London Panorama: Primrose Hill;
- e. 5. London Panorama: Greenwich Park;
- f. 6. London Panorama: Blackheath Point;
- g. 8. Linear View: Westminster Pier to St Paul's Cathedral;
- h. 9. Linear View: King Henry VIII's Mound, Richmond to St Paul's Cathedral;
- i. 11. River Prospect: London Bridge;
- j. 12. River Prospect: Southwark Bridge;
- k. 13. River Prospect: Millennium Bridge and Thames side at Tate Modern;
- l. 14. River Prospect: Blackfriars Bridge;
- m. 15. River Prospect: Waterloo Bridge;
- n. 16. River Prospect: The South Bank;
- o. 17. River Prospect: Golden Jubilee/Hungerford Footbridges;
- p. 18. River Prospect: Westminster Bridge;
- q. 19. River Prospect: Lambeth Bridge;
- r. 20. River Prospect: Victoria Embankment between Waterloo and Westminster Bridges;

- s. 22. River Prospect: Albert Embankment between Westminster and Lambeth Bridges along Thames path near St Thomas' Hospital; and
- t. 23. Townscape View: Bridge over the Serpentine to Westminster.

17.4.6 Several of the CA appraisals and management documents and local planning policy documents also contain key local views.

17.4.7 A detailed baseline environment will be presented in the ES to provide a description of the identified townscape and visual receptors, indicating their key characteristics, value and susceptibility, against which the potential change arising from the Proposed Scheme will be assessed.

Future Baseline

17.4.8 Predicting the future baseline involves a degree of speculation and uncertainty as acknowledged at paragraph 5.33 in GLVIA3 (Ref 17.21). It requires projecting forward any trends in change and considering how they may affect the townscape over time. The nature of the future baseline is influenced by a combination of natural and human processes, including changes in the built form such as the implementation of the Cory Development Project at Riverside Campus. This will be less apparent within the parts of the Study Area which are characterised by CA and exhibit a historic pattern to the townscape whereas redevelopment of the built form will be more likely within eastern parts of the Study Area, where a less cohesive townscape pattern exists. Cumulative schemes are able to influence the future baseline and would be discussed in the cumulative assessment.

17.5 Potential for Likely Significant Effects

17.5.1 The following potential effects on townscape character and visual amenity have been identified for further assessment within the ES. Where matters are proposed to be scoped out of the assessment that is also confirmed.

Construction Phase

Townscape Character

17.5.2 During the construction phase, the Proposed Scheme may give rise to the following effects on the townscape character:

- a. Temporary physical effects on the townscape fabric as a result of the above ground construction plant and activities associated with the Proposed Scheme including compounds, material storage, slurry processing and laydown areas.
- b. Temporary effects on the townscape character within the Study Area including the perceptual changes as a result of the above ground construction activity including movement, noise and lights associated with construction traffic, plant and machinery.

- 17.5.3 Below ground construction activities including tunnelling are scoped out as they are not likely to significantly affect townscape character. Such activities would affect the townscape character indirectly and given the townscape context such effects, on aspects such as tranquillity, would be minimal.

Visual Amenity

- 17.5.4 During the construction phase, the Proposed Scheme may result in temporary disruption to views for visual receptors due to above ground construction plant and activities associated with the construction of the Proposed Scheme including compounds, material storage, slurry processing, laydown areas, movement from construction traffic, plant and machinery and lighting.
- 17.5.5 Below ground construction activities including tunnelling are scoped out as they would not be visible.
- 17.5.6 Due to the low sensitivity of several types of visual receptors in the urban context of the townscape effects on residential and recreational receptors only are scoped into the assessment due to their higher sensitivity. All other types of visual receptors are scoped out, including road users. The Designated Views identified as part of the LVMF (Ref 17.26) and displayed on **Volume 2, Figure 17.4: Visual Context** would be reviewed in the ES as the design progresses.

Operation Phase

Townscape Character

- 17.5.7 During the operation phase, the Proposed Scheme may give rise to long term effects on the physical townscape fabric, such as loss of townscape elements including alteration to the urban structure and built form, vegetation and open space, topography, historical development and movement and connectivity due to the introduction of the new infrastructure. Long term effects on defined Townscape Character Areas (TCA) within the Study Area may include perceptual changes to the character as a result of the Proposed Scheme. This could include detracting from the setting and primary focus of designations or more sensitive townscapes.
- 17.5.8 However, considering the extent and scale of the proposed above ground infrastructure associated with the Proposed Scheme and the existing urban context, it is considered that the potential for likely significant effects on the townscape character is limited. Nevertheless, operational effects associated with the above ground infrastructure of the Heat Recovery System at the Riverside Campus and any Thermal Stores, which may require above ground structures, are proposed to be scoped in to the EIA, so that any potential effects and the requirements for mitigation can be fully assessed. The remaining above ground operational infrastructure, including the Maintenance and Access Points (MAP) ground level coverings and kiosks, are scoped out due to their limited scale and footprint, and considering the existing urban

context that they would be located within (i.e. it is not considered that the provision of a ground level covering or a kiosk could have the potential for likely significant effects on a townscape character within the urban environment of London).

17.5.9 Below ground infrastructure is scoped out as it is not likely to give rise to significant effects on townscape character.

17.5.10 The consideration of operational lighting is also scoped out as the operational lighting associated with the Proposed Scheme at the Riverside Campus would be similar to the existing light levels present across the site and would not therefore contribute to additional nighttime effects on the surrounding townscape character.

Visual Amenity

17.5.11 Long term changes to views from visual receptors due to the introduction of the Proposed Scheme could include dominating or altering (beneficially or adversely) the composition of the view from a viewpoint. However, as set out above, considering the extent and scale of the proposed above ground infrastructure associated with the Proposed Scheme and the existing urban context, it is considered that the potential for likely significant effects on views is limited. Nevertheless, operational effects associated with the above ground infrastructure of the Heat Recovery System at the Riverside Campus and any Thermal Stores, which may require above ground structures, are proposed to be scoped in to the EIA, so that any potential effects and the requirements for mitigation can be fully assessed. The remaining above ground operational infrastructure, including the MAP ground level coverings and kiosks, are scoped out due to their limited scale and footprint and considering the existing urban context that they would be located within.

17.5.12 Below ground infrastructure is scoped out as it would not be visible.

17.5.13 As at construction, due to the sensitivity of different types of visual receptors in the townscape context, effects on residential and recreational receptors only are scoped into the assessment. The potential effects arising from the Proposed Scheme on other receptors, including road users, would be minimal given the lower sensitivity of such receptors and urban context of the townscape through which the Proposed Scheme passes through and are therefore scoped out.

17.5.14 It is not considered that the Designated Views identified as part of the LVMF (Ref 17.26) and displayed on **Volume 2, Figure 17.4: Visual Context** would be significantly affected by the Proposed Scheme at operation due to the minimal scale and location of the above ground infrastructure proposed, therefore these receptors are proposed to be scoped out. This would be reviewed as the design progresses.

- 17.5.15 The consideration of operational lighting is also scoped out as the operational lighting associated with the Proposed Scheme at the Riverside Campus would be similar to the existing light levels present across the site and would not therefore contribute to additional nighttime effects on surrounding views.

Decommissioning

- 17.5.16 The Proposed Scheme is intended to become part of London's critical infrastructure with no decommissioning proposed. However, if decommissioning were to be required, it is likely that minor works would be needed to remove above ground infrastructure. Underground pipelines are expected to be left in-situ to minimise adverse environmental effects. Standard construction practice management measures would be expected to avoid any likely significant effects, considering the small scale of works required. Given this, decommissioning effects are proposed to be scoped out of the TVIA.

17.6 Assessment Methodology

Sensitive Receptors

Townscape Receptors

- 17.6.1 Buildings, layout, density and mix, open space, land use pattern, landform, hydrology, vegetation, cultural and historic features and associations combine to create a common 'sense of place' and identity which can be used to categorise the townscape into definable units. The TVIA would define TCA through detailed desk-top and site survey. The defined TCA would form the townscape baseline across the Study Area against which the townscape assessment would be assessed in order to understand likely significant townscape effects. It should be noted that townscape character almost invariably forms part of a continuum and that character area boundaries are often not distinct.
- 17.6.2 Defining the TCA would draw upon the relevant documentation published for each of the boroughs and any other relevant documentation, set out as follows:
- a. Ordnance Survey (OS) mapping, and aerial photography;
 - b. OS Digital Terrain Model (DTM);
 - c. National and local planning policy;
 - d. CA Appraisals and Management documents;
 - e. LBB Bexley Local Character Study 2021 (Ref 17.27);
 - f. RBG Characterisation and Intensification Study (Ref 17.28);
 - g. LBL Lewisham Characterisation Study 2019 (Ref 17.29);
 - h. LBS Heritage Supplementary Planning Document (Ref 17.30);

- i. LBLa Lambeth Local Distinctiveness Study 2012 (Ref 17.31);
- j. LBBD Character Study (Ref 17.32);
- k. LBTH Character Area Assessment (Ref 17.33);
- l. CoL City Public Realm Supplementary Planning Document (Ref 17.34);
- m. CoW Public Realm Guidance Supplementary Planning Document 2025 (Ref 17.35); and
- n. RBKC Character Study 2022 (Ref 17.36).

17.6.3 This will also include collaboration with other disciplines including built heritage and a review of key sources of information to understand the baseline townscape conditions (as shown in **Volume 2, Figure 17.2: Townscape Context**).

Visual Receptors

17.6.4 The visual assessment will determine the degree of anticipated change to visual amenity experienced by people (visual receptors) that would occur as a result of the Proposed Scheme. The visual assessment considers static and sequential effects through analysis of individual viewpoints which are considered representative of the range of views within the Study Area.

17.6.5 Representative viewpoints would be chosen once the geographical location of the Proposed Scheme components has been refined further. The visual assessment is not intended as an exhaustive assessment of all potential visual effects but rather an assessment of a sufficient number of views from a variety of distances and directions that allow a proportionate assessment of changes to visual amenity to be made to assess the likelihood of significant effects. The location of the representative viewpoints would be discussed with key stakeholders (such as the local authorities and GLA) with the aim of agreeing locations.

17.6.6 Key considerations in relation to the identification of representative viewpoints and the potential effect on visual amenity include the following within the Study Area (as shown in **Volume 2, Figure 17.4: Visual Context**):

- a. Views that have been identified in relevant planning policy and guidance documents, and relevant CA appraisals. This could include selected Designated Views identified in the LVMF at construction only, which would be reviewed as the design progresses.
- b. Views with receptors of particular sensitivity in relation to historical designations such as WHS.
- c. Residential receptors in close proximity to the Proposed Scheme.

- d. Recreational users in local green spaces including Southmere Park, Birchmere Park, Maryon Park, Southwark Park, Geraldine Mary Harmsworth Park and Victoria Embankment Gardens.
- e. Recreational users of the National Cycle Network, cycleways, National Trails including the Thames Path, Public Rights of Way network and the Green Chain Walks including in Maryon Park.

17.6.7 As noted above, a ZTV would be produced of the Proposed Scheme. The ZTV would be run for the scoped in above ground infrastructure associated with the Proposed Scheme.

17.6.8 The computer generated ZTV would be run using Light Detection and Ranging data where available in conjunction with lower resolution Digital Elevation Model if required. OS MasterMap data and vegetation based on woodland from the National Forestry Inventory would be used to develop a DTM for built form and vegetation screening.

17.6.9 The use of these maps would need to be qualified by the following considerations:

- a. the ZTV is limited by the detail of the DTM data used and does not take account of local topographic variations;
- b. the ZTV has been calculated based on a maximum infrastructure height; and
- c. the ZTV maps do not take account of the likely orientation of a viewer, such as the direction of travel, and there is no allowance for reduction of visibility with distance, weather, or light.

17.6.10 These limitations mean that the ZTV tends to overestimate the extent of visibility, both in terms of the areas from which the Proposed Scheme is visible and the extent of the Proposed Scheme which is visible. Consequently, the ZTV should be considered as a tool to identify areas of potential visibility for further targeted survey and assessment, and not a measure of the visual effect.

17.6.11 Visualisations would be produced for those representative viewpoints in which operational infrastructure would be visible to assist an understanding of the potential visual effects. The methodology for the preparation and presentation of the visualisations will follow the requirements set out in the Landscape Institute, 2019, Technical Guidance Note 06/19: Visual Representation of Development Proposals (Ref 17.23). Separate visualisations are not scoped in for the Designated Views identified in the LVMF (Ref 17.26) as none are considered to have the potential to be significantly affected and are scoped out of the assessment at operation.

Impact Assessment Methodology

17.6.12 The TVIA will be carried out in accordance with the good practice guidance outlined in Section 17.3 above. GLVIA3 (Ref 17.21) places a strong emphasis on the importance of professional judgement in identifying and defining the significance of townscape and visual effects. Professional judgement will be used in combination with structured methods and criteria to evaluate townscape and visual value and susceptibility, together with the resulting sensitivity, magnitude and significance of effect.

17.6.13 The following section summarises the methodology for the TVIA which builds on the general assessment methodology presented in **Volume 1, Chapter 5: EIA Approach and Methodology**.

Sensitivity of Townscape Receptors

17.6.14 Townscape receptors are described as components of the townscape that are likely to be affected by the Proposed Scheme. These can include overall character and key characteristics, individual elements or features, and specific aesthetic or perceptual aspects. It is the interaction between the different components of the Proposed Scheme and these townscape receptors which has the potential to result in townscape effects (both adverse and beneficial).

17.6.15 The sensitivity of the townscape receptor will be derived by combining the value of the townscape (determined as part of the baseline study) and the townscape's susceptibility to change to the specific type of development being assessed.

17.6.16 Townscape value is frequently addressed by reference to international, national, regional, and local designations. Absence of such a designation does not necessarily imply a lack of quality or value. Factors such as accessibility and local scarcity can render areas of nationally unremarkable quality highly valuable as a local resource. The evaluation of townscape value is also informed by the following factors where relevant, as outlined in the Landscape Institute's Technical Guidance Note (TGN) 02/21 (Ref 17.24), and classified as very high, high, medium, low or very low with evidence provided as to the basis of the evaluation. It should be noted that TGN 02/21 refers to 'landscape' throughout, however it is also considered applicable to townscape assessments, and this terminology has been amended to 'townscape' below given the context of the Proposed Scheme:

- a. Natural heritage – the extent to which a townscape has clear evidence of ecological, geological, geomorphological or physiographic interest which contributes positively to the townscape.
- b. Cultural heritage – the extent to which a townscape has clear evidence of archaeological, historical or cultural interest which contributes positively to the townscape.

- c. Townscape condition – the extent to which a townscape is in a good physical state both with regard to individual elements and overall townscape structure.
- d. Associations – the extent to which a townscape is connected with notable people, events and the arts.
- e. Distinctiveness – the extent to which a townscape has a strong sense of identity.
- f. Recreational – the extent to which a townscape offers recreational opportunities where experience of townscape is important.
- g. Perceptual (scenic) – the extent to which a townscape appeals to the senses, primarily the visual sense.
- h. Perceptual (wildness and tranquillity) – the extent to which a townscape has a strong perceptual value, notably wildness, tranquillity and/or dark skies. To note that this factor is less relevant in the townscape context.
- i. Functional – the extent to which a townscape performs a clearly identifiable and valuable function, particularly in the healthy functioning of the townscape.

17.6.17 Townscape susceptibility relates to the ability of a particular townscape to accommodate the specific type of development being assessed (in this case, the Proposed Scheme). It is assessed through consideration of the baseline characteristics of the townscape, and in particular, the scale or complexity of a given townscape. The evaluation of townscape susceptibility will be defined as very high, high, medium, low or very low and will be supported by a clear explanation based upon the analysis of the townscape receptor and the extent to which it is able to accommodate the changes that would result from the Proposed Scheme. The considerations relevant to the assessment of susceptibility include the following:

- a. Scale – a measure of how well a proposed development would relate to the overall scale, massing and density of the townscape, landform and/or townscape features.
- b. Landform – the extent to which a proposed development would relate to and/or integrate with the existing landform and topographic features.
- c. Pattern – the extent to which a proposed development would relate to the existing townscape pattern including the urban grain and relationship between buildings.
- d. Streetscape – a measure of how well a proposed development would relate to existing streetscape, such as building line, roofline, building types, architecture and materials.
- e. Openness/enclosure – the extent to which the openness or enclosure of a townscape would influence the ability of a townscape to

accommodate a proposed development, such as reviewing influence on the skyline.

- f. Landmarks – a measure of how well a proposed development would relate to existing landmark features.
- g. Development context – the level to which existing similar development within a townscape influences the ability to accommodate a proposed development.
- h. Perceptual qualities – the extent to which existing perceptual qualities would influence the ability of the townscape to accommodate a proposed development such as the nightscape.

17.6.18 The overall sensitivity assessment of the townscape receptor will be made by applying professional judgement to combine and analyse the identified value and susceptibility ratings. Overall sensitivity will be rated as very high, high, medium, low or very low.

17.6.19 **Table 17-3** below outlines indicators that inform townscape value and susceptibility (and therefore sensitivity). The basis of the assessment will be made clear in the evaluation of each townscape receptor.

Table 17-3 Sensitivity of Townscape Receptors

	Higher Sensitivity Indicators	Lower Sensitivity Indicators
Value	A nationally designated townscape and/or a townscape in very good condition, recognised associations, very high recreational opportunities, a very high degree of distinctiveness, with very strong perceptual aspects and/or very important natural and cultural heritage features and functional qualities.	An undesignated townscape and/or townscape containing few if any notable elements/features, of poor condition or containing several detracting features and limited aesthetic qualities. Townscapes which have limited recognised associations, recreational opportunities, natural and cultural heritage features and/or functional qualities.
Susceptibility	Attributes that make up the character of the townscape which offer very limited opportunities to accommodate change of the type proposed without fundamentally altering key characteristics.	Attributes that make up the character of the townscape which are tolerant of a large degree of the type of change proposed without fundamentally altering the key characteristics.

Sensitivity of Visual Receptors

- 17.6.20 Sensitivity of visual receptors will be defined through an appraisal of the viewing expectation, or value, placed on the view as identified in the baseline study, and its susceptibility to change.
- 17.6.21 The value attached to views is often informed by the appearance on Ordnance Survey or tourist maps and in guidebooks, literature and art, or identified in policy. Value can also be indicated by the provision of parking places and sign boards and interpretive material for enjoyment. The nature and composition of the view is also an indicator. It is important to note that the absence of view recognition does not preclude local value, as a view may be important as a resource in the local or immediate environment due to its relative rarity or local importance. The value of the view will be classified as very high, high, medium, low or very low and is supported by evidenced, professional judgements.
- 17.6.22 The susceptibility of visual receptors to change will be established as a function of the occupation or activity of people experiencing the view, and the extent to which their attention or interest is focused on the view and the visual amenity they experience. For example, walkers whose interest may be focused on the townscape or a particular view, or visitors at an attraction where views are an important part of the experience, indicate a higher level of susceptibility. Conversely receptors engaged in outdoor sport where views are not important or receptors at their place of work are considered less susceptible to change. The susceptibility of visual receptors is not dependent on the specific change being proposed. Judgements about the susceptibility of visual receptors will be rated using very high, high, medium, low or very low ratings using consistent and reasoned judgements.
- 17.6.23 The overall sensitivity assessment of the visual receptor will be determined by applying professional judgement to combine and analyse the identified value and susceptibility ratings. Overall visual sensitivity will be rated as very high, high, medium, low or very low.
- 17.6.24 **Table 17-4** below outlines indicators that inform the value of the view and the susceptibility (and therefore sensitivity) of visual receptors. The basis of the assessment will be made clear in the evaluation of each visual receptor.

Table 17-4 Sensitivity of Visual Receptors

	Higher Sensitivity Indicators	Lower Sensitivity Indicators
Value	Views protected by designation, or nationally recognised, or recorded on maps/guidebooks or with cultural associations.	Views which are not documented or protected with minimal or no cultural associations.
Susceptibility	Viewers whose attention or interest is focused on their surroundings; Residential properties and settlements where views contribute to the townscape setting enjoyed by residents; and People engaged in outdoor recreation including users of cycle routes, recreational routes, core paths and visitors to heritage assets where views of the surroundings are an important contributor to experience.	People whose attention or interest is not focused on their surroundings and where the view is incidental to their enjoyment; People travelling more rapidly on major roads, rail or transport routes not recognised as scenic routes; People engaged in outdoor recreation which does not involve or depend upon appreciation of views of the townscape; and People at their place of work whose attention is not on their surroundings.

Townscape Magnitude of Effect

17.6.25 Townscape magnitude of effect³ refers to the extent to which the Proposed Scheme would alter the existing characteristics of the townscape. It is an expression of the size or scale of change to the townscape, the geographical extent of the area influenced, and its duration and reversibility. Notes and Clarifications on Aspects of GLVIA3 Technical Guidance Note 2024-01 (Ref 17.21) sets out that the size/scale of effect is likely to be the most important

³ The generic EIA method uses the terminology 'magnitude of impact' or 'magnitude of change' to define the environmental impact of the Proposed Scheme. The TVIA methodology differs in the use of this terminology and refers to the 'magnitude of effect' to define the environmental impact of the Proposed Scheme. This is because GLVIA3 specifically uses the term 'magnitude of effect' which is defined as the 'nature of the effect likely to occur' and is determined by combining judgements about scale of effect; extent of effect; and duration of effect. Judgements about 'magnitude of effect' are combined with judgements about receptor sensitivity to determine the overall significance of effect.

factor, with geographical extent and duration/reversibility considered as 'modifiers'. The variables involved are:

- a. the extent of existing townscape elements that would be lost, the proportion of the total extent that this represents and the contribution of that element to the character of the townscape;
- b. the extent to which aesthetic or perceptual aspects of the townscape are altered either by removal of existing components of the townscape or by the addition of new components;
- c. whether the change alters the key characteristics of the townscape that are integral to its distinctive character;
- d. the geographic extent over which the change will be experienced (for example within the application boundary, the immediate setting around that boundary, at the local townscape character area scale, or on a larger scale influencing broader areas of townscape character);
- e. the duration of the change (i.e. short term, medium term, or long term) as defined in **Volume 1, Chapter 5: EIA Approach and Methodology**, and its reversibility (i.e. whether it is permanent, temporary, or partially reversible); and
- f. townscape change can be both direct, through alteration of physical components, or indirect, resulting from changes to perceptual aspects of character and how it is experienced.

17.6.26 An overall assessment of the magnitude of townscape effect resulting from the Proposed Scheme on townscape receptors will be made by combining the above judgements using evidence and professional judgement. The level of townscape magnitude of effect is described as being very high, high, medium, low, very low or none as defined in **Table 17-5** below.

Table 17-5 Townscape Magnitude of Effect

Magnitude	Criteria
Very High	Substantial alteration to the townscape receptor or may impact an extensive area or unique and important characteristics. May be longer term, permanent or reversible.
High	Large alteration to the townscape receptor or may impact an extensive area or unique characteristics at a local level. May be longer term, permanent or reversible.
Medium	Partial alteration to the townscape receptor or may impact a wide area or characteristics at a local level. May be medium term, permanent or reversible.

Magnitude	Criteria
Low	Slight alteration to the townscape receptor or may impact a restricted area and few key characteristics. May be short to medium term, permanent or reversible.
Very Low	Very slight change to the townscape receptor or may impact a limited area or no key characteristics. May be short-term, permanent or reversible.
None	No change to the townscape receptor.

Visual Magnitude of Effect

17.6.27 Visual magnitude of effect relates to the extent to which the Proposed Scheme would alter the existing view and is an expression of the size or scale of change in the view, the geographical extent of the area influenced and its duration and reversibility. Notes and Clarifications on Aspects of GLVIA3 Technical Guidance Note 2024-01 (Ref 17.25) sets out that not all components of magnitude of effect are equally weighted. It is considered that the scale of change and degree of contrast are likely to be the most important factors, with the nature of view, angle of the view and duration/reversibility considered as 'modifiers'. The variables involved are described below:

- the scale of the change in the view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by a proposed development;
- the degree of contrast or integration of any new features or changes in the form, scale, composition and focal points of the view;
- the nature of the view of a proposed development in relation to the amount of time over which it will be experienced, and whether views of this will be visible fully, partially or glimpsed;
- the angle of view in relation to the main activity of the receptor, distance of the viewpoint from a proposed development and the extent of the area over which the changes would be visible; and
- the duration of the change (i.e. short term, medium term, or long term), as defined in **Volume 1, Chapter 5: EIA Approach and Methodology**, and its reversibility (i.e. whether it is permanent, temporary, or partially reversible).

17.6.28 An overall assessment of the magnitude of visual effect resulting from the Proposed Scheme on the visual receptor will be made combining the above judgements using evidence and professional judgement. The level of visual magnitude of effect will be described as being very high, high, medium, low, very low or none as defined in **Table 17-6** below.

Table 17-6 Visual Magnitude of Effect

Magnitude	Criteria
Very High	A substantial change to the composition of the view or change that may be viewed in the foreground or directly. May be longer term, permanent or reversible.
High	A pronounced change to the composition of the view or change that may be viewed in the foreground or directly. May be longer term, permanent or reversible.
Medium	A noticeable change to the composition of the view or change that may be viewed in the middle ground or indirectly. May be medium term, permanent or reversible.
Low	An unobtrusive change in the composition of the view or change that may be viewed in the background or obliquely. May be short to medium term, permanent or reversible.
Very Low	A barely perceptible change in the composition of the view or change that may be viewed in the background and/or very obliquely. May be short term, permanent or reversible.
None	No change to the view.

Duration of Change

17.6.29 For the purposes of this TVIA, the duration of change associated with the townscape and visual magnitude of effect is considered to be as follows:

- a. Short term: 0-4 years;
- b. Medium term: 5-10 years; and
- c. Long term: 11+ years.

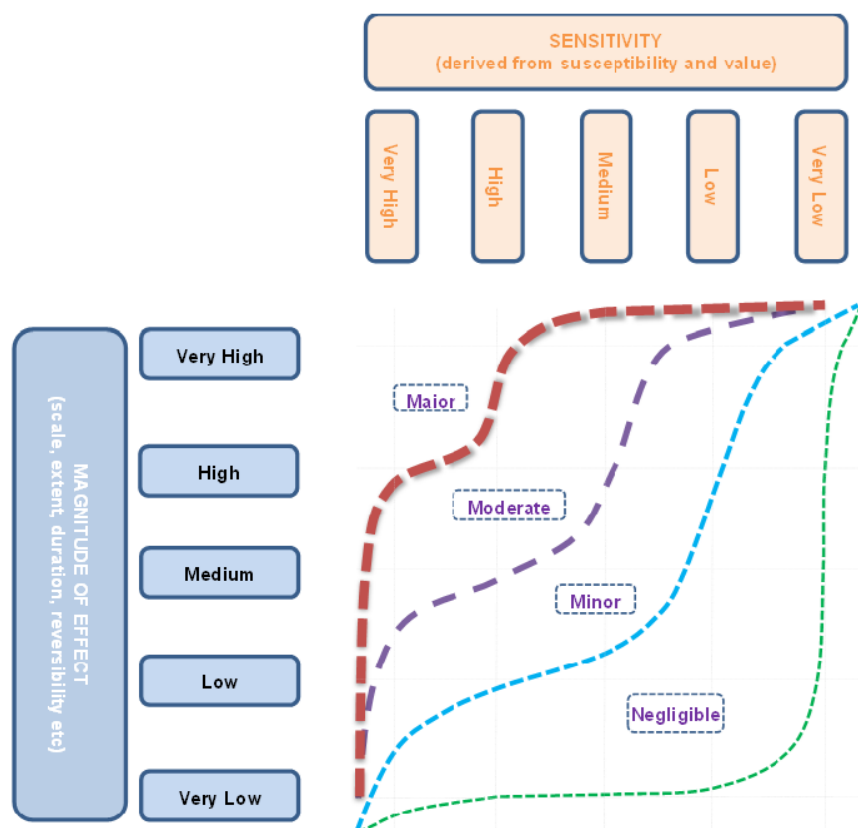
Significance of Effects

17.6.30 Determination of the significance of townscape and visual effects will be undertaken by employing professional judgement and experience to combine and analyse the magnitude of effect against the identified sensitivity of townscape and visual receptors.

17.6.31 The significance of townscape and visual effects are described with reference to the criteria presented in **Table 17-7** below. For the purposes of this assessment, effects rated as being of moderate or major effect are considered to be significant.

Table 17-7 Significance of Effect

Significance of Effect	Townscape	Visual
Major	Highly noticeable change affecting key characteristics of a very highly sensitive townscape, resulting in a fundamental change to its character.	Considerable change affecting a large extent of a very highly sensitive view and becoming a dominant feature.
Moderate	Noticeable change affecting some key characteristics in a highly sensitive townscape or very noticeable change in a medium sensitivity townscape, resulting in a change to the overall impression of its character.	Noticeable change affecting an important part of a highly sensitive view or a wider extent of a medium sensitivity view, becoming prominent or detracting from the existing focus.
Minor	Small change affecting few characteristics in a medium to highly sensitive townscape or noticeable change to a less sensitive townscape, resulting in a limited or localised change to the impression of its character.	Small change affecting a limited and/or unimportant part of a medium to highly sensitive view or an important part of a less sensitive view, unlikely to distract from the existing focus.
Negligible	Very little change from baseline conditions, resulting in a barely distinguishable or indistinguishable change.	Where there is no discernible improvement or deterioration in the existing view.
No change	No alteration to any of the components that contribute to the existing townscape resource.	No change to the existing view.

Plate 17-1: Classification of Townscape and Visual Effects**17.7 Design, Mitigation and Enhancement Measures**

17.7.1 Mitigation measures would be embedded within the design of the Proposed Scheme to help minimise potential effects, based on key sensitivities, constraints and opportunities identified through the baseline study. For example, townscape and visual considerations would continue to inform the iterative siting and design of the Proposed Scheme for works during both the construction and operation phases. Mitigation may also include landscape planting to help reduce the extent or significance of adverse effects in the long term, however noting the urban environment that the Proposed Scheme sits within.

17.8 Assumptions, Limitations and Uncertainties

17.8.1 This chapter has been based on the description and parameters of the Proposed Scheme set out within Volume 1, Chapter 2: Proposed Scheme of this EIA Scoping Report. Specifically, elements have been proposed to be scoped out of the assessment on the basis of the scale and extent of permanent above ground MAP infrastructure. Furthermore, it is assumed that the maximum height of the proposed infrastructure at the Riverside Campus associated with the Proposed Scheme would not exceed that of the

surrounding existing infrastructure. These assumptions would be reviewed prior to the completion of the ES.

17.9 Summary of Elements Scoped In or Scoped Out

17.9.1 A summary of the townscape and visual items to be scoped in or out of the ES is provided in **Table 17-8**.

Table 17-8 Summary of Scope of Townscape and Visual Assessment

Element	Phase	Scoped In	Scoped Out	Justification
Townscape Character – Above ground construction works	Construction	✓		Above ground construction works that could temporarily alter the TCA. This would include all above ground components of the Proposed Scheme and construction lighting.
Townscape Character – Below ground construction works	Construction		✓	Below ground construction works are not likely to significantly alter the TCA.
Townscape Character – Above ground operational infrastructure	Operation	✓		Above ground operational infrastructure which could permanently alter the TCA. This is limited to the Heat Recovery System at the Riverside Campus and any Thermal Stores that may require above ground structures. The MAP ground level coverings and kiosks are scoped out due to their limited scale within an existing urban setting. Consideration of new operational lighting at Riverside Campus is also scoped out due to the existing industrial setting.
Townscape Character - Below ground components of the Proposed Scheme	Operation		✓	Below ground infrastructure is not likely to significantly alter the TCA.

Element	Phase	Scoped In	Scoped Out	Justification
Visual Amenity – Above ground construction works	Construction	✓		Above ground construction works across the Proposed Scheme for residential and recreational receptors only. This would include all above ground components of the Proposed Scheme and construction lighting. Designated Views are also scoped in for consideration.
Visual Amenity – Below ground construction works	Construction		✓	Below ground construction works would not be visible to receptors.
Visual Amenity – Above ground operational infrastructure	Operation	✓		Above ground operational infrastructure which could permanently alter visual amenity for residential and recreational receptors only. This is limited to the Heat Recovery System at the Riverside Campus and any Thermal Stores that may require above ground structures. The MAP ground level coverings and kiosks are scoped out due to their limited scale within an existing urban setting. Consideration of operational lighting is also scoped out due to the existing industrial setting. Designated Views are scoped out.
Visual Amenity - Below ground components of the Proposed Scheme	Operation		✓	Below ground infrastructure would not be visible to receptors.
All Townscape Character and	Decommissioning		✓	The Proposed Scheme is intended to become part of London's critical infrastructure with no decommissioning proposed. However, if

Element	Phase	Scoped In	Scoped Out	Justification
Visual Amenity effects				decommissioning were to be required, it is likely that only minor works would be needed to remove above ground infrastructure. Standard construction practice management measures would be expected to avoid any likely significant effects, considering the small scale of works required. Given this, decommissioning effects are proposed to be scoped out of the TVIA.

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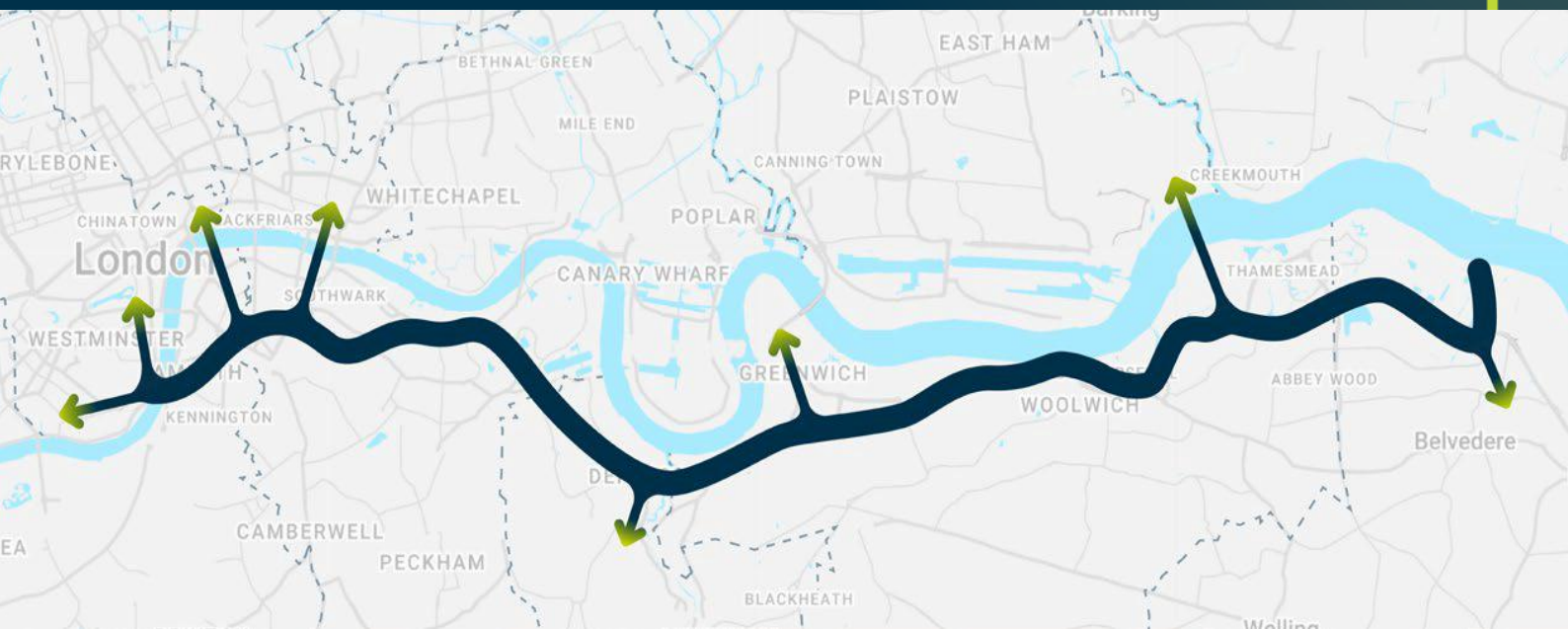
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Environmental Impact Assessment Scoping Report

Volume 1: Main Report

Chapter 18: Transport



Cory Environmental Holdings Limited

July 2026

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18. Transport

18.1 Introduction

18.1.1 This chapter identifies the potential for likely significant effects of the Proposed Scheme on transport. It sets out the proposed methodology for the transport assessment in the Environmental Statement (ES) and identifies those impacts that can be scoped into or out of the assessment of likely significant effects.

18.1.2 This chapter is supported by the following figures in Volume 2 of the Scoping Report:

- a. **Figure 18-1: Transport Study Area;**
- b. **Figure 18-2: Existing Walking Network;**
- c. **Figure 18-3: Existing Cycling Network;**
- d. **Figure 18-4: Public Transport Access Level (PTAL);**
- e. **Figure 18-5: Public Transport – Bus stops; and**
- f. **Figure 18-6: Public Transport – Railway Stations.**

18.2 Study Area

18.2.1 For the purposes of EIA Scoping, the Study Area includes the extents of the highway network in the vicinity of the EIA Scoping Boundary¹, as shown in **Volume 2, Figure 18-1**. The Study Area has been defined based on professional judgement and experience of working on other DCO schemes; it includes receptors considered to be potentially at risk from direct or indirect transport impacts arising from the Proposed Scheme.

18.2.2 The Study Area is spread across multiple London Boroughs, as listed below:

- a. London Borough of Bexley (LBB);
- b. Royal Borough of Greenwich (RBG);
- c. London Borough of Lewisham (LBLe);
- d. London Borough of Southwark (LBS);
- e. London Borough of Lambeth (LBLa);
- f. London Borough of Barking and Dagenham (LBBD);
- g. London Borough of Tower Hamlets (LBTH);
- h. City of London (CoL);
- i. City of Westminster (CoW); and

¹ All references to 'EIA Scoping Boundary' correspond to the area shown in **Volume 2, Figure 1-1**.

j. Royal Borough of Kensington and Chelsea (RBKC).

- 18.2.3 The extent of the Study Area for assessment in terms of highway impact will be subject to discussion and consultation with the London boroughs impacted by the Proposed Scheme, as set out above, as well as Transport for London (TfL). The Proposed Scheme is not expected to impact the Strategic Road Network (SRN), although consultation will be held with National Highways (NH) if necessary.
- 18.2.4 At this stage, it is assumed that the key road links likely to require consideration would be those directly affected by Maintenance and Access Points (MAP) situated along the proposed alignment of the Proposed Scheme, as well as road links used to access construction compounds. However, these have not yet been defined, as the locations of the construction compounds have not been established at this stage.
- 18.2.5 The Transport Study Area for the ES is proposed to include a 50m buffer around each of the proposed MAP, extending to include the anticipated construction routes within the vicinity of the Proposed Scheme that will be utilised by the construction vehicles during the construction phase to access and egress the Proposed Scheme (and so may be impacted). As a minimum, it is anticipated that the links mentioned in Section 18.4 below will likely be used by construction vehicles to access the Proposed Scheme.

18.3 Relevant Legislation, Planning Policy and Guidance

- 18.3.1 Legislation, planning policy and guidance relating to transport is outlined below.

Legislation

- 18.3.2 There is no transport specific legislation relevant to the assessment of transport impacts from the Proposed Scheme.

National Planning Policy

Overarching National Policy Statement for Energy (NPS EN-1)

- 18.3.3 The relevant national policies from NPS EN-1 for transport are summarised within

18.3.4 **Table 18-1.** These documents have informed the assessment methodology and the identification of sensitive receptors. The national policies are relevant to all elements of the assessments covered in this chapter.

Table 18-1: Overarching National Policy Statement for Energy – Transport

National Policy	Relevant Requirements	Relevance to the Assessment
National Policy Statement for Energy (NPS EN-1) (Ref 18.1)	Section 5.14 Traffic and Transport, outlines the planning policy for transport, including guidance on undertaking relevant parts of the EIA.	EN-1 highlights the importance of assessing transport effects, stating that where a development is likely to have significant transport implications, a Transport Assessment should be prepared and included within the ES Transport chapter. Applicants are expected to consider impacts arising across all relevant stages of the proposed development including construction, operation and, where necessary, decommissioning. EN-1 recognises that large energy schemes can generate substantial traffic movements, requiring assessment of impacts on network capacity, safety and users, alongside consideration of cumulative effects and alternatives to road-based transport. The policy emphasises the need for applicants to identify the likely significant effects as well as mitigation measures to prevent, reduce or offset these effects and therefore ensuring that appropriate measures (such as traffic management or specific mitigations) are secured.

National Policy	Relevant Requirements	Relevance to the Assessment
		The EN-1 makes it clear that transport impacts must be robustly assessed and appropriately mitigated, with decision-making based on whether any residual effects are acceptable in the planning balance. These requirements are used to formulate the assessment methodology, receptor selection/sensitivity, potential significant environmental effects and mitigation.

National Planning Policy Framework (NPPF)

- 18.3.5 The most recent version of the NPPF (Ref 18.2) was published in December 2024. Paragraphs relevant to the assessment of potential transport effects are listed in **Table 18-2** and will be considered in the development of the ES.
- 18.3.6 It should be noted that a draft NPPF was published for consultation in December 2025, however it is not expected that this draft will significantly alter the policy context or policy compliance of the Proposed Scheme.

Table 18-2: National Planning Policy Framework

NPPF Paragraph	Paragraph Text
Paragraph 109	Transport issues should be considered from the earliest stages of plan-making and development proposals, using a vision-led approach to identify transport solutions that deliver well-designed, sustainable and popular places. This should involve: • making transport considerations an important part of early engagement with local communities; • ensuring patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places; • understanding and addressing the potential impacts of development on transport networks; • realising opportunities from existing or proposed transport infrastructure, and changing transport technology and usage – for example in relation to the scale, location or density of development that can be accommodated; • identifying and pursuing opportunities to promote walking, cycling and public transport use; and • identifying, assessing and taking into account the environmental impacts of traffic and transport infrastructure – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains.
Paragraph 115	In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that: • sustainable transport modes are prioritised taking account of the vision for the site, the type of development and its location; • safe and suitable access to the site can be achieved for all users;

NPPF Paragraph	Paragraph Text
	- the design of streets, parking areas, other transport elements and the content of associated standards reflect current national guidance, including the National Design Guide and the National Model Design Code⁴⁸; and - any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree through a vision-led approach.
Paragraph 116	Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network, following mitigation, would be severe, taking into account all reasonable future scenarios.
Paragraph 118	All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a vision-led transport statement or transport assessment so that the likely impacts of the proposal can be assessed and monitored.

Local and Neighbourhood Planning Policy

18.3.7 **Table 18-3** lists the specific policies from Local and Neighbourhood Plan documents within each London borough that are most relevant to the Proposed Scheme. These documents and policies have informed the assessment methodology and will inform the identification of sensitive receptors within the Study Area.

Table 18-3: List of Relevant Local and Neighbourhood Policy – Transport

Local Authority	Relevant Local and Neighbourhood Plans	Relevant Local and Neighbourhood Plan Policies
Greater London Authority	The London Plan 2021 (Ref 18.3)	- Policy T4 Assessing and mitigating transport impacts - Policy T7 Deliveries, servicing and construction
London Borough of Bexley (LBB)	Bexley Local Plan 2023 (Ref 18.4)	Policy SP10 Bexley's Transport Network

Local Authority	Relevant Local and Neighbourhood Plans	Relevant Local and Neighbourhood Plan Policies
		Policy DP22 Sustainable Transport
Royal Borough of Greenwich (RBG)	Royal Greenwich Local Plan: Core Strategy with Detailed Policies (Ref 18.5)	- Policy IM4 Sustainable Travel - Policy IM(a) Impact on the Road Network
	Royal Borough of Greenwich Draft Local Plan (Ref 18.6)	- Policy T3: Roads and Streets - Policy T5: Freight
London Borough of Lewisham (LBLe)	Lewisham Local Plan 2020-2040 (Ref 18.7)	Policy TR1 Sustainable transport and movement
London Borough of Southwark (LBS)	The Southwark Plan 2022 (Ref 18.8)	Policy P50 Highways impacts
London Borough of Lambeth (LBLa)	Lambeth Local Plan 2020-2035 (Ref 18.9)	Policy T1 Sustainable Travel
	South Bank & Waterloo Neighbourhood Plan 2017-2032 (Ref 18.10)	Policy P16: Streetscape & Transport
	Kennington Oval and Vauxhall Neighbourhood Plan 2035 (Ref 18.11)	No policies from this Neighbourhood Plan are relevant to the assessment in this Scoping Chapter
London Borough of Barking and Dagenham (LBBD)	London Borough of Barking and Dagenham Local Plan 2020-2037 (Ref 18.12)	Strategic Policy SP8: Planning for integrated and sustainable transport
London Borough of Tower Hamlets (LBTH)	Tower Hamlets Local Plan 2031: Managing Growth and Sharing	- Policy D.ES2 Air Quality - Policy D.ES7 A zero carbon borough

Local Authority	Relevant Local and Neighbourhood Plans	Relevant Local and Neighbourhood Plan Policies
	Benefits (Ref 18.13)	• Policy D.TR2 Impacts on the transport network
City of London (CoL)	City of London Local Plan 2015 (Ref 18.14)	• Policy DM 16.1 Transport impacts of development
	City of London Local Plan: Revised Proposed Submission Draft April 2024 (Ref 18.15)	• Policy VT1: The impacts of development on transport • Policy HL2: Air quality
City of Westminster (CoW)	City of Westminster: City Plan 2019-2040 (Ref 18.16)	• Policy 30: Public transport and infrastructure
	Victoria Neighbourhood Plan 2025 - 2040 (Ref 18.17)	• Policy VNA-01: A walkable environment • Policy VNA-02: Cycle infrastructure • Policy VNA-03: Mobility hubs and cycle docking points • Policy VNA-04: Electric vehicle charging points
Royal Borough of Kensington and Chelsea (RBKC)	Royal Borough of Kensington and Chelsea Local Plan 2024 (Ref 18.18)	• Policy TR5: Land Use and Transport

18.3.8 The Applicant will seek to adhere to the relevant policies and document requirements set out above that are deemed applicable to the Proposed Scheme. The DCO Application will be supported by additional transport documents which will be discussed and engaged upon with the relevant consultees (including but not limited to, the Transport Assessment (TA), Framework Construction Logistics Plan (CLP), and other mitigation documents produced for the DCO Application, as well as the development of a Scheme-wide approach to the approval of detailed management measures.

Relevant Guidance

18.3.9 Relevant guidance documents which have been considered for the Transport chapter are listed below:

- a. Department for Levelling Up, Housing and Communities – National Planning Practice Guidance (NPPG) (2024) (Ref 18.19); and
- b. Construction Logistics and Community Safety (CLOCS) – Construction Logistics Planning (CLP) Guidance (2021) (Ref 18.20); and
- c. Institute of Sustainability and Environmental Professionals (ISEP) – ‘Environmental Assessment of Traffic and Movement’ (2023) (Ref 18.21).

18.4 Baseline Conditions and Future Baseline

18.4.1 Baseline conditions across the Study Area will be described in detail in the ES Transport chapter, however for the purposes of this Scoping Report, they have been summarised in the sub-sections below.

18.4.2 Transport of construction materials and excavated material by water is not proposed, given the alignment of the Proposed Scheme and the lack of appropriate local infrastructure to transfer materials throughout the extent of the Proposed Scheme. At this stage, it is also considered that the potential transport of materials by rail is unlikely to be feasible, however, this will be further considered as part of the pre-application process.

18.4.3 The reasoning for the proposed transport routes, which will be discussed and agreed with stakeholders, as well as details of assumptions which underpin them, where available, will be presented in the DCO Application.

Existing Local Highway Network

Strategic Road Network

18.4.4 The SRN is the network of motorways and major A-roads managed by NH. The closest parts of the SRN to the Proposed Scheme are the A13 and the M25, near Aveley in Thurrock. The M25 junction 30 (which forms a junction with the A13) is located approximately 8km from the most eastern extent of the Transmission Branch to the south of Dagenham in LBBD.

18.4.5 There are no parts of the SRN that are expected to interact with the Proposed Scheme, although consultation will be held with NH, if assessments indicate that this necessary.

Transport for London Road Network (TLRN)

18.4.6 The Transport for London Road Network (TLRN), also known as the TfL Red Routes, is a network of major arterial routes which run through London and are managed by TfL. The TLRN handles high volumes of traffic including

freight, bus routes and strategic cycle routes. These routes carry up to 30% of the London's traffic and help reduce congestion.

18.4.7 The Proposed Scheme largely follows TLRN roads, and those within the EIA Scoping Boundary are listed in **Table 18-4**.

18.4.8 The London Lorry Control Scheme (LLCS) limits HGV movements on certain roads in London to minimise noise pollution. Unless special permissions are obtained, HGV movements are prohibited during the following times:

- a. Monday - Friday: Before 07:00 and after 21:00.
- b. Saturday: After 13:00
- c. Sunday: All day

18.4.9 Roads in the TLRN that are not subject to these restrictions are described in the table below as Permitted Routes.

Table 18-4: TLRN Roads in Vicinity of the Proposed Scheme

TLRN Road	Borough	Road restrictions	Overlapping section(s) of Proposed Scheme	Figure 18-1 Sheet Ref.
A205 South Circular	RBG	LLCS restrictions apply	London SHM – Transmission Trunk Main	Sheets 2 & 3
A102	RBG	Permitted Route	London SHM – Transmission Trunk Main	Sheet 3
A101	LBS	LLCS restrictions apply 2m Height restriction applies to vehicles entering/exiting Rotherhithe Tunnel	London SHM – Transmission Trunk Main	Sheets 4 & 5
A200	RBG LBLe LBS	LLCS restrictions apply	London SHM – Transmission Trunk Main	Sheets 4 & 5
A100	LBS	LLCS restrictions apply 7.5T weight restriction applies to vehicles crossing Tower Bridge	London SHM – Transmission Trunk Main	Sheet 5
A201	LBS	LLCS restrictions apply	London SHM – Transmission Trunk Main	Sheet 5
A2	LBS	LLCS restrictions apply Within Congestion Zone	London SHM – Transmission Trunk Main	Sheet 5
A302	LBS	LLCS restrictions apply	London SHM – Transmission Trunk Main	Sheet 5

TLRN Road	Borough	Road restrictions	Overlapping section(s) of Proposed Scheme	Figure 18-1 Sheet Ref.
		Within Congestion Zone		
	CoW	LLCS restrictions apply Within Congestion Zone	London SHM - Transmission Branch – Victoria	Sheet 6
A3203	LBS	LLCS restrictions apply Within Congestion Zone	London SHM – Transmission Trunk Main	Sheets 5 & 6
	LBLa	LLCS restrictions apply Within Congestion Zone	London SHM – Transmission Trunk Main	Sheets 5 & 6
A3036	LBLa	LLCS restrictions apply Within Congestion Zone	London SHM – Transmission Trunk Main	Sheets 5 & 6
A3	LBS	LLCS restrictions apply Within Congestion Zone	London SHM -Transmission Branch – Cannon Street	Sheet 5
A3200	LBS	LLCS restrictions apply Within Congestion Zone 4.8m Height restriction for vehicles passing underneath railway bridge	London SHM - Transmission Branch – Cannon Street	Sheet 5
		LLCS restrictions apply Within Congestion Zone	London SHM -Transmission Branch – Blackfriars	Sheet 5

TLRN Road	Borough	Road restrictions	Overlapping section(s) of Proposed Scheme	Figure 18-1 Sheet Ref.
	LBLa	LLCS restrictions apply Within Congestion Zone	London SHM -Transmission Branch – Embankment	Sheets 5 & 6
A3211	CoL	LLCS restrictions apply Within Congestion Zone	London SHM -Transmission Branch – City of London	Sheet 5
		LLCS restrictions apply Within Congestion Zone	London SHM - Transmission Branch – Blackfriars	Sheet 5
	CoW	LLCS restrictions apply Within Congestion Zone	London SHM - Transmission Branch – Embankment	Sheets 5 & 6
A10	CoL	LLCS restrictions apply Within Congestion Zone	London SHM - Transmission Branch – City of London	Sheet 5
A201	LBS	LLCS restrictions apply Within Congestion Zone	London SHM - Transmission Branch – Blackfriars	Sheet 5
A40	CoW	LLCS restrictions apply Within Congestion Zone	London SHM - Transmission Branch – Paddington	Sheet 6
A5	CoW	LLCS restrictions apply Within Congestion Zone	London SHM - Transmission Branch – Paddington	Sheet 6

TLRN Road	Borough	Road restrictions	Overlapping section(s) of Proposed Scheme	Figure 18-1 Sheet Ref.
A3212	CoW	LLCS restrictions apply	London SHM – Transmission Trunk Main London SHM - Transmission Branch – Chelsea London SHM - Transmission Branch – Victoria London SHM - Transmission Branch – Kensington	Sheet 6
A202	CoW	LLCS restrictions apply	London SHM - Transmission Branch – Victoria	Sheet 6
A3213	CoW	LLCS restrictions apply 7.5T weight limit applies to vehicles crossing Ecclestone Bridge	London SHM - Transmission Branch – Kensington	Sheet 6
A4	CoW	LLCS restrictions apply	London SHM - Transmission Branch – Paddington	Sheet 6
	RBKC	LLCS restrictions apply	London SHM - Transmission Branch – Kensington	Sheet 6

Major Road Network (MRN)

18.4.10 The non-TLRN Major Road Network (MRN) forms part of the arterial road network that has a similar function to the TLRN but is managed by the local borough highway authorities rather than TfL, sitting between the SRN and the rest of the local road network within London.

18.4.11 The list of MRN within the vicinity of the Proposed Scheme are shown in **Table 18-5**.

Table 18-5: MRN in Vicinity of Proposed Scheme

MRN Road	Borough	Road restrictions	Overlapping section(s) of Proposed Scheme	Figure 18-1 Sheet Ref.
A13	LBBD	Permitted Route	London SHM - Transmission Branch – Barking 1	Sheet 1
A2016	LBB RBG	LLCS restrictions apply	London SHM – Transmission Trunk Main London SHM - Transmission Branch – Barking 2	Sheets 1 & 2
A205	RBG	LLCS restrictions apply	London SHM – Transmission Trunk Main	Sheets 2 & 3
A206	RBG	LLCS restrictions apply	London SHM – Transmission Trunk Main	Sheets 2 & 3

Local Road Network (LRN)

18.4.12 The Local Road Network (LRN) is the network of public roads that are not part of the SRN and are managed by the local borough highway authorities. This includes local A-roads as well as B-roads, C-roads and unclassified roads used for local traffic rather than through-traffic.

Roads within the EIA Scoping Boundary

18.4.13 The interactions between the EIA Scoping Boundary and the MRN, TLRN and LRN are described below on a borough-by-borough basis. Given the scale of the Proposed Scheme and recognising that the design and final alignment remains subject to refinement at the ES stage, roads with only minimal overlap with the EIA Scoping Boundary have been excluded from the summary tables presented below as these are considered unlikely to experience a significant effect. It should therefore be noted that this is not an exhaustive list of all potentially impacted links.

18.4.14 The full extent of the EIA Scoping Boundary, including all overlapping road links, is illustrated in **Figure 18-1: Transport Study Area**.

London Borough of Bexley (LBB)

18.4.15 **Table 18-6** lists roads within LBB that are located within the EIA Scoping Boundary and therefore could be impacted by the Proposed Scheme.

Table 18-6: Potentially Impacted Roads within LBB

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potential overlapping section(s) parts of Proposed Scheme
Norman Road	LRN	20	Single Carriageway	Trunk Main
A2016	MRN	50	Dual Carriageway	Trunk Main
Yarnton Way	LRN	20/30	Dual Carriageway	Trunk Main
A2041 Harrow Manorway	LRN	20/30	Dual Carriageway	Trunk Main
Bazalgette Way	LRN	20	Single Carriageway	Transmission Branch – Barking 2

Royal Borough of Greenwich (RBG)

18.4.16 **Table 18-7** lists roads within RBG that are located within the EIA Scoping Boundary and therefore could be impacted by the Proposed Scheme.

Table 18-7: Potentially Impacted Roads within RBG

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potential overlapping section(s) parts of Proposed Scheme
A2016	MRN	50	Dual Carriageway	Trunk Main
A2041 Harrow Manorway	LRN	30/40/50	Dual Carriageway	Trunk Main Transmission Branch – Barking 3
Greenhaven Drive	LRN	30	Single Carriageway	Transmission Branch – Barking 3
Tom Cribb Road	LRN	20	Single Carriageway	Trunk Main
Duke of Wellington Avenue	LRN	20	Single Carriageway	Trunk Main
Warren Lane	LRN	20	Single Carriageway	Trunk Main
Glass Yard	LRN	30	Single Carriageway	Trunk Main
A206	MRN	30	Dual Carriageway	Trunk Main
A205	TLRN/MRN	20	Dual Carriageway	Trunk Main
A102	TLRN	50	Dual Carriageway	Trunk Main Transmission Branch – Greenwich Peninsula 1
Tunnel Avenue	LRN	20	Single Carriageway	Trunk Main Transmission Branch – Greenwich Peninsula 1 Transmission Branch –

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potential overlapping section(s) parts of Proposed Scheme
				Greenwich Peninsula 2
Peartree Way	LRN	30	Dual Carriageway	Transmission Branch – Greenwich Peninsula 1
Bugsby's Way	LRN	30	Dual Carriageway	Transmission Branch – Greenwich Peninsula 1
Millennium Way	LRN	30	Dual Carriageway	Transmission Branch – Greenwich Peninsula 1
Old School Close	LRN	20	Single Carriageway	Transmission Branch – Greenwich Peninsula 1 Transmission Branch – Greenwich Peninsula 2
A2203	LRN	20	Single Carriageway	Transmission Branch – Greenwich Peninsula 2
Stockwell Street	LRN	20	Single Carriageway	Trunk Main
Straightsmouth	LRN	20	Single Carriageway	Trunk Main
Churchfields	LRN	20	Single Carriageway	Trunk Main
Roan Street	LRN	20	Single Carriageway	Trunk Main
Haddo Street	LRN	20	Single Carriageway	Trunk Main

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potential overlapping section(s) parts of Proposed Scheme
Bardsley Lane	LRN	20	Single Carriageway	Trunk Main
A200	TLRN	20	Single Carriageway	Trunk Main

London Borough of Lewisham (LBLe)

18.4.17 **Table 18-8** lists roads within LBLe that are located within the EIA Scoping Boundary and therefore could be impacted by the Proposed Scheme.

Table 18-8: Potentially Impacted Roads within LBLe

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potentially overlapping section(s) parts of Proposed Scheme
A200	TLRN	20	Single Carriageway	Trunk Main
A2209	LRN	20	Single Carriageway	Trunk Main

London Borough of Southwark (LBS)

18.4.18 **Table 18-9** lists roads within LBS that are located within the EIA Scoping Boundary and therefore could be impacted by the Proposed Scheme.

Table 18-9: Potentially Impacted Roads within LBS

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potentially overlapping section(s) parts of Proposed Scheme
A200	TLRN	20	Single Carriageway	Trunk Main
Cope Street	LRN	20	Single Carriageway	Trunk Main
B205	LRN	20	Single Carriageway	Trunk Main
Deal Porters Way	LRN	20	Single Carriageway	Trunk Main

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potentially overlapping section(s) parts of Proposed Scheme
A101	TLRN	20	Single Carriageway	Trunk Main
Fulford Street	LRN	20	Single Carriageway	Transmission Branch – Wapping
Perryn Road	LRN	20	Single Carriageway	Trunk Main
Old Jamaica Road	LRN	20	Single Carriageway	Trunk Main
Marine Street	LRN	20	Single Carriageway	Trunk Main
Frean Street	LRN	20	Single Carriageway	Trunk Main
Enid Street	LRN	20	Single Carriageway	Trunk Main
Neckinger Estate	LRN	20	Single Carriageway	Trunk Main
Spa Road	LRN	20	Single Carriageway	Trunk Main
A2206	LRN	20	Single Carriageway	Trunk Main
B202	LRN	20	Single Carriageway	Trunk Main
The Grange	LRN	20	Single Carriageway	Trunk Main
Grange Walk	LRN	20	Single Carriageway	Trunk Main
A100	TLRN	20	Single Carriageway	Trunk Main
Newham's Row	LRN	20	Single Carriageway	Trunk Main
A2198	LRN	20	Single Carriageway	Trunk Main
A2205	LRN	20	Single Carriageway	Trunk Main

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potentially overlapping section(s) parts of Proposed Scheme
Decima Street	LRN	20	Single Carriageway	Trunk Main
A2	TLRN	20	Single Carriageway	Trunk Main
Tabard Street	LRN	20	Single Carriageway	Trunk Main
Trinity Street	LRN	20	Single Carriageway	Trunk Main
A3	TLRN	20	Single Carriageway	Trunk Main Transmission Branch – Cannon Street
B300	LRN	20	Single Carriageway	Transmission Branch – Cannon Street
Redcross Way	LRN	20	Single Carriageway	Transmission Branch – Cannon Street
A3200	TLRN	20	Single Carriageway	Transmission Branch – Cannon Street
Park Street	LRN	20	Single Carriageway	Transmission Branch – Cannon Street
A3202	TLRN	20	Single Carriageway	Trunk Main Transmission Branch – Blackfriars Transmission Branch – Embankment
A201	TLRN	20	Single Carriageway	Transmission Branch – Blackfriars
Burrell Street	LRN	20	Single Carriageway	Transmission Branch – Blackfriars
Bear Lane	LRN	20	Single Carriageway	Transmission Branch – Blackfriars
Hopton Street	LRN	20	Single Carriageway	Transmission Branch – Blackfriars
A301	LRN	20	Single Carriageway	Transmission Branch – Embankment

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potentially overlapping section(s) parts of Proposed Scheme
Dodson Street	LRN	20	Single Carriageway	Transmission Branch – Embankment
A3203	TLRN	20	Single Carriageway	Trunk Main
A302	TLRN	20	Single Carriageway	Trunk Main

London Borough of Lambeth (LBLa)

18.4.19 **Table 18-10** lists roads within LBLa that are located within the EIA Scoping Boundary and therefore could be impacted by the Proposed Scheme.

Table 18-10: Potentially Impacted Roads within LBLa

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potential overlapping section(s) parts of Proposed Scheme
A3203	TLRN	20	Single Carriageway	Trunk Main
A3036	TLRN	20	Single Carriageway	Trunk Main
A301	LRN	20	Single Carriageway	Transmission Branch – Embankment
A3200	TLRN	20	Single Carriageway	Transmission Branch – Embankment
Belvedere Road	LRN	20	Single Carriageway	Transmission Branch – Embankment

London Borough of Barking and Dagenham (LBBD)

18.4.20 **Table 18-11** lists roads within LBBD that are located within the EIA Scoping Boundary and therefore could be impacted by the Proposed Scheme.

Table 18-11: Potentially Impacted Roads within LBBD

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potentially overlapping section(s) parts of Proposed Scheme
Kent Avenue	LRN	20	Single Carriageway	Transmission Branch – Barking 1
Chequers Lane	LRN	20	Single Carriageway	Transmission Branch – Barking 1
Choats Road	LRN	20	Single Carriageway	Transmission Branch – Barking 1

London Borough of Tower Hamlets (LBTH)

18.4.21 **Table 18-12** lists roads within LBTH that are located within the EIA Scoping Boundary and therefore could be impacted by the Proposed Scheme:

Table 18-12: Potentially Impacted Roads within LBTH

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potentially overlapping section(s) parts of Proposed Scheme
Wapping High Street	LRN	20	Single Carriageway	Transmission Branch – Wapping

City of London (CoL)

18.4.22 **Table 18-13** lists roads within CoL which are located within the EIA Scoping Boundary and therefore could be impacted by the Proposed Scheme.

Table 18-13: Potentially Impacted Roads within CoL

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potentially overlapping section(s) parts of Proposed Scheme
Cousin Lane	LRN	20	Single Carriageway	Transmission Branch – Cannon Street
A3211	TLRN	20	Single Carriageway	Transmission Branch – Cannon Street Transmission Branch – City of London

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potentially overlapping section(s) parts of Proposed Scheme
				Transmission Branch – Blackfriars
College Street	LRN	20	Single Carriageway	Transmission Branch – City of London
College Hill	LRN	20	Single Carriageway	Transmission Branch – City of London
Queen Street	LRN	20	Single Carriageway	Transmission Branch – City of London
Cheapside	LRN	20	Single Carriageway	Transmission Branch – City of London
Circus Place	LRN	20	Single Carriageway	Transmission Branch – City of London
A10	TLRN	20	Single Carriageway	Transmission Branch – City of London
Queen Street	LRN	20	Single Carriageway	Transmission Branch – City of London
King Street	LRN	20	Single Carriageway	Transmission Branch – City of London
Gresham Street	LRN	20	Single Carriageway	Transmission Branch – City of London
Coleman Street	LRN	20	Single Carriageway	Transmission Branch – City of London
A1211	LRN	20	Single Carriageway / Dual Carriageway	Transmission Branch – City of London
Outwich Street	LRN	20	Single Carriageway	Transmission Branch – City of London
Blackfriars Passage	LRN	20	Single Carriageway	Transmission Branch – Blackfriars

City of Westminster (CoW)

18.4.23 **Table 18-14** lists roads within CoW that are located within the EIA Scoping Boundary and therefore could be impacted by the Proposed Scheme.

Table 18-14: Potentially Impacted Roads within CoW

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potentially overlapping section(s) parts of Proposed Scheme
A3211	TLRN	20	Single Carriageway	Transmission Branch – Embankment
Villiers Street	LRN	20	Single Carriageway	Transmission Branch – Embankment
A4	TLRN	20	Single Carriageway	Transmission Branch – Embankment Transmission Branch – Paddington Transmission Branch – Kensington
A308	LRN	20	Single Carriageway	Transmission Branch – Embankment
Waterloo Place	LRN	20	Dual Carriageway	Transmission Branch – Embankment
Bedford Street	LRN	20	Single Carriageway	Transmission Branch – Paddington
Garrick Street	LRN	20	Single Carriageway	Transmission Branch – Paddington
B402	LRN	20	Single Carriageway	Transmission Branch – Paddington

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potentially overlapping section(s) parts of Proposed Scheme
Great Newport Street	LRN	20	Single Carriageway	Transmission Branch – Paddington
Charing Cross Road	LRN	20	Single Carriageway	Transmission Branch – Paddington
A400	LRN	20	Single Carriageway	Transmission Branch – Paddington
Cranbourn Street	LRN	20	Single Carriageway	Transmission Branch – Paddington
Coventry Street	LRN	20	Single Carriageway	Transmission Branch – Paddington
Rupert Street	LRN	20	Single Carriageway	Transmission Branch – Paddington
A401 Shaftesbury Avenue	LRN	20	Single Carriageway	Transmission Branch – Paddington
Walker's Court	LRN	20	Single Carriageway	Transmission Branch – Paddington
Berwick Street	LRN	20	Single Carriageway	Transmission Branch – Paddington
A40 Oxford Street	TLRN	20	Dual Carriageway	Transmission Branch – Paddington
Wells Street	LRN	20	Single Carriageway	Transmission Branch – Paddington
A5204	LRN	20	Single Carriageway	Transmission Branch – Paddington

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potentially overlapping section(s) parts of Proposed Scheme
Cavendish Square	LRN	20	Single Carriageway	Transmission Branch – Paddington
Edwards Mews	LRN	20	Single Carriageway	Transmission Branch – Paddington
Portman Square	LRN	20	Single Carriageway	Transmission Branch – Paddington
Great Cumberland Place	LRN	20	Single Carriageway	Transmission Branch – Paddington
A5	TLRN	20	Single / Dual Carriageway	Transmission Branch – Paddington
Seymour Street	LRN	20	Single Carriageway	Transmission Branch – Paddington
Connaught Square	LRN	20	Single Carriageway	Transmission Branch – Paddington
A202	TLRN	20	Single / Dual Carriageway	Transmission Branch – Chelsea Transmission Branch – Victoria Transmission Branch – Kensington
A3212	TLRN	20	Single / Dual Carriageway	Trunk Main Transmission Branch – Chelsea Transmission Branch – Victoria Transmission Branch – Kensington

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potentially overlapping section(s) parts of Proposed Scheme
A3216	LRN	20	Single Carriageway	Transmission Branch – Chelsea Transmission Branch – Kensington
A302	TLRN	20	Single Carriageway	Transmission Branch – Victoria
A3213	TLRN / LRN	20	Single Carriageway	Transmission Branch – Kensington
A3217	LRN	20	Single Carriageway	Transmission Branch – Kensington
B310 Belgrave Place	LRN	20	Single Carriageway	Transmission Branch – Kensington
B319 Chesham Place	LRN	20	Single Carriageway	Transmission Branch – Kensington
Lowndes Place	LRN	20	Single Carriageway	Transmission Branch – Kensington
Eaton Place	LRN	20	Single Carriageway	Transmission Branch – Kensington
Eaton Square	LRN	20	Single Carriageway	Transmission Branch – Kensington
Eaton Mews North	LRN	20	Single Carriageway	Transmission Branch – Kensington
Lyall Street	LRN	20	Single Carriageway	Transmission Branch – Kensington

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potentially overlapping section(s) parts of Proposed Scheme
Chesham Street	LRN	20	Single Carriageway	Transmission Branch – Kensington

Royal Borough of Kensington and Chelsea (RBKC)

18.4.24 **Table 18-15** lists roads within RBKC that are located within the EIA Scoping Boundary and therefore could be impacted by the Proposed Scheme.

Table 18-15: Potentially Impacted Roads within RKBC

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potentially overlapping section(s) parts of Proposed Scheme
A3216	LRN	20	Single Carriageway	Transmission Branch – Kensington
Wilbraham Place	LRN	20	Single Carriageway	Transmission Branch – Kensington
Ellis Street	LRN	20	Single Carriageway	Transmission Branch – Kensington
Cadogan Place	LRN	20	Single Carriageway	Transmission Branch – Kensington
Cadogan Lane	LRN	20	Single Carriageway	Transmission Branch – Kensington
B319 Pont Street	LRN	20	Single Carriageway	Transmission Branch – Kensington
Pavilion Street	LRN	20	Single Carriageway	Transmission Branch – Kensington
Walton Street	LRN	20	Single Carriageway	Transmission Branch – Kensington

Road Name	Road Network	Speed Limit (mph)	Carriageway Type	Potentially overlapping section(s) parts of Proposed Scheme
Yeoman's Row	LRN	20	Single Carriageway	Transmission Branch – Kensington
Egerton Terrace	LRN	20	Single Carriageway	Transmission Branch – Kensington
A308 Brompton Road	LRN	20	Single Carriageway	Transmission Branch – Kensington
A4	TLRN	20	Single Carriageway	Transmission Branch – Kensington

Walking

Overview

18.4.25 The EIA Scoping Boundary interaction with existing walking infrastructure, including Public Rights of Way (PRoW) and National Trails, is listed in **Table 18-16**. However, it should be noted that the Inner London boroughs are legally exempt from the statutory duty to produce and maintain a Definitive Map of PRoW. Given this, there are no defined PRoW in RBG, LBL, LBLa, LBTH, CoL, CoW and RBKC.

18.4.26 All PRoW and National Trails within the vicinity of the Proposed Scheme that could be affected by the Proposed Scheme are shown on **Volume 2, Figure 18-2 Existing Walking Network**. Commonly used London routes for walking are addressed within **Volume 1, Chapter 16: Socio-economics**.

Table 18-16: PRow and National Trails within EIA Scoping Boundary

PRow ID / Route Name	Borough	PRow / Route Type	Potentially overlapping section(s) parts of Proposed Scheme	Figure 18-2 Sheet Ref.
BX FP1#1	LBB	Public Footpath	Trunk Main	Sheet 1
BX FP2#1	LBB	Public Footpath	Trunk Main	Sheet 1
BX FP2#2	LBB	Public Footpath	Trunk Main Transmission Branch – Barking 2	Sheet 1
BX FP3	LBB	Public Footpath	Transmission Branch – Barking 1	Sheet 1
BX FP4#1	LBB	Public Footpath	Transmission Branch – Barking 1	Sheet 1
BX FP4#2	LBB	Public Footpath	Transmission Branch – Barking 1	Sheet 1
Thames Path	Multiple	National Trail	Trunk Main Transmission Branch – Wapping Transmission Branch – Cannon Street Transmission Branch – Blackfriars Transmission Branch – Embankment Transmission Branch – Chelsea Transmission Branch – Paddington	Sheets 3-6
King Charles III England Coast Path	LBB, RBG	National Trail	Trunk Main Transmission Branch – Barking 1 Transmission Branch – Barking 2 Transmission Branch – Barking 3	Sheets 1 & 2

London Borough of Bexley (LBB)

18.4.27 There are several PRoW that are located within the EIA Scoping Boundary in LBB. These are listed in **Table 18-16**.

18.4.28 There is also potential for the EIA Scoping Boundary to interact with the King Charles III England Coast Path within LBB.

London Borough of Barking and Dagenham (LBBD)

18.4.29 There are no PRoW or walking trails within the EIA Scoping Boundary in LBBD that could be impacted by the Proposed Scheme.

Royal Borough of Greenwich (RBG)

18.4.30 A section of the Thames Path near Deptford Creek is within the EIA Scoping Boundary in RBG.

18.4.31 A section of the King Charles III England Coast Path near Woolwich Ferry South Pier roundabout is within the EIA Scoping Boundary.

London Borough of Lewisham (LBLe)

18.4.32 A section of the Thames Path on Sayes Court Street and Prince Street is within the EIA Scoping Boundary in LBLe.

London Borough of Southwark (LBS)

18.4.33 Several sections of the Thames Path on the southern side of the river are within the EIA Scoping Boundary in LBS.

London Borough of Lambeth (LBLa)

18.4.34 A section of the Thames Path between Lambeth Bridge and Vauxhall Bridge and a section of the Thames Path near Festival Pier are both within the EIA Scoping Boundary in LBLa.

London Borough of Tower Hamlets (LBTH)

18.4.35 A section of the Thames Path near Waterside Gardens is within the EIA Scoping Boundary in LBTH.

City of London (CoL)

18.4.36 A section of the Thames Path to the east of Blackfriars Bridge and a section of the Thames Path near Walbrook Wharf are both within the EIA Scoping Boundary in CoL.

City of Westminster (CoW)

18.4.37 Several sections of the Thames Path are within the EIA Scoping Boundary in CoW.

Royal Borough of Kensington and Chelsea (RBKC)

18.4.38 A section of the Thames Path near the border with CoW is within the EIA Scoping Boundary in RBKC.

Cycling

Overview

18.4.39 **Volume 2, Figure 18-3 Existing Cycling Network** shows the cycling routes and cycle hire stations in the vicinity of the Proposed Scheme. The numbered Cycleways and National Cycle Network routes that cross or pass within 50m of the Proposed Scheme are listed in **Table 18-17**, with further details on the interaction between these routes and the Proposed Scheme provided below.

Table 18-17: Cycleways and NCN Routes within 50m of Study Area

Cycle Route	Borough	Route Description	Potentially overlapping section(s) with Proposed Scheme	Figure 18-3 Sheet Ref.
Cycleway 1	CoL	Freezy Water to CoL	Transmission Branch – City of London	Sheet 5
Cycleway 3	CoL CoW	Lancaster Gate to Barking	Transmission Branch – Blackfriars Transmission Branch – Cannon Street Transmission Branch – City of London Transmission Branch – Embankment	Sheets 5 & 6
Cycleway 4	RBG LBLe LBS	London Bridge to Greenwich	London SHM – Transmission Trunk Main	Sheets 3-5
Cycleway 5	LBS LBLa	Waterloo to Clapham Common	London SHM – Transmission Trunk Main Transmission Branch – Blackfriars Transmission Branch – Embankment	Sheets 5 & 6
Cycleway 6	LBS	Belsize Park to Elephant & Castle	London SHM – Transmission Trunk Main Transmission Branch – Blackfriars Transmission Branch – Embankment	Sheet 5
Cycle Superhighway 7	LBS	City of London to Colliers Wood	London SHM – Transmission Trunk Main	Sheet 5

Cycle Route	Borough	Route Description	Potentially overlapping section(s) with Proposed Scheme	Figure 18-3 Sheet Ref.
	CoL		Transmission Branch – City of London	
Cycleway 8	CoW	Wandsworth High Street to Lambeth Bridge	London SHM – Transmission Trunk Main Transmission Branch – Chelsea Transmission Branch – Kensington Transmission Branch – Victoria	Sheet 6
Cycleway 10	LBLa LBS RBG	Euston Station to Greenwich	London SHM – Transmission Trunk Main Transmission Branch – Embankment Transmission Branch – Blackfriars Transmission Branch – Cannon Street	Sheets 4-6
Cycleway 14	LBB RBG LBLe LBS	Waterloo to Erith	London SHM – Transmission Trunk Main Transmission Branch – Barking 1 Transmission Branch – Barking 2 Transmission Branch – Barking 3 Transmission Branch – Wapping Transmission Branch – Blackfriars Transmission Branch – Cannon Street	Sheets 1-5

Cycle Route	Borough	Route Description	Potentially overlapping section(s) with Proposed Scheme	Figure 18-3 Sheet Ref.
			Transmission Branch – Greenwich Peninsula 1 Transmission Branch – Greenwich Peninsula 2	
Cycleway 62	LBLa	Lambeth to Kennington	London SHM – Transmission Trunk Main	Sheets 5 & 6
NCN Route 1	LBB RBG	Dover to Shetland	London SHM – Transmission Trunk Main Transmission Branch – Barking 1 Transmission Branch – Barking 2 Transmission Branch – Barking 3 Transmission Branch – Greenwich Peninsula 1 Transmission Branch – Greenwich Peninsula 2	Sheets 1-4
NCN Route 4	RBG LBL LBS LBLa	Greenwich to Fishguard	London SHM – Transmission Trunk Main Transmission Branch – Blackfriars Transmission Branch – Cannon Street Transmission Branch – Chelsea	Sheets 4-6

Cycle Route	Borough	Route Description	Potentially overlapping section(s) with Proposed Scheme	Figure 18-3 Sheet Ref.
	CoW RBKC		Transmission Branch – Embankment Transmission Branch – Kensington Transmission Branch – Victoria Transmission Branch – Wapping	
NCN Route 21	RBG	Greenwich to Eastbourne	London SHM – Transmission Trunk Main	Sheet 4
NCN Route 425	LBS	Rotherhithe to Camberwell	London SHM – Transmission Trunk Main	Sheet 4

London Borough of Bexley (LBB)

18.4.40 The Proposed Scheme could interact with Cycleway 4 (C4), part of NCN Route 1, within the EIA Scoping Boundary in LBB.

London Borough of Barking and Dagenham (LBBD)

18.4.41 There are no Cycleways or NCN routes that pass through the EIA Scoping Boundary in LBBD.

Royal Borough of Greenwich (RBG)

18.4.42 The Proposed Scheme could interact with C4, C14, C18, NCN Routes 1, 4 and 21 within the EIA Scoping Boundary in RBG.

London Borough of Lewisham (LBLe)

18.4.43 The Proposed Scheme could interact with C4, C14 (which is part of NCN Route 4), within the extents of the EIA Scoping Boundary in LBLe.

London Borough of Southwark (LBS)

18.4.44 The Proposed Scheme could interact with C4, C5, C6, C10, C14, Cycle Superhighway 7 (CS7), NCN Route 4 and NCN Route 425 within the extents of the EIA Scoping Boundary in LBS.

London Borough of Lambeth (LBLa)

18.4.45 The Proposed Scheme could interact with C5 and C62 within the EIA Scoping Boundary in LBLa.

London Borough of Tower Hamlets (LBTH)

18.4.46 There are no Cycleways or NCN routes which pass through the EIA Scoping Boundary in LBTH.

City of London (CoL)

18.4.47 The Proposed Scheme could interact with C1, C3 and CS7, within the EIA Scoping Boundary in CoL.

City of Westminster (CoW)

18.4.48 The Proposed Scheme could interact with C3, C8 and NCN Route 4, within the EIA Scoping Boundary in CoW.

Royal Borough of Kensington and Chelsea (RBKC)

18.4.49 The Proposed Scheme could interact with NCN Route 4 within the EIA Scoping Boundary in RBKC.

Public Transport

Overview

18.4.50 The Public Transport Accessibility Level (PTAL) index adopted by Transport for London (TfL) reflects walking times to public transport facilities as well as the service range and reliability of services for the London area. The PTAL is

based on the weekday morning peak period service frequency of all bus services accessible from stops within a 640m walking distance of a site as well as rail services accessible from stations within a 960m walking distance. The index is split into several bands between 0 (Worst) and 6b (Best), with a score of 0 representing areas with no public transport services accessible.

18.4.51 **Volume 2, Figure 18-4 Public Transport Access Level (PTAL)** shows the PTAL scores in the vicinity of the Proposed Scheme.

18.4.52 **Volume 2, Figure 18-5 Public Transport – Bus stops** shows the bus stops within 640m of the Proposed Scheme.

18.4.53 **Volume 2, Figure 18-6 Public Transport – Rail and Underground Provision** shows the location of railway stations within 960m of the Proposed Scheme.

18.4.54 The distances set out above correspond to the assumptions in the PTAL methodology that people will walk up to 640m (approximately eight minutes walking time) to a bus service and up to 960m (approximately 12 minutes walking time) to a rail or Tube service, based on an average walk speed of 80m per minute. TfL PTAL scores are based on actual walking distances, however for the purposes of illustration, **Volume 2, Figures 18-5 and 18-6** are based on ‘as the crow flies’ distances to identify the bus stop catchments (within 640m) and rail/underground station catchments (within 960m).

18.4.55 Although not incorporated into PTAL, parts of the Proposed Scheme may be accessible by River Boat Services. The likely significant effects of the Proposed Scheme on these will be assessed in more detail at the ES stage.

18.4.56 The below paragraphs summarise the PTAL scores in the vicinity of the Proposed Scheme and the closest stations to the Proposed Scheme within each borough. Due to the large number of bus stops in the vicinity of the Proposed Scheme in each borough, these have not been included in the summaries below but are shown in **Volume 2, Figure 18-5 Public Transport – Bus stops**.

London Borough of Bexley (LBB)

18.4.57 The PTAL in LBB within the EIA Scoping Boundary ranges between 0 and 6a, with the lowest scores occurring near the Riverside Campus and the highest score occurring along the A2041. The nearest stations to the Proposed Scheme are Belvedere and Abbey Wood Station. Belvedere is served by National Rail services and Abbey Wood is served by National Rail and Elizabeth Line services.

London Borough of Barking and Dagenham (LBBD)

18.4.58 The PTAL in LBBD within the EIA Scoping Boundary ranges between 0 and 2, with the lowest scores occurring at the industrial estate to the south of the A13

off Dorset Way and Kent Avenue, and the highest score occurring along Chequers Lane.

- 18.4.59 The nearest stations to the Proposed Scheme in the borough are Barking Riverside and Dagenham Dock. Barking Riverside is served by the Suffragette Line whilst Dagenham Dock is served by the C2C rail service.

Royal Borough of Greenwich (RBG)

- 18.4.60 The PTAL in RBG within the EIA Scoping Boundary ranges between 0 and 6b, with the lowest scores occurring on the A2016 near the border with LBB and the highest scores occurring on the A206 Beresford Street in Woolwich.

- 18.4.61 There are several stations within a walking distance of the Proposed Scheme in RBG, including Woolwich and Woolwich Arsenal in Woolwich, which are collectively served by National Rail, Docklands Light Railway (DLR) and Elizabeth Line services, and Cutty Sark station in Greenwich, which is served by the DLR.

London Borough of Lewisham (LBLe)

- 18.4.62 The PTAL in LBLe within the EIA Scoping Boundary ranges between 2 and 4, with the lowest scores occurring on the A200 Evelyn Street in the vicinity of Deptford Park and the highest score occurring further southeast on the A200 Evelyn Street in Deptford.

- 18.4.63 The nearest station to the Proposed Scheme in the borough is Deptford Station. Deptford station is served by Southeastern and Thameslink services.

London Borough of Southwark (LBS)

- 18.4.64 The PTAL in LBS within the EIA Scoping Boundary ranges between 3 and 6b, with the highest scores occurring around Borough High Street, and the lowest scores occurring near the intersection between the A100 and B202.

- 18.4.65 Since the Study Area in LBS covers the entire width of the borough, there are several stations within walking distance of the Proposed Scheme. Stations that are within particularly close proximity include Surrey Quays, Bermondsey, Borough, Elephant & Castle and London Bridge. These stations are served by a wide range of rail services including Underground, Overground and National Rail.

London Borough of Lambeth (LBLa)

- 18.4.66 The PTAL in LBLA within the EIA Scoping Boundary ranges between 4 and 6b, with the highest score near the A23/A3202 junction and the lowest scores occurring near Lambeth Bridge.

- 18.4.67 The nearest stations to the Proposed Scheme in the borough are London Waterloo and Lambeth North. London Waterloo station is served by the Northern, Jubilee, Bakerloo and Waterloo & City lines, as well as National Rail services. Lambeth North is served by the Bakerloo line.

18.4.68 Part of the EIA Scoping Boundary overlaps with the Bakerloo extension safeguarding area in LBLA.

London Borough of Tower Hamlets (LBTH)

18.4.69 The PTAL in LBTH within the EIA Scoping Boundary is between 3 and 4. The nearest station to the Proposed Scheme in the borough is Wapping Overground station, which is served by the Windrush Line.

City of London (CoL)

18.4.70 The PTAL in CoL within the EIA Scoping Boundary is uniformly 6b, with numerous stations located in close proximity to the Proposed Scheme in the borough. Nearby stations include Cannon Street, Bank, Moorgate and Liverpool Street, which are collectively served by Underground, Overground, DLR, National Rail and Elizabeth Line services.

City of Westminster (CoW)

18.4.71 The PTAL in CoW is generally very high, with most of the Study Area in the borough scoring either 6a or 6b. However, the PTAL scores in the south of CoW closer to the river are generally lower, with the lowest scores occurring along A3212 Grosvenor Road in Pimlico.

18.4.72 There are a large number of stations within close proximity of the Proposed Scheme in CoW, including Victoria, Tottenham Court Road, Embankment and Charing Cross, which are collectively served by Underground, National Rail and Elizabeth Line services.

Royal Borough of Kensington and Chelsea (RBKC)

18.4.73 In RBKC, the majority of the Proposed Scheme is located in areas with a PTAL score of 6a, however part of the Study Area near Knightsbridge School records a PTAL score of 5, whilst the area around the terminus of the Kensington Transmission Branch outside the V&A Museum has a score of 6b.

18.4.74 The nearest station to the Proposed Scheme in the borough is South Kensington Underground station, which is served by the Circle, District and Piccadilly Lines.

Future Baseline

18.4.75 The ES would consider future baseline conditions on the road network within the Study Area for the peak construction year (currently expected to be between 2030 and 2034) without the Proposed Scheme. It would also account for other relevant developments which would be operational after the baseline year and/or constructed at the same time as the Proposed Scheme.

18.4.76 The future baseline would also consider the construction and operation of planned service extensions including Thamesmead DLR and Bakerloo Line.

18.5 Potential for Likely Significant Effects

Construction Phase

- 18.5.1 The greatest transport impacts of the Proposed Scheme would occur during the construction phase. This will therefore form the focus of the assessment presented in the ES.
- 18.5.2 It is currently anticipated that during the peak construction period (assumed to be between 2030 and 2034), there will be a maximum of 310 construction staff across the Site per day (split across four different locations working simultaneously) and a maximum of 38 HGV (76 movements) and 13 LGV (26 movements) per day. The proposed number of construction vehicle movements and construction staff during the peak of the construction phase will be reviewed and confirmed within the ES.
- 18.5.3 The main considerations and potential construction phase effects will be:
- a. increase in delay to road users (including drivers and bus passengers) and pedestrians due to traffic management measures or increase in construction traffic movements;
 - b. impacts on severance and delays for highway users, pedestrians and cyclists due to temporary closures of roads and/or walking/cycling routes (including PRow);
 - c. potential delays to bus routes/corridors as a result of construction vehicle movements/ construction site locations/ activity;
 - d. reduced capacity of public transport services as a result of construction workers travelling to/from the Proposed Scheme;
 - e. reduced availability of parking/loading facilities as a result of construction sites;
 - f. change in route connections and amenity for pedestrians and cyclists due to traffic management measures associated with construction of the Proposed Scheme;
 - g. increase in HGV movements causing additional severance to pedestrians and cyclists, a decline in pedestrian and cyclist amenity, or additional fear and intimidation to pedestrians and cyclists; and
 - a. increase in HGV movements and Large/Hazardous Loads, including Abnormal Indivisible Loads (AILs) (if required), resulting in a decline in road safety.

Operation Phase

- 18.5.4 Once operational, the Proposed Scheme would operate 24 hours per day, all year-round. Operational maintenance would involve routine, planned maintenance and system checks, as well as any required reactive

maintenance and repairs. Further information can be found within **Volume 1, Chapter 2: The Proposed Scheme** of this EIA Scoping Report.

- 18.5.5 It is anticipated that up to eight staff would be required for operation and maintenance of the Proposed Scheme. It is expected that these staff would be based at the Riverside Campus.
- 18.5.6 Given the minimal number of operational trips expected to be generated, specifically within the network peak hours of this phase, operational phase transport effects will be scoped out from the ES assessment. Further details of the operational phase activities (including maintenance) transport arrangements will be set out in the ES to support this approach.

Decommissioning

- 18.5.7 As described within **Volume 1, Chapter 2: The Proposed Scheme** of this EIA Scoping Report, the Proposed Scheme is expected to be a critical part of London's long-term energy infrastructure and therefore expected to be maintained, refurbished and replaced rather than fully decommissioned. Because of this, there is no proposed decommissioning assessment year. If decommissioning were to be required, this would be limited to the removal of above ground infrastructure, comprising minor works. With the implementation of standard good practice management measures, no significant effects are considered likely.

18.6 Assessment Methodology

- 18.6.1 The assessment of likely significant effects as a result of the Proposed Scheme on transport will be undertaken using the methodology set out below.

Sources of Baseline Information

- 18.6.2 The following sources will be used to inform the assessment:
- a. Local public travel and network information from rail and bus operators, as well as from Transport for London (TfL).
 - b. Public Transport Accessibility Level (PTAL) information from the TfL Web-based Connectivity Assessment Toolkit (WebCAT).
 - c. Details of walking and cycling routes from the relevant local authorities and TfL, including national/ regional walking routes, Public Rights of Way (PRoW) and National Cycle Network (NCN) routes and Cycleways.
 - d. Personal Injury Collision (PIC - Crash and Collision) data provided by TfL and LHA.
 - e. Ordnance Survey (OS) Base Mapping.
 - f. Highway boundary information from LHA.

- g. Mode share data from the 2011 Census (or 2021 data if considered appropriate given the context of COVID-19).
- h. Highway modelling, if necessary, to assess the impacts of potential road closures, diversions and temporary traffic measures required for the Proposed Scheme.
- i. Traffic count and speed survey data where required (see further below).
- j. Traffic growth factors by applying National Transport Model (NTM) adjustments to National Road Traffic Forecast (NRTF) growth factors within the Trip Ends Model Program (TEMPro), utilising the latest National Trip Ends Model (NTEM) dataset.
- k. Route planning tools, such as Google Maps, to inform HGV routing to the MAP.
- l. Public Transport capacity and usage data from TfL.

18.6.3 Where existing traffic flow data is not already available, it is proposed to commission Automatic Traffic Counts (ATC) and Manual Classified Counts (MCC) to determine the baseline traffic conditions of the surrounding highway network in the vicinity of the MAP. The proposed survey locations and requirements would be discussed and agreed with TfL and the relevant LHA.

18.6.4 In addition, peak hour traffic flows will be identified from historic data held by TfL, traffic survey company databases or Department for Transport (DfT) count sites, if available.

Scenarios

18.6.5 To determine the impact of the Proposed Scheme, the following scenarios will be considered to inform the assessment of the peak construction phase:

- a. Baseline (currently expected to be 2026 or 2027) – AM, PM and Daily traffic flows; and
- b. Peak Construction Year (currently expected to be between 2030 and 2034) With and Without Development – AM, PM and Daily traffic flows. The peak construction year will be confirmed and assessed at the ES Stage.

Impact Assessment Methodology

ISEP Guidance

18.6.6 In accordance with 2023 ISEP Guidance (Ref 18.21) for assessing the environmental impacts of traffic and movements, the following impacts will be considered in the ES:

- a. Severance (of communities);
- b. Pedestrian Delay (incorporating delay to all non-motorised users);

- c. Non-Motorised User Amenity;
- d. Fear and Intimidation (on and by road users);
- e. Driver Delay (for vehicle drivers and passengers);
- f. Road Safety (for vehicle users and pedestrians); and
- g. Hazardous/Large Loads.

18.6.7 The following impacts will also be considered:

- a. Bus passenger delay;
- b. Public transport capacity;
- c. Parking and loading;
- d. PRow diversions and closures;

18.6.8 The assessment of these impacts will consider:

- a. magnitude of change to the baseline;
- b. sensitivity of the affected receptor; and
- c. the scale, nature and significance of the effect.

18.6.9 In addition, the anticipated effects will be classified as short-term, medium-term or long-term, as well as permanent or temporary.

18.6.10 A Transport Assessment will be prepared and submitted alongside the DCO Application, either as a standalone document or as an appendix to the ES, and will include details such as:

- a. existing baseline conditions;
- b. trip generation; and
- c. road safety collision review.

Screening

18.6.11 The 2023 ISEP guidelines (Ref 18.21) set out two rules to screen potential road links into the impact assessment;

- a. Rule 1: include highway links where traffic flows will increase by 30% or more (or the number of HGVs will increase by 30% or more); and
- b. Rule 2: include any other specifically sensitive areas (e.g. accident black spots, conservation areas, hospitals, links with high pedestrian flows etc.) where traffic flows will increase by 10% or more.

18.6.12 Based on this, links and junctions will not be assessed where there is expected to be a <30% increase in traffic flows as a result of the Proposed Scheme, unless any specifically sensitive receptors are identified.

18.6.13 Additionally, a negligible magnitude of change will be assigned where there is expected to be fewer than 30 additional vehicle trips per hour during each of

the development peak hours as a result of the Proposed Scheme during construction, irrespective of the proportional increase in traffic flows.

Sensitivity

18.6.14 Specific sensitivity thresholds for each category will be agreed upon with TfL and LHA and detailed in the ES Transport chapter. The general considerations informing these criteria are outlined below.

18.6.15 The general criteria for defining the importance or sensitivity of receptors relating to the assessment of Severance, Pedestrian Delay, Non-Motorised User Amenity, and Fear and Intimidation will include the following considerations:

- a. number of sensitive users present, including:
 - i. schools;
 - ii. play areas;
 - iii. hospitals;
 - iv. retirement/care homes;
 - v. places of worship;
 - vi. historic buildings;
- b. residential properties with direct frontage to highway links;
- c. workplaces with direct frontage to highway link;
- d. pedestrians using footways, PRow and/or crossings on highway link;
- e. cyclists using off-road designated cycle routes along highway link.

18.6.16 The general criteria for defining the importance or sensitivity of receptors for the assessment of Driver Delay will include consideration of the following:

- a. status of Link in road hierarchy;
- b. location of junction (i.e. Inner or Outer London);
- c. junction type (e.g. signalised or unsignalised);
- d. number of junction arms with high queuing;
- e. volume of queuing on junction arms; and
- f. volume of queuing on road links.

18.6.17 The sensitivity of the potential effect of MAP during the construction phase on bus routes/corridors will be proportional to the importance of the corridor as indicated by the number of services per hour and correspondingly the number of passengers affected.

18.6.18 The sensitivity of Public Transport capacity will be based on the frequency of bus/rail services in the vicinity of each receptor.

18.6.19 The preliminary criteria for defining the importance or sensitivity of road link and road junction receptors for the assessment of Road Safety will include the following considerations:

- a. number of killed and seriously injured (KSI) casualties in the last five years;
- b. total number of collisions in the last five years; and
- c. proximity to/impact on junctions included in TfL Safer Junctions programme (Ref 18.22).

18.6.20 The preliminary criteria for defining the importance or sensitivity of road link and road junction receptors for the assessment of Hazardous/Large Loads will include the following considerations:

- a. number of KSI casualties involving goods vehicles (>3.5 tonnes) in the last five years;
- b. total number of collisions involving goods vehicles (>3.5 tonnes) in the last five years; and
- c. proximity to/impact on junctions included in TfL Safer Junctions programme (Ref 18.22).

18.6.21 The assessment of sensitivity in relation to Parking will include the following considerations:

- a. type of parking space affected (e.g. Blue Badge bays);
- b. location of parking;
- c. parking bay restrictions (e.g. prohibitions at certain times); and
- d. proximity of alternative parking options.

18.6.22 The assessment of sensitivity in relation to Loading Impacts will include the following considerations:

- a. loading bay designation (e.g. on-street)
- b. location of loading bay;
- c. loading restriction detail; and
- d. proximity of loading bay alternatives.

Magnitude

18.6.23 As identified within the 2023 ISEP guidelines (Ref 18.21), the magnitude of impact represents the level of change from the baseline conditions. Many of the criteria do not provide specific thresholds by which such impacts can be assessed, and so in these cases will be measured qualitatively.

18.6.24 Based on the ISEP guidelines aimed at assessing traffic impacts, non-traffic impacts such as those on pedestrians and cyclists will be assessed with

reference to the scale and duration of temporary traffic management measures.

- 18.6.25 Severance is defined in the ISEP guidelines as the "*perceived division that can occur within a community when it becomes separated by major traffic infrastructure. The term is used to describe a complex series of factors that separate people from places and other people. Severance may result from the difficulty of crossing a heavily trafficked road or a physical barrier created by infrastructure*". Severance can also be caused by a full closure of a highway, leading to a requirement for road users to take alternative routes to their destinations.
- 18.6.26 The ISEP guidelines state that changes in traffic flow of 30%, 60% and 90% are regarded as producing 'slight', 'moderate' and 'substantial' changes in severance respectively. However, caution should be observed when applying these thresholds to very low baseline flows which are unlikely to experience severance impacts even with high percentage changes.
- 18.6.27 Pedestrian Delay (incorporating delay to all non-motorised users) concerns the impacts of changes in volume, composition or speed of traffic on the ability of pedestrians to crossroads. The assessment of Pedestrian Delay serves as a proxy for the delay that other modes of non-motorised users may experience when crossing roads or as the result of diversion of routes around construction works.
- 18.6.28 Non-Motorised User Amenity is broadly defined as "*the relative pleasantness of a journey, and is considered to be affected by traffic flow, traffic composition and pavement width/separation from traffic*". The guidance suggests that a tentative threshold for judging the significance of changes in non-motorised user amenity would be where the traffic flow (or HGV component) is halved or doubled. However, the magnitude of impact will also consider the impact of construction activities, which may have an effect by virtue of reducing the width of cycle lanes and/or segregation from traffic. This will be considered on a case-by-case basis at each of the MAP sites.
- 18.6.29 Fear and Intimidation occur through a combination of traffic flow, speed, proportion of HGV and the proximity of traffic to people. These indicators are often heightened by a perceived lack of protection or buffers from the highway or through narrow or non-existent footways. The assessment will consider each road on a case-by-case basis, however there are thresholds provided in the 2023 ISEP guidelines which are further summarised in **Table 18-19**.
- 18.6.30 Driver Delay relates to incremental increases in traffic. However, traffic delays are only likely to be significant when traffic is already at, or close to, the capacity of the system. As a further consideration, where any temporary road closures or traffic management will be in place to enable the construction of the Proposed Scheme, any additional potential delay caused by these measures and/or resultant diversion routes will be reported.

- 18.6.31 Similar to Driver Delay, Bus Passenger Delay relates to incremental increases in traffic when traffic is already at, or close to, the capacity of the system as well as any temporary diversions or traffic management which is likely to be in place to enable the construction of the Proposed Scheme. Bus Passenger delay will also consider whether the temporary suspension or relocation of bus stops will cause additional delay to passengers in accessing services.
- 18.6.32 For Public Transport Capacity, the assessment will consider the net change in passenger numbers anticipated on routes and services accessible within a reasonable walking distance of the Proposed Scheme. Then a qualitative assessment of the ability of those services to accommodate any additional volume of passengers (based upon the frequency of the service) will be undertaken, i.e. the greater the frequency of the service, the greater the ability of that service to accommodate further passengers.
- 18.6.33 Road Safety considers PIC data obtained for the most recent five-year period available at junctions and links along the proposed construction traffic routes. This will be used to assess whether the additional traffic during construction of the Proposed Scheme would be likely to have a detrimental effect on road safety.
- 18.6.34 For Hazardous/Large Loads, the guidance states that where the number of movements is considered to be significant, risk analysis should be carried out to illustrate the potential for accidents. Appropriate routes for HGV and AIL (if applicable) should be considered, with mitigation strategies to secure safe passage. As part of the Proposed Scheme, there will be the requirement for abnormal loads which are categorised as Large Loads.
- 18.6.35 In view of the above, the impacts of Hazardous/Large Loads will be considered, in the form of a qualitative risk assessment to establish the likelihood and extent of such effects. The Framework CLP, which will be prepared at ES stage, will include details of measures that will be employed to support the safe movements of HGV and AIL (if applicable) to and from the Proposed Scheme.
- 18.6.36 Parking and Loading will be considered on a case-by-case basis and will consider the extent to which existing parking and loading facilities are rendered unavailable during construction activities. Thresholds will be based on judgement and will consider the geographic extent of any suspension and the duration.
- 18.6.37 PRoW Diversions and Closures will be considered on the basis of the type of impact i.e. whether a temporary PRoW closure or diversion is proposed, as well as any increases in pedestrian journey length following a closure/diversion and how long any potential disruption to an existing route would occur for. The assessment will consider indicative thresholds derived based on professional experience.

- 18.6.38 **Table 18-18** and **Table 18-19** summarise the criteria that will be considered to assess the magnitude of effect, along with the thresholds that will be used to determine whether effects are considered high, medium, low or very low. In accordance with ISEP guidance, a very low magnitude of change has been assigned where there is expected to be fewer than 30 additional vehicle trips per hour during each of the development peak hours as a result of the Proposed Scheme, irrespective of the proportional increase in traffic flows.
- 18.6.39 **Table 18-18** recognises that impacts could be caused by an increase in traffic and/or an impact on the existing infrastructure and provides outline thresholds for both. Where the impact would be the result of a combination of traffic increases and infrastructure impact, professional judgement will be used to identify the combined magnitude of impact.

Table 18-18: Magnitude Criteria for Transport and Access (All Assessment Criteria)

Impact	Very Low	Low	Medium	High
Severance	Increase in total traffic flows of below 30% (or increase in HGV flows of below 10%).	Increase in total traffic flows of 30-59% (or increase in HGV flows of 10-39%).	Increase in total traffic flows of 60-89% (or increase in HGV flows of 40-89%).	Increase in total traffic flows or HGV flows of 90% and above.
	Potential impacts on Severance of any temporary closures to the highway network and walking and cycling networks (including PRow) as a result of the Proposed Scheme will be assessed if required.			
Pedestrian Delay	The severity of the impact will be determined based on the thresholds identified above for severance as it relates to pedestrians.			
Non-Motorised User Amenity	Increase in total traffic flows of below 50%.	Increase in total traffic flows of 50-69%.	Increase in total traffic flows of 70-99%.	Increase in total traffic flows of 100% or above.
Fear and Intimidation	No change in degree of hazard level for daily traffic flows, HGV flows and vehicle speeds (see Table 18-19 below).	One step change in degree of hazard level (see Table 18-19), but with >400 daily vehicle increase or >500 daily HGV increase.	Two step changes in degree of hazard level based on the degree of hazard scores for daily traffic flows, HGV flows and vehicle speeds (see Table 18-19 below).	One step change in degree of hazard level (see Table 18-19 below), but with <400 daily vehicle increase or <500 daily HGV increase.
	Potential impacts on Fear and Intimidation of any temporary closures to the walking and cycling networks (including PRow) as a result of the Proposed Scheme will be assessed if required.			
Driver / Bus Passenger Delay	No material impact on traffic delay or bus journey times.	Small increase in traffic delay or bus journey times.	Medium increase in traffic delay or bus journey times.	Large increase in traffic delay or bus journey times.
Public Transport Capacity	No material change in passenger demand	Small increase in passenger demand	Medium increase in passenger demand	Large increase in passenger demand

Impact	Very Low	Low	Medium	High
Road Safety	Increase in total traffic flows of below 30% (or increase in HGV flows of below 10%).	All links estimated to experience increases in total traffic flows of at least 30% or increases in HGV flows of at least 10% are analysed further on a case-by-case basis.		
Hazardous/Large Loads	Based on the probability of a personal injury accident, categorised as fatal or serious, involving a hazardous/large load, occurring.			
Parking and Loading	No loss of existing parking/loading facilities.	Minor loss of parking/loading.	Significant loss of parking/loading for short duration.	Significant loss of parking/loading for significant duration of time.

18.6.40 Additional magnitude criteria for Fear and Intimidation based on those outlined in the 2023 ISEP guidelines are provided in **Table 18-19** below.

Table 18-19: Additional Magnitude Criteria for Fear and Intimidation

Criteria	Degree of Hazard			
	Small	Moderate	Great	Extreme
A) Average Hourly Traffic Flow	<600 (0)	600-1,200 (10)	1,200-1,800 (20)	>1,800 (30)
B) Daily HGV Flow	<1,000 (0)	1,000-2,000 (10)	2,000-3,000 (20)	>3,000 (30)
C) Average Speed	<20mph (0)	20-30mph (10)	30-40mph (20)	>40mph (30)
Total Score (A+B+C)	0-20	21-40	41-70	71+

Significance of Effects

18.6.41 **Table 18-20** shows the matrix used to determine the significance of effect for the impact assessment. Effects predicted to be 'major' or 'moderate' are considered significant whilst effects predicted to be 'minor' or 'negligible' are considered not significant.

Table 18-20: Significance of Effects Matrix (Transport)

Sensitivity or Value of Resource/ Receptor	Magnitude of Change			
	High	Medium	Low	Very Low
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Very Low	Minor	Negligible	Negligible	Negligible

18.6.42 Duration is considered when assessing the overall significance of residual effects, noting that the ISEP Guidelines state in Paragraph 1.27 that: “*The EIA Regulations also require consideration of whether the anticipated effect is short-term, medium-term or long-term and whether it is permanent or temporary.*”

18.6.43 The magnitude of impact at each receptor will account for the duration of works, however all the transport effects associated with the construction phase of the Proposed Scheme would likely be temporary effects.

18.7 Design, Mitigation and Enhancement Measures

18.7.1 Mitigation measures for the construction impacts will be set out within the following documents to be prepared for submission with the DCO Application:

- a. **Framework Construction Logistics Plan (CLP)** document will identify key mitigations and management measures to be implemented during the construction phase of the Proposed Scheme. Potential mitigation measures that could be implemented during the construction phase include:
 - i. restriction of HGV movements to certain routes, days of the week and times of the day (where practicable);
 - ii. restricting working hours to avoid staff travel coinciding with the network peak hours (when practicable);
 - iii. use of a staff travel plan to optimise staff travel movements to MAP sites;
 - iv. planning and management of routes to accommodate AIL if required;
 - v. positioning of suitably qualified marshals and/or other temporary traffic management at the site access points;
 - vi. providing road signs and/or markings to increase awareness of the site access points;
 - vii. undertaking vegetation clearance to improve visibility (if necessary);
 - viii. implementing a Delivery Management System to control the bookings of HGV deliveries; and
 - ix. maintaining access to footways, public footpaths including PRow during the construction phase or otherwise providing temporary diversion routes where required.
- b. **Framework Construction Worker Travel Plan (CWTP):** It is expected that the majority of construction workers will travel to each construction MAP site via active travel modes or public transport, and that there will therefore be minimal road traffic movements associated with constructions workers. The CWTP will encourage travel by active travel modes and public transport. The document will also look to manage and minimise the adverse traffic impacts caused by construction staff travelling to and from the Proposed Scheme during its construction phase and seek to encourage sustainable travel modes during the construction phase of the Proposed Scheme.

- 18.7.2 If required, the DCO Application would identify PRow diversion routes, consider interactions with the wider highway network and set out appropriate management, safety and wayfinding measures for PRow users.

18.8 Assumptions, Limitations and Uncertainties

- 18.8.1 At this stage the exact extent of the Study Area, including the MAP locations, has not yet been determined, as detailed discussions have not yet taken place with the respective LHA or TfL.
- 18.8.2 The Study Area proposed as part of this EIA Scoping Report is determined by an understanding of the highway and transport networks and where the likely impacts of the Proposed Scheme will be. However, it is anticipated that the Study Area will be formally agreed with TfL and the LHA as part of formal discussion before the submission of the DCO Application.

18.9 Summary of Elements Scoped In or Scoped Out

- 18.9.1 A summary of the transport impacts scoped in or out of the ES is provided in **Table 18-21**

Table 18-21: Summary of scope for transport assessment in the ES

Impacts	Phase	Scoped In	Scoped Out	Justification
Impact of the construction phase of the Proposed Scheme	Construction	✓		Assessing the total traffic increase during the construction phase. The temporary increase in traffic could have potentially significant effects.
Severance	Construction	✓		The temporary increase in traffic and temporary closures of roads and walking/cycling routes could generate potentially significant effects on severance.
Pedestrian Delay	Construction	✓		The temporary increase in traffic and temporary closures of walking routes could generate potentially significant effects on pedestrian delay.
Non-motorised users amenity	Construction	✓		The temporary increase in traffic could generate potentially significant effects on pedestrian and cyclist amenities.
Fear and Intimidation	Construction	✓		The temporary increase in traffic and temporary closure of walking/cycling routes could generate potentially significant effects on fear and intimidation.
Driver Delay	Construction	✓		The temporary increase in traffic and temporary closures of roads could generate potentially significant effects on driver delay.
Bus Delay	Construction	✓		The temporary increase in traffic and temporary closures of roads could generate potentially significant effects on bus route/corridor delay.

Impacts	Phase	Scoped In	Scoped Out	Justification
Public Transport Capacity	Construction	✓		The temporary increase in public transport users associated with the Construction of the Proposed Scheme could generate potentially significant effects on public transport capacity.
Road Safety	Construction	✓		The temporary increase in traffic could generate potentially significant effects on road safety.
Hazardous/Large Loads	Construction	✓		Whilst it is not expected that there will be any hazardous loads associated with the Proposed Scheme, Large Loads in the form of AILs may be required.
Impact of the operational phase of the Proposed Scheme	Operation		✓	The trips associated with the operational phase of the Proposed Scheme are expected to be minimal and therefore not result in significant effects.
Impact of the decommissioning phase of the Proposed Scheme	Decommissioning		✓	The Proposed Scheme would become part of London's critical infrastructure and elements would be refurbished and replaced as required so that there is no 'decommissioning'. However, in the event of decommissioning being required, minor works for the removal of above ground infrastructure only would be required, which are unlikely to result in significant traffic movements. With the implementation of

Impacts	Phase	Scoped In	Scoped Out	Justification
				standard good practice measures, no significant effects are considered likely.

18.10 References

- Ref 18.1 Department for Energy, Security and Net Zero (2025) 'Overarching National Policy Statement for Energy (EN-1)'. Available at: <https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1-2025> [Accessed 06/05/2026]
- Ref 18.2 National Planning Policy Framework (NPPF) (2024). Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2> [Accessed 06 May 2026]
- Ref 18.3 Mayor of London (2021) The London Plan. Available at: https://www.london.gov.uk/sites/default/files/the_london_plan_2021.pdf [Accessed 9 April 2026].
- Ref 18.4 London Borough of Bexley Council (2023) Bexley Local Plan. Available at: <https://www.bexley.gov.uk/sites/default/files/2023-07/bexley-local-plan-adopted-26-april-2023.pdf> [Accessed 27 April 2026].
- Ref 18.5 Royal Borough of Greenwich Council (2014) Royal Greenwich Local Plan: Core Strategy with Detailed Policies. Available at: https://www.royalgreenwich.gov.uk/sites/default/files/2025-07/Royal_Greenwich_Local_Plan_Core_Strategy_with_Detailed_Policies_main.pdf [Accessed 27 April 2026].
- Ref 18.6 Royal Borough of Greenwich Council (2025) Draft Local Plan. Available at: <https://www.royalgreenwich.gov.uk/sites/default/files/2025-12/Draft%20Local%20Plan%20Regulation%2018%20v14.pdf> [Accessed 18 May 2026]
- Ref 18.7 Lewisham Council (2025) Lewisham Local Plan 2020-2040. Available at: <https://lewisham.gov.uk/myservices/planning/policy/adopted-local-plan/adoption-of-the-local-plan> [Accessed 27 April 2026].
- Ref 18.8 Southwark Council (2022) The Southwark Plan 2022. Available at: <https://www.southwark.gov.uk/planning-environment-and-building-control/planning/planning-policy-and-guidance/southwark-plan-2022> [Accessed 27 April 2026].
- Ref 18.9 Lambeth Council (2021) Lambeth Local Plan 2020-2035. Available at: <https://www.lambeth.gov.uk/sites/default/files/2021-09/Lambeth%20Local%20Plan%202021.pdf> [Accessed 27 April 2026].
- Ref 18.10 South Bank & Waterloo Neighbours (2019) South Bank & Waterloo Neighbourhood Plan 2017 - 2032. Available at: <https://www.lambeth.gov.uk/sites/default/files/2021->

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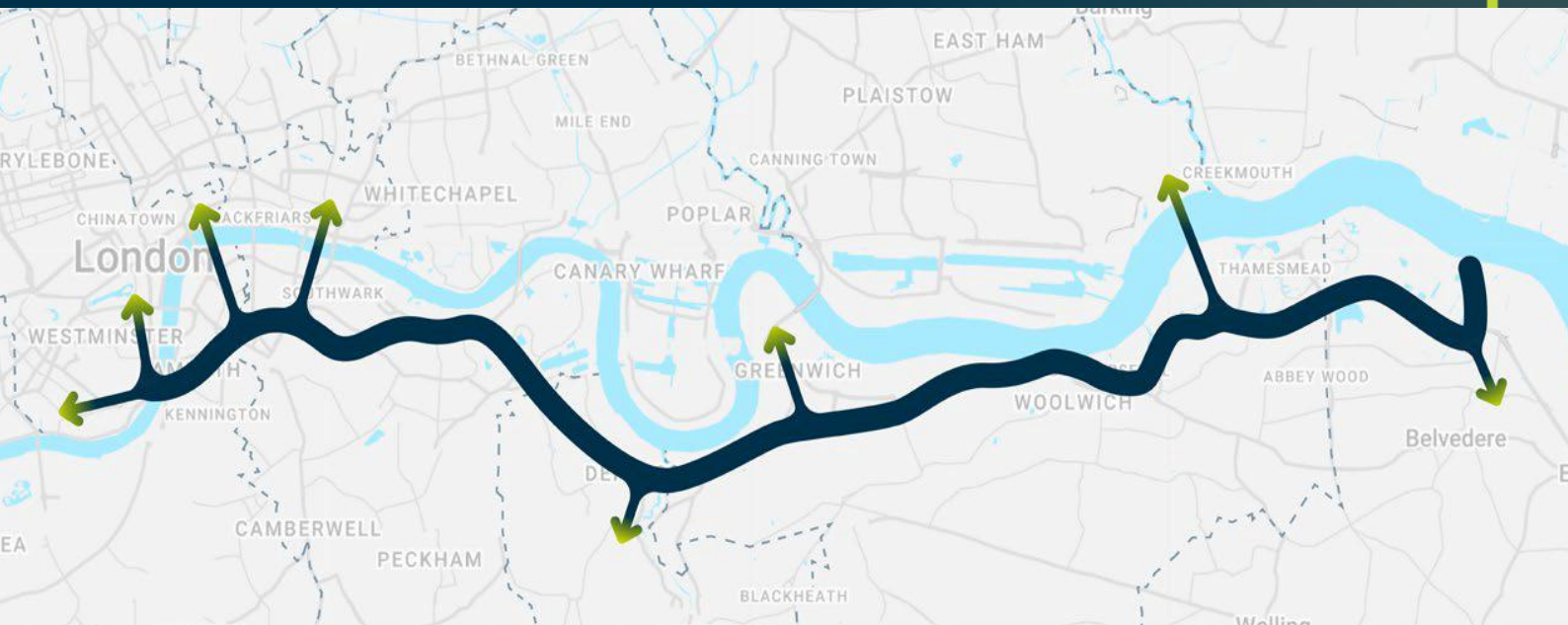
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- Ref 18.12 London Borough of Barking and Dagenham Council (2024) London Borough of Barking and Dagenham 2020-2037. Available at: <https://www.lbbd.gov.uk/sites/default/files/2024-10/B%26D LocalPlan A4 SEP24 digital.pdf> [Accessed 27 April 2026].
- Ref 18.13 Tower Hamlets (2020). Tower Hamlets Local Plan 2031: Managing Growth and Sharing Benefits. Available at: https://www.towerhamlets.gov.uk/lgnl/planning_and_building_control/planning_policy_guidance/Local_plan/local_plan.aspx [Accessed 27 April 2026].
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- Ref 18.16 City of Westminster Council (2026) City of Westminster: City Plan 2019-2040. Available at: <https://www.westminster.gov.uk/sites/default/files/media/documents/city-plan-2019-2040-january-2026.pdf> [Accessed 27 April 2026].
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- Ref 18.21 Institute of Sustainability and Environmental Professionals (ISEP) (2023); 'Environmental Assessment of Traffic and Movement'.
- Ref 18.22 Transport for London (2026) Safer Junctions Programme. Available at: <https://content.tfl.gov.uk/clp-guidance-clocs.pdf> [Accessed 20 May 2026]

Environmental Impact Assessment Scoping Report

Volume 1: Main Report

Chapter 19: Water Environment and Flood Risk



Cory Environmental Holdings Limited

July 2026

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19. Water Environment and Flood Risk

19.1 Introduction

- 19.1.1 This chapter identifies the potential for likely significant effects of the Proposed Scheme on water environment and flood risk. It sets out the proposed methodology for the water environment and flood risk assessment in the Environmental Statement (ES) and identifies those impacts which should be scoped into or scoped out of the assessment.
- 19.1.2 Water environment includes surface water features (e.g. rivers, streams, ditches and canals), and groundwater bodies. Effects on the water environment cover water quality, water resources, physical changes to hydromorphology and the function of water environment systems, flood risk and drainage.
- 19.1.3 This chapter is supported by the following figures and appendices:
- a. **Volume 2, Figure 19-1: Surface Water Features and their Attributes;**
 - b. **Volume 2, Figure 19-2: Water Framework Directive Groundwater Bodies;**
 - c. **Volume 2, Figure 19-3: Water Framework Directive Surface Water Bodies**
 - d. **Volume 2, Figure 19-4: Superficial Geology;**
 - e. **Volume 2, Figure 19-5: Bedrock Geology;**
 - f. **Volume 2, Figure 19-6: Groundwater Features and their Attributes;**
 - g. **Volume 2, Figure 19-7: Fluvial and Tidal Flood Risk;**
 - h. **Volume 2, Figure 19-8: Surface Water Flood Risk; and**
 - i. **Volume 3, Appendix 19-1: Water Environment and Flood Risk Baseline.**
- 19.1.4 There are interrelationships with other disciplines. Therefore, this chapter should also be read in conjunction with the following chapters:
- a. **Volume 1, Chapter 8: Ecology**, particularly aquatic ecology and assessment of ponds; and
 - b. **Volume 1, Chapter 9: Ground Conditions**, particularly assessment of contaminated land.

19.2 Study Area

19.2.1 The Study Areas for the water environment and flood risk assessment are set out in **Table 19-1**. Both the 500m buffer and the 1km buffer are shown in **Volume 2, Figure 19-1 Surface Water Features and their Attributes**.

Table 19-1: Proposed Study Area Buffers by Subtopic

Subtopic	Study Area Buffer	Reasoning
All	EIA Scoping Boundary	The area within the EIA Scoping Boundary will be considered by all topics, in addition to the described buffers below ¹ .
Groundwater	1 km	This extent is considered appropriate based on technical understanding from similar projects and reflects the distance over which likely significant effects can reasonably be expected to occur. Where relevant, the assessment will also look beyond the 1km buffer to capture any pathways or receptors that could reasonably be affected outside the defined Study Area.
Surface Water	500 m, further downstream if deemed necessary	Due to the urban nature of the works, significant run-off beyond 500m is considered unlikely. However, as pollutants can propagate downstream, it is necessary to take into account any additional characteristics of watercourses located downstream of the Proposed Scheme, including potentially beyond the Study Area, to ensure an appropriate and precautionary value is assigned when assessing likely significant effects on water quality. Typically, a downstream distance of a few kilometres is considered for this purpose, for this Proposed Scheme

¹ All references to 'EIA Scoping Boundary', correspond to the area shown in **Volume 2, Figure 1-1**.

Subtopic	Study Area Buffer	Reasoning
		the River Thames has been identified as the most downstream receptor.
Hydromorphology (WFD)	500 m	As for surface water.
Flood Risk	1 km, further if deemed necessary	As for groundwater. In addition, the Study Area may extend beyond 1km from the EIA Scoping Boundary, in order to include upstream and downstream reaches of the watercourse that may be affected by the Proposed Scheme. This will be defined at later stages of assessment and within the ES.

19.3 Relevant Legislation, Planning Policy and Guidance

19.3.1 Legislation, planning policy and guidance relating to water environment and flood risk are outlined below².

Legislation

19.3.2 The potential for likely significant effect of the Project on the water environment is considered in relation to the following legalisation:

- a. Environment Act 2021 (Ref 19.1);
- b. Water Act 2014 (Ref 19.2);
- c. Water Act 2003 (Ref 19.3);
- d. Floods and Water Management Act 2010 (Ref 19.4);
- e. Water Resources Act 1991 (Amendment) (England and Wales) Regulations 2009 (Ref 19.5);
- f. Flood Risk Regulation 2009 (Ref 19.6);
- g. Land Drainage Act 1991 (Ref 19.7);
- h. Water Resources Act 1991 (Ref 19.8);
- i. Environmental Protection Act 1990 (Ref 19.9);

² Excludes legislation implemented for the sole purpose of transferring relevant powers from EU to UK Ministers and Organisations following the UK leaving the European Union.

- j. Salmon and Freshwater Fisheries Act 1975 (Ref 19.10);
- k. Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (Ref 19.11);
- l. Environmental Damage (Prevention and Remediation) Regulations 2017 (Ref 19.12);
- m. The Water Abstraction and Impounding (Exemptions) Regulations 2017 (Ref 19.13);
- n. Environmental Permitting (England and Wales) Regulations 2016, as amended 2018 (Ref 19.14);
- o. Building Regulations 2010 (Ref 19.15), Document Part H: Drainage and Waste Disposal (2010);
- p. Eels (England and Wales) Regulation 2009 (Ref 19.16);
- q. The Control of Substances Hazardous to Health (Amendment) Regulations 2004 (Ref 19.17);
- r. Control of Pollution (Oil Storage) (England) Regulations 2001 (Ref 19.18);
- s. The Anti-Pollution Works Regulations 1999 (Ref 19.19);
- t. The Groundwater (Water Framework Directive) (England) Direction 2016 (Ref 19.20); and
- u. The Water Framework Directive (WFD) (Standards and Classification) Directions 2015 (Ref 19.21).

National Planning Policy

Overarching National Policy Statement for Energy (EN-1)

- 19.3.3 The relevant policies from the Overarching National Policy Statement for Energy (NPS EN-1) for water environment and flood risk are summarised within **Table 19-2** below. These policies have informed the assessment methodology and identification of sensitive receptors and Study Areas.

Table 19-2: National Policy Statement – Water Environment and Flood Risk

National Policy	Summary of Requirements	Relevance to the Assessment
Overarching National Policy Statement (NPS) for Energy EN-1 (Ref 19.22): - Section 5.8 Flood Risk - Section 5.16 Water Quality and Resources	- Flood risk assessment required for all energy projects in Flood Zone 2 and 3. - Flood risk assessment required for energy projects in Flood Zone 1 if the site is greater than 1 ha. - Development proposal has to regard River Basin Management Plans and meet the requirements of Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 ('WFD Regulations') (Ref 19.11). - Requirements of the WFD Regulations are primarily to minimise deterioration of any quality element of a water body from its current status or potential; and / or to prevent future attainment of good status or potential where not already achieved.	- Flood risk assessment required. - Future increased risk in flooding to be covered in ES. - WFD requirements considered within the WFD Screening and Scoping Assessment.

National Planning Policy Framework (NPPF)

19.3.4 The following sections from the NPPF (December 2024 (Ref 19.23)) are considered relevant to the assessment of the likely significant effects on water environment and flood risk and will be considered in the assessment:

- a. Section 14 Meeting the challenge of climate change, flooding and coastal change; and
- b. Section 15 Conserving and enhancing the natural environment.

19.3.5 It should be noted that a draft NPPF was published for consultation in December 2025, however it is not expected that this draft will significantly alter the policy context or policy compliance of the Proposed Scheme.

Local and Neighbourhood Planning Policy

19.3.6 The local planning policy listed in **Table 19-3** are considered relevant to the assessment of likely significant effects on water environment and flood risk presented in this chapter.

Table 19-3: List of Relevant Local Planning Policy – Water Environment and Flood Risk

Local Authority	Relevant Local Policy	Relevant Neighbourhood Plans	Strategic Flood Risk Assessment (SFRA)	Local Flood Risk Management Strategy (LFRMS)	Topics Covered Relevant to the Assessment
Greater London Authority	The London Plan – The Spatial Development Strategy for Greater London 2021 (Ref 19.24) Policies: SI 12 Flood risk management, SI13 Sustainable Drainage, SI 14 Waterways – strategic role	N/A	See rows below.	See rows below.	Water infrastructure, usage and transport, water quality, supply and treatment, flood risk, sustainable drainage systems (SuDS).
London Borough of Bexley (LBB)	- Bexley Local Plan 2023 (Ref 19.25) Policies: DP29: Water quality, supply and treatment, DP32: Flood risk management, DP33 – Sustainable drainage systems - Sustainable Drainage Design and Evaluation Guide 2018 (Ref 19.26)	No neighbourhood plan made but has a Development Plan which includes the Mayor's London Plan 2021, Bexley Local Plan 2023 and Bexley Local Plan Policies Map (Ref 19.27)	Bexley SFRA Level 1 2020 (Ref 19.28)	Bexley LFRMS March 2017(Ref 19.29)	Water infrastructure, usage and transport, water quality, supply and treatment, flood risk, sustainable drainage systems (SuDS).

Local Authority	Relevant Local Policy	Relevant Neighbourhood Plans	Strategic Flood Risk Assessment (SFRA)	Local Flood Risk Management Strategy (LFRMS)	Topics Covered Relevant to the Assessment
Royal Borough of Greenwich (RBG)	- Royal Greenwich Local Plan 2014 (Ref 19.30) Policies: E2: Flood Risk, E3: Residual Flood Risk, Royal Borough of Greenwich Draft Local Plan (2025) (Ref 19.31) Policies: EN6 Flood risk and sustainable drainage - Flood risk management responsibilities, powers and guidance (Ref 19.32) Chapters: Chapter 4: Level 1 Assessment of Flood Risk, Chapter 6: Flood Risk Management Policy Recommendations	N/A	Greenwich SFRA Level 1 2017 (Ref 19.33)	Greenwich LFRMS (October 2025)	Sustainability, flood risk assessment and management strategy.
London Borough of Lewisham (LBLe)	Lewisham Local Plan (2025) (Ref 19.34) Policies: SD7: Minimising and managing flood risk, SD8: Sustainable	N/A	Lewisham SFRA Level 1 2018 (Ref 19.35)	Lewisham LFRMS 2022-2027 (Ref 19.36)	Flood risk, SuDS, water quality, water supply and wastewater.

Local Authority	Relevant Local Policy	Relevant Neighbourhood Plans	Strategic Flood Risk Assessment (SFRA)	Local Flood Risk Management Strategy (LFRMS)	Topics Covered Relevant to the Assessment
	drainage, SD10: Water supply and wastewater				
London Borough of Southwark (LBS)	The Southwark Plan 2022 (Ref 19.37) Policies: P68: Reducing flood risk, P69: Sustainability standards	Southbank and Waterloo Neighbourhood Area (Ref 19.38)	Southwark SFRA Level 1 2017 (Ref 19.39)	Southwark LFRMS 2023-2029 (Ref 19.40)	Flood risk, sustainability standards, SuDS.
London Borough of Lambeth (LBLa)	Lambeth Local Plan 2021 (Ref 19.41) Policies: EN4: Sustainable design and construction, EN5: Flood risk, EN6: Sustainable drainage systems and water management, EN7: Sustainable waste management	• Southbank and Waterloo (Ref 19.38). No policies from this Neighbourhood Plan are relevant to the assessment in this Scoping Chapter. • Kennington Oval and Vauxhall, Brixton Neighbourhood (Ref 19.42). No policies from this Neighbourhood Plan are relevant to the	Lambeth SFRA Level 1 (2013)	Lambeth LFRMS (2014-2020)	Sustainable design and construction, flood risk, SuDS, waste management.

Local Authority	Relevant Local Policy	Relevant Neighbourhood Plans	Strategic Flood Risk Assessment (SFRA)	Local Flood Risk Management Strategy (LFRMS)	Topics Covered Relevant to the Assessment
		assessment in this Scoping Chapter.			
London Borough of Barking and Dagenham (LBBD)	Barking and Dagenham 2037 Local Plan (Ref 19.43) Policies: DMNE 4: Water Environment, DMSI 6: Flood risk and defences, DMSI 7: Water management, DMSI 1: Sustainable design and construction	N/A	Barking and Dagenham SFRA Level 1 2017 (Ref 19.44)	Barking and Dagenham LFRMS February 2017 (Ref 19.45)	Local environmental impacts, water quality and management, flood risk, SuDS, waste management
London Borough of Tower Hamlets (LBTH)	- Tower Hamlets Local Plan 2020 (Ref 19.46) Policies: D.ES4: Flood risk, D.ES5: Sustainable drainage, D.ES6: Sustainable water and wastewater management - LBTH Strategic Flood Risk Assessment 2017 (Ref 19.47) Chapters: 3: Flood Risk in Tower Hamlets,	N/A	Tower Hamlets SFRA Level 1 2017 (Ref 19.48)	Tower Hamlets LFRMS 2016-2022 (Ref 19.49)	Flood risk, SuDS, waste management

Local Authority	Relevant Local Policy	Relevant Neighbourhood Plans	Strategic Flood Risk Assessment (SFRA)	Local Flood Risk Management Strategy (LFRMS)	Topics Covered Relevant to the Assessment
	Chapter 5: Managing Flood Risk				
City of London (CoL)	- CoL: Local Plan 2015 (Ref 19.50) Policies: DM 15.8: Contaminated land and water quality, CS18: Flood risk, DM 18.2: Sustainable drainage systems (SuDS) and DM18.3 Flood protection and climate change resilience - CoL: City Plan 2040 (Ref 19.51) Policies: S15: Climate Resilience and Flood Risk, CR2: Flood Risk, CR3: Sustainable drainage systems (SuDS), CR4: Flood protection and flood defences	N/A	CoL SFRA 2023 (Ref 19.52)	CoL LFRMS 2021-2027 (Ref 19.53)	Sustainable development and water quality, waste management, flood risk, SuDS, water quality and pollution, flood protection and defences.
City of Westminster (CoW)	Westminster City Plan 2026 (Ref 19.54) Policies: 37: Local	Victoria Neighbourhood Plan 2025-2040 (Ref 19.55). No relevant	Westminster SFRA Level 1	Westminster LFRMS 2024-	Local environmental impacts, flood risk,

Local Authority	Relevant Local Policy	Relevant Neighbourhood Plans	Strategic Flood Risk Assessment (SFRA)	Local Flood Risk Management Strategy (LFRMS)	Topics Covered Relevant to the Assessment
	Environment Impacts, 39: Flood Risk	policies however paragraphs 8.18-8.24 cover Flood risk and resilience.	2023 (Ref 19.56)	2030 (Ref 19.57)	waste management, SuDS.
Royal Borough of Kensington and Chelsea (RBKC)	New Local Plan Review (July 2024) (Ref 19.58) Policies: GB11: Flood Risk, GB12: Sustainable Drainage, GB13: Water and Wastewater Infrastructure	N/A	RBKC Level 1 Strategic Flood Risk Assessment (Ref 19.59)	Local Flood Risk Management Strategy 2024 to 2030 (Ref 19.60)	Sustainable development and water quality, waste management, flood risk, SuDS, water quality and pollution, flood protection and defences.

Relevant Guidance

- 19.3.7 Design and project specific mitigation will be taken into account with reference to good practice (e.g. Guidance on Pollution Prevention and reports prepared by the Construction Industries Research and Information Association (CIRIA)) and the requirements of local planning policy and any supplementary guidance. The relevant national guidance in relation to water environment and flood risk includes:
- a. The National Planning Policy Guidance (NPPG) (Ref 19.61), updated in 2024, provides guidance for local planning authorities on assessing the significance of effects of projects on the water environment. The NPPG for Flood Risk advises on how to take account of and address the risks associated with flooding and coastal change in the planning process. It outlines steps intended to ensure that development is directed to sites with lower flood risk, and that proposals which cannot be made safe are not permitted. These steps include: assess flood risk; avoid flood risk; and manage and mitigate flood risk. The guidance states that developers and applicants must consider flood risk both to and from a development site, and that doing so at an early stage is likely to be in their best interests. In addition, the guidance provides detail on the application of the Sequential Test and the Exception Test.
 - b. The national guidance for the implementation of sustainable drainage measures (SuDS) was updated in 2025 and should be a consideration for all new development 'National Standards for SuDS Guidance' (Ref 19.23).
 - c. The Environment Agency's Flood Risk Assessments Climate Change Allowances (Ref 19.62) which provides guidance on how to apply climate change allowances to FRAs.
 - d. Guidance on Pollution Prevention Notes (Ref 19.63).
 - e. Pollution Prevention for Businesses (Ref 19.64)
 - f. CIRIA (2001) Control of Water Pollution from Construction Sites – Guidance for Consultants and Contractors (C532) (Ref 19.65).
 - g. CIRIA (2006) Control of Water Pollution from Linear Construction Projects – Technical Guidance (C648) (Ref 19.66).
 - h. CIRIA (2023) Environmental good practice on site (5th edition) (C811) (Ref 19.67).
 - i. CIRIA (2016) Groundwater control: design and practice (second edition) (C750) (Ref 19.68).

19.3.8 The Environment Agency provides guidance/position statements on the approach to the protection of groundwater (Ref 19.69). This includes the following statements relevant to the construction phase of the project:

- a. Regulatory Position Statement (RPS) A (General approach to groundwater protection, a risk-based approach);
- b. RPS G (Discharge of liquid effluents into the ground); and
- c. RPS N (Groundwater resources and abstraction).

19.3.9 The Environment Agency provides further guidance on groundwater abstractions and protection through the following:

- a. Environment Agency (2007) Hydrogeological impact appraisal for groundwater abstractions. Science Report – SC040020/SR2 (Ref 19.70);
- b. Environment Agency (2007) Hydrogeological impact appraisal for dewatering abstractions. Science Report – SC040020/SR1 (Ref 19.71);
- c. Environment Agency (2017) Protect groundwater and prevent groundwater pollution (Ref 19.72); and
- d. Environment Agency (2017) Groundwater protection technical guidance (Ref 19.73).

19.3.10 The Environment Agency provides further guidance and position statements with regards to some activities that would otherwise require environmental permits or water resource licences within the following:

- a. RPS 261: Temporary dewatering from excavations to surface water (Ref 19.74); and
- b. RPS 368: Small-scale abstractions for construction dewatering (Ref 19.75).

19.3.11 Finally, the Water Framework Directive UK Risk Assessment of Groundwater-Dependent Terrestrial Ecosystems from the Technical Advisory Group (TAG) (Ref 19.76) outlines guidance in relation to habitats directly impacted by groundwater.

19.4 Baseline Conditions and Future Baseline

19.4.1 **Volume 3, Appendix 19-1: Water Environment and Flood Risk Baseline** describes the baseline environmental characteristics for the Proposed Scheme and surrounding areas. A summary has been provided in this section.

Climate

- 19.4.2 According to the 1991 to 2020 (Ref 19.77) Greenwich Observatory Met Office station data, the Study Area receives less rain on average annually than the rest of the England Southeast and Central South Region, at 563mm compared to 806mm. The highest monthly rainfall averages occur in November and October and the lowest in July and March.

Land Use and Topography

- 19.4.3 The land use across the 1km Study Area is characteristic of a dense urban environment, comprising a mix of residential, commercial, recreational, and some industrial uses. The 1km Study Area spans from Crossness Sewage Treatment Works to South Kensington, stretching as far north as Marylebone and south as Greenwich. Generally, the 1km Study Area is between 0 and 15m above sea level with little variation. The lowest points are along the tidal River Thames where the topography is typically 0m above sea level, the highest points are at Greenwich Observatory (40m above sea level) and Lesnes Abbey Wood (50m above sea level) (Ref 19.78).

Hydrogeology

- 19.4.4 The 1km Study Area crosses superficial geology consisting of Secondary A, Secondary Undifferentiated and Unproductive aquifers. The major bedrock aquifers crossed by the Proposed Scheme consist of the Secondary A Lambeth Group aquifer, Secondary A Thanet Formation aquifer and the Principal Chalk aquifer. In the west, the Principal aquifer is confined by the London Clay Formation, with groundwater levels at ~-35m AOD. In the central and eastern part of the 1km Study Area, the Principal and Secondary A aquifers are unconfined, with groundwater levels shallower at ~1m AOD. For further details, see **Volume 3, Appendix 19-1: Water Environment and Flood Risk Baseline**.

Surface Water Features

- 19.4.5 The EIA Scoping Boundary is located within the Thames River Basin District (RBD) (Ref 19.79) and within the London, Roding Beam and Ingrebourne and the Thames Transitional and Coastal (TraC) Management Catchment.
- 19.4.6 **Volume 3, Appendix 19-1: Water Environment and Flood Risk Baseline** lists and summarises pertinent information on surface water bodies present within the 500m Study Area, as shown in **Volume 2, Figure 19-1: Surface Water Receptors and their Attributes**. **Table 19-4** gives a brief summary of the surface water features in the 500m Study Area.

Table 19-4: Summary of Surface Water Features Within the 500m Study Area

Scheme Extent	Summary of Watercourses
Western (i.e. west of Greenwich Peninsula)	• Main Rivers: River Thames, St Saviour's Dock, Deptford Creek • Ordinary Watercourses: The Westbourne, Spirit Quay Canal, Albion Channel • Lakes: St James's Park Lake, Buckingham Palace Garden Lake, Guildhall School of Music and Drama Lake, Canada Water • Docks: Greenland Dock
Eastern (i.e east of Greenwich peninsula)	• Main Rivers: River Thames, Broadwater, Buzzards Mouth Sewer, Marsh Dykes, Gores Brook, Great Breach Dyke, Horse Head Dyke, Beam and Ravensbourne • Ordinary Watercourses: Harrow Canal, Crossway Canal • Lakes: Greenwich Peninsula Ecology Park Lake, Birchmere, Thamesmere, South Mere, Crossway Lake, Crossness Nature Reserve Lake, Dagenham Breach

19.4.7 There are no flow gauging stations within the EIA Scoping Boundary, however there are four flow gauges upstream of the Proposed Scheme on relevant watercourses. Details of these stations are given in **Volume 3, Appendix 19-1: Water Environment and Flood Risk Baseline**.

19.4.8 Based on the summary of the flow gauging stations, noting that some of these are at a distance upstream or downstream of the EIA Scoping Boundary, the majority of the catchments are considered to have a relatively low baseflow index. This means that baseflow is less important to sustaining flow, and indicating less permeable bedrock, superficial deposits and soils. These watercourses are more dependent on surface water runoff and are likely to be susceptible to periods of dry weather. The exception is the River Thames, which has a higher baseflow index.

Water Framework Directive

19.4.9 The Study Area falls across several WFD water bodies, specifically:

- THAMES MIDDLE Transitional Water Body (GB530603911402);
- Marsh Dykes (Woolwich) Surface Water Body (GB106039023500);
- Gores Brook Surface Water Body (GB106037028140);

- d. Beam and Ravensbourne Surface Water Body (GB106037028100);
- e. Ravensbourne (Catford to Deptford) Surface Water Body (GB106039023270);
- f. Greenwich Tertiaries and Chalk Groundwater Body (GB40602G602500); and
- g. South Essex Thurrock Chalk Groundwater Body (GB40601G401100).

19.4.10 A Water Framework Directive (WFD) Screening and Scoping Assessment has been prepared as a stand-alone document and will be submitted to the Environment Agency for consideration.

Hydromorphology

19.4.11 The Thames Middle (GB530603911402) is a heavily modified transitional water body which flows entirely through an urban area. The watercourse is modified for coastal protection, flood protection and navigation, ports and harbours, and therefore lacks a natural hydromorphological regime due to the extensive modifications.

19.4.12 Marsh Dykes (Woolwich) Water Body (GB106039023500) flows entirely through an urban area. The watercourse is culverted at several points throughout the catchment due to road and rail crossings, and under residential areas.

19.4.13 Gores Brook Water Body (GB106037028140) flows entirely through an urban area. The watercourse is culverted at several points throughout the catchment due to road and rail crossings.

19.4.14 Beam and Ravensbourne Water Body (GB106037028100) water body flows through an urban landscape and is crossed by multiple roads and railway lines, which may contribute to its heavily modified status.

Water Resources, Abstractions and Discharges

19.4.15 There is one Drinking Water Protected Area (DrWPA) in the 500m Study Area. DrWPA are locations identified by the WFD where raw water is abstracted for human consumption (Ref 19.79). The DrWPA is the Thames Middle (GB530603911402) and is currently not at risk, its location is shown in **Volume 2, Figure 19-1: Surface Water Features and their Attributes**.

19.4.16 There are no Drinking Water Safeguard Zones or Nutrient Neutrality Catchments within the 1km Study Area (see **Volume 3, Appendix 19-1: Water Environment and Flood Risk Baseline**). Therefore, these zones or catchments are scoped out of further assessment.

- 19.4.17 No information is available at this scoping stage regarding specific licensed abstractions and consented discharges to/from the surface water and groundwater environment. However, this will be requested from the Environment Agency and included in the baseline at later stages of assessment.
- 19.4.18 There are three Source Protection Zones (SPZ) 1 within the 1km Study Area. Two within the western end of the Study Area, to the west of and south of the City of Westminster. These two SPZ1 are surrounded by an SPZ2. However, no SPZ3 is associated with these abstractions. These SPZs are likely to be associated with abstractions from the underlying Chalk, not the shallower London Clay. A third SPZ1 and associated SPZ2 and SPZ3 is present in the Deptford area and extending south towards Lewisham (see **Volume 2, Figure 19-6: Groundwater Features and their Attributes**). Full explanations of SPZs can be found in **Volume 3, Appendix 19-1: Water Environment and Flood Risk**.

Water Quality

Surface Water Quality

- 19.4.19 Within the 500m Study Area, there are eight Environment Agency routine water quality monitoring stations (Ref 19.79). A summary of the water quality monitoring stations and the data that is available is provided in **Volume 3, Appendix 19-1: Water Environment and Flood Risk Baseline**. Relevant data will be used to inform the baseline at subsequent stages of assessment.

Groundwater Quality

- 19.4.20 In the superficial aquifers (Alluvium and River Terrace Deposits), groundwater quality is vulnerable to urban influences, with potential elevated concentrations of nutrients, hydrocarbons, metals and solvents due to historical industrial land use, dense infrastructure and leakage from underground services. These shallow units often show higher variability and quicker responses to surface contamination because of their relatively high permeability and limited natural protection.
- 19.4.21 Groundwater quality within the Chalk aquifer beneath central London is characterised by hard, alkaline water with naturally low contaminant levels, but it is influenced by natural geochemistry and long-term urban pressures. Elevated chloride, sulphate and nitrate may occur due to historical abstraction, urban recharge, infrastructure leakage and, where the London Clay is thin or absent, downward migration of poorer quality shallow groundwater from the River Terrace Deposits. The Chalk is also susceptible to saline intrusion due to groundwater abstractions.

Ecological Potential of Water Features

Designated Nature Conservation Sites

- 19.4.22 There are seven statutory and non-statutory designated ecological sites within either the EIA Scoping Boundary or the 500m Study Area for the water environment assessment. Crossness Local Nature Reserve (LNR) is the only designated site located within the EIA Scoping Boundary. Within the 500m Study Area, Gilberts Pit Site of Special Scientific Interest (SSSI) is located within 10m of the EIA Scoping Boundary and there are five LNR: Maryon Wilson Park & Gilbert's Pit LNR, Sue Godfrey Nature Park LNR, Battersea Park Nature Areas LNR, Lesnes Abbey Woods LNR and Russia Dock Woodland LNR. However, only Crossness LNR and Russia Dock Woodland LNR are hydrologically dependent and are the only ones that will be considered within the assessment.
- 19.4.23 Additionally, there are a further four LNR within the 1 km Study Area. These are Stave Hill Ecology Park, Mudchute Park Farm, Ripple and Scrattons Ecopark and Extension (Ref 19.78). Of these, Stave Hill Ecology Park, Mudchute Park Farm and Ripple are hydrologically dependent. However, only Stave Hill Ecology Park (NGR: TQ 36101 79768) is within a distance of possible influence with a flow path, and therefore is the only LNR over 500m from the Proposed Scheme which will be considered within the assessment.
- 19.4.24 There are no Special Protection Areas, Ramsar sites or Special Areas of Conservation within the 1km Study Area for the water environment assessment.

Priority Habitats

- 19.4.25 There are number of priority habitats within the 500m Study Area, these include mudflats and reedbeds along the River Thames, coastal and floodplain grazing marshes at Erith Marshes, Crossness Nature Reserve and local to the Ripple Nature Reserve. There are no known chalk rivers.

Groundwater Dependent Terrestrial Ecosystems

- 19.4.26 There are no Groundwater Dependent Terrestrial Ecosystems (GWDTE) within the 1km Study Area. Two GWDTE, Inner Thames Marshes Site of Special Scientific Interest (SSSI) and Ingrebourne Marshes SSSI, are located 0.48 km and 1.6 km east of, and down gradient of, the 1km Study Area.

Flood Risk

- 19.4.27 The EIA Scoping Boundary is primarily situated within Flood Zone 3 but benefits significantly from established flood defence infrastructure, particularly the London Tidal Defences, which reduce overall risk exposure. Flooding from

tidal and fluvial sources is therefore managed and considered low likelihood in terms of defence breach, while surface water and groundwater flooding present more localised risks driven by topography, aquifer conditions, and prolonged rainfall. Sewer flooding remains a concern during high-intensity rainfall events due to capacity limitations in parts of the network, and reservoir flooding represents a low residual risk due to strict regulatory controls. Overall, flood risk within the 1km Study Area is varied but largely mitigated through existing infrastructure and management systems.

Future Baseline

- 19.4.28 The future baseline relates to known or anticipated changes to the current baseline in the future which would develop in the absence of the Proposed Scheme and will be considered in the ES.
- 19.4.29 Climate change is expected to significantly influence hydrological conditions within the 1km Study Area over the lifetime of the Proposed Scheme. This includes increases in flood risk which will be assessed using UKCP18 (Ref 19.81) projections and the Future Flows and Groundwater Levels Project (Ref 19.82). For the FRA, the impacts of climate change on future flood risk would be assessed in line with current Environment Agency guidance (Ref 19.83). Appropriate climate change allowances from this guidance will be incorporated into assessments and will inform the design of mitigation and drainage measures.
- 19.4.30 Future improvements in water quality may arise from evolving legislation or the introduction of new standards under the Environment Act 2021 (Ref 19.1). However, these may be offset by pressures such as climate change, population growth, and infrastructure constraints. Overall, such changes are not expected to alter the fundamental importance of water receptors, which is primarily determined by their physical characteristics, designations, and ecological value rather than water quality alone.
- 19.4.31 The effects of known future development within the same hydrological catchments as the 1km Study Area will also be considered. The approach to assessing cumulative effects is set out in **Volume 1, Chapter 20: Approach to Cumulative Effects**.

19.5 Potential for Likely Significant Effects

Construction Phase

- 19.5.1 There are several activities which would be undertaken during the Proposed Scheme's construction phase that are likely to generate impacts that have the

potential to adversely affect the water environment, drainage and flood risk, if unmitigated. These are summarised in the following sections.

19.5.2 The Proposed Scheme has the potential to affect groundwater quality and quantity due to construction activities if not appropriately designed/mitigated by:

- a. Dewatering of aquifer units for installation of Maintenance and Access Points (MAP) and pipeline.
- b. Mobilisation of existing poor-quality groundwater.
- c. Potential introduction of pollutants during construction such as hydrocarbons, grout etc.
- d. Potential impacts on groundwater resources and abstractions (licenced and potentially unlicenced abstractions), baseflow to watercourses, and groundwater dependent features from temporary dewatering of excavations, emplacement of sub-surface structures or changes in hydrology.

19.5.3 There are potential likely significant effects to surface water features and flood risk within the 500m and 1km Study Area of the Proposed Scheme if not appropriately designed/mitigated, arising from:

- a. Pollution of surface water due to deposition or spillage of soils, sediments, oils, fuels, or other construction chemicals, through uncontrolled site run-off from above ground construction works. This includes construction of the Pump Station MAP, underground works and compounds, as well as the use of water during construction activities including concrete batching.
- b. Tunnelling or other construction activities may cause sediments to be disturbed which has the potential to release contaminants into the watercourse.
- c. Temporary impacts on the hydromorphology of watercourses from the installation of watercourse pipeline crossings, thermal storage, access requirements or construction of MAP local to watercourses.
- d. Potential for temporary changes in flood risk from alteration of ground elevations and overland flow pathways, increases in surface water runoff, and exacerbation of local flood risk, due to deposition of silt, sediment in drains, ditches.
- e. Potential impact on flood conveyance routes if materials are stored within the floodplain.

- f. Potential impact on groundwater flood risk whilst laying any of the London SHM or excavating from the construction of the MAP.

- 19.5.4 There is potential for effects arising from foul drainage from services required for construction compounds. However, at this stage, it is assumed that any foul wastewater generated from services required at the construction compounds would be managed through a self-contained drainage system discharging to a sealed cesspit or equivalent. These storage tanks would be regularly emptied by a licensed recycling and waste management contractor. On this basis, effects from foul drainage are not anticipated and have therefore been scoped out of further assessment.
- 19.5.5 There is potential for effects arising from water demand during construction. However, it is assumed that any water needed for the construction of the Proposed Scheme would be supplied by a commercial source and therefore no on-site abstraction is proposed. The source of water required to commission the London SHM, and to undertake hydrostatic testing prior to commissioning is currently assumed to be provided by the previously identified Riverside Campus suppliers and by a new supply agreement to be arranged with the Local Water Undertaker (Thames Water). Discussion with Thames Water will therefore be required in advance of the submission of the DCO Application and an assessment of water supply may therefore also be appropriate as part of the ES, as there is potential for impact on local water resource provision. The effect on water supply to commission the London SHM has therefore been scoped in for further assessment at the ES stage, where further details will be confirmed by the Applicant.
- 19.5.6 There is potential for surface water pollution and contamination arising from above ground construction and below ground tunnelling activities. However, the London SHM will be located at a minimum depth of 5m below the riverbed, and construction mitigation measures noted in Section 19.7 will be implemented. While the 5m minimum depth applies to crossings beneath the River Thames, it is anticipated that the typical crossing depth will more realistically range between approximately 20m and 30m; confirmation of anticipated depths is dependent on further design refinement. Given this and also given the high dilution and dispersion capacity of the River Thames, combined with its naturally elevated turbidity levels, the Thames WFD water body has been scoped out for further assessment. In contrast, smaller surface water bodies may be more sensitive to likely significant effects due to their lower turbidity and reduced dilution and dispersion capacity. Consequently, the remaining surface water bodies have been scoped in for further assessment.

Operation Phase

- 19.5.7 The Proposed Scheme has the potential to affect groundwater quality and quantity during operation by:
- a. Physical obstruction leading to raised groundwater levels in the upgradient side and reduced groundwater levels on the down gradient side.
 - b. Migration of contaminants within groundwater following preferential pathways provided by the foundations of structures to non-contaminated soils, geology and groundwater.
- 19.5.8 The Proposed Scheme has the potential to affect the surface water environment, including water quality, hydromorphology and flood risk during the operation phase, including routine maintenance works and reactive repairs, through the following impact pathways:
- a. Likely significant effects on water quality in watercourses from surface water run-off and potential accidental spillages from routine maintenance and reactive repairs.
 - b. Likely significant effects on water supply in the Study Area due to the operation of London SMH.
- 19.5.9 There is potential for effects from foul drainage in the 500m Study Area due to the services needed for any office and/or maintenance facilities. At this stage it is assumed any foul wastewater generated on site would be stored in self-contained foul drainage system to a sealed cesspit or similar sealed system or through systems already set up at Riverside Campus. These tanks would be emptied under contract with a registered recycling and waste management contractor. Therefore, effects from foul drainage have been scoped out of further assessment.
- 19.5.10 There is potential for effects on water supply in the 500 m Study Area due to any office/maintenance facilities required as part of the Proposed Scheme. It is assumed any water needed for the operation of the Proposed Scheme would be provided by a commercial source or an existing source at Riverside Campus, and therefore no new on-site abstraction is proposed to be supplied to the offices / maintenance facilities. Therefore, this aspect has been scoped out of further assessment. The source of the abstraction of water to operate the London SHM is currently assumed to be provided the previously identified Riverside Campus suppliers and by a new supply agreement to be arranged with the Local Water Undertaker (Thames Water). As noted above in reference to construction, an assessment of water supply may be required during the ES as there may be an impact on water resource provision in the area. Therefore,

impact on water supply to operate London SHM has been scoped in for further assessment at ES stage where further details on this will be available.

- 19.5.11 Potential for increase in thermal conditions of the watercourse where the thermal store is located near a watercourse or the pipeline extends beneath the riverbed which may have a localised impact on water quality (e.g. dissolved oxygen concentrations). However, design of the Proposed Scheme will ensure thermal losses are reduced as far as practicable, the London SHM will be located at a minimum depth of 5m below the riverbed and the thermal stores buffered from all watercourses and/or water features. Due to this, there are no effects considered from thermal pollution to surface water bodies and this has therefore been scoped out of further assessment.
- 19.5.12 It is also considered that the effects on groundwater bodies from increased thermal conditions associated with the pipeline and thermal stores would be negligible given the design of the London SHM that will ensure thermal losses are reduced as far as practicable. For this reason, impacts to groundwater bodies from increased thermal conditions has been scoped out of further assessment.

Decommissioning

- 19.5.13 The Proposed Scheme is intended to become part of London's critical infrastructure with no decommissioning proposed. However, if decommissioning were to be required, it is likely that minor works would be needed to remove above ground infrastructure. Underground pipelines are expected to be left in-situ to minimise adverse environmental effects, particularly on groundwater. Standard construction practice site runoff management measures would be expected to avoid any likely significant effects on surface water, considering the small scale of works required, and would be in line with good practice guidance at that time. Potential for impact on water supply due to water demand during decommissioning is not considered a concern due to the assumption there will be no new abstraction required.
- 19.5.14 The potential to increase flood risk within the EIA Scoping Boundary during decommissioning is considered minimal. All existing pipework is anticipated to remain in situ; therefore, local drainage networks are not expected to be affected by the proposed works.
- 19.5.15 Given the factors outlined above, a detailed assessment of likely significant effects on the water environment and flood risk from the decommissioning of the Proposed Scheme has been scoped out.

19.6 Assessment Methodology

Impact Assessment Methodology

Baseline Data Sources

- 19.6.1 The scope of the assessment is based on a review of baseline information and will be confirmed through review of additional data sources, site visits and further consultation with relevant stakeholders.
- 19.6.2 In addition to the data sources referenced in Section 19.4, the assessment will also be informed by the following supplementary information:
- a. site walkover surveys;
 - b. data from Environment Agency flood models;
 - c. drainage and flood data from Local Authority Surface Water Management Plans and SFRA;
 - d. catchment and hydrological data from the Flood Estimation Handbook webservice;
 - e. data on licenced PWS, abstractions discharges; and
 - f. pollution incidents recorded on the National Incident Reporting System in the past 5 years.

Technical Guidance

- 19.6.3 The assessment will be undertaken in accordance with the following good practice and guidance documents:
- a. Planning Inspectorate Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive (Ref 19.84);
 - b. Local flood risk management guidelines published by the LLFA (various dates) (Ref 19.85);
 - c. Construction Industry Research and Information Association (CIRIA) publications (various dates) (Ref 19.86);
 - d. National Highways Design Manual for Roads and Bridges (DMRB) LA113 (Ref 19.87) and LA 104 for criteria to determine the significant of effect (Ref 19.88); and
 - e. Guidance for Pollution Prevention series (various dates).

Proposed Assessment Methodology

- 19.6.4 This section summaries the methodology proposed for the water environment assessment. This includes the criteria for the determination of the importance of the receptor and the magnitude of change from baseline conditions.

19.6.5 Likely significant effects of the Proposed Scheme on the water environment, drainage, and flood risk will be assessed by:

- a. considering the existing (baseline) status of the water environment within the Study Area and relevant surroundings with respect to surface water features, flood risk, and drainage, following the source-pathway-receptor approach;
- b. identifying likely significant effects of the Proposed Scheme on the water environment, drainage and flood risk during the operation and construction phases, as well as cumulative effects;
- c. proposing suitable mitigation measures to be incorporated into the Project design, construction and operation, to reduce or minimise significant adverse effects (i.e. embedded mitigation); and
- d. presenting additional mitigation measures to reduce, minimise or offset significant adverse effects, which remain after embedded and good practice measures have been accounted for.

Source-Pathway-Receptor Approach

19.6.6 The water environment, drainage, and flood risk impact assessment will generally be based on a source-pathway-receptor model. For an impact on the water environment to exist the following is required:

- a. an impact source (such as the release of polluting chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or the loss or damage to all or part of a water body);
- b. a receptor that is sensitive to that impact (i.e. water features and the services they support); and
- c. a pathway by which the two are linked.

19.6.7 The assessment of the likely significant effects is qualitative, and will consider the construction and operation phases, as well as cumulative effects with other developments. To support the assessment of effects on the water environment, some sub-topic specific assessments will be undertaken. These are described in more detail in the following sections.

Water Quality and Resource Assessment

19.6.8 Relevant data will be requested and obtained from the Environment Agency, such as abstractions, discharges and pollution incidents. Sewer records will also be obtained from Thames Water to be reviewed as part of the source pathway assessment. A walkover survey will be undertaken by a hydromorphologist and a water scientist. This will be to observe surface water

features in the 500m Study Area and to make observations about their current condition and character, the presence of existing risks and any potential pathways for construction and operation impacts as a result of the Proposed Scheme.

19.6.9 Although relevant background water quality data from the Environment Agency will be used to inform the baseline at subsequent stages of assessment, the importance of water bodies will be determined from a holistic review of water body features and does not rely on water quality. This is due to the principle that no controlled water may be polluted and thus it is not appropriate to potentially allow a greater impact based on a perceived lower water quality. Due to the nature of the types of water quality impacts from the Proposed Scheme, the assessment will be based on a risk assessment basis that does not require input of raw background water quality data. This is considered an appropriate and standard approach. Water quality monitoring is only effective when there is a clear purpose for it and may require monitoring over a long period of time to ensure reliable and robust results, which is not considered the case here. Therefore, no water quality sampling is proposed to support the water environment assessment.

19.6.10 A qualitative assessment of likely significant effects on surface water quality from construction and operation of the Proposed Scheme will be undertaken. This will consider the risk to surface water features resulting from construction or future operation activity using the source-pathway-receptor approach. Where there is a risk of pollution, mitigation measures will be described with reference to best practice guidance (e.g. Guidance on Pollution Prevention Notes, British Industry Standards and CIRIA guidance, see Section 19.3).

Hydromorphology and Water Framework Directive (WFD) Assessment

19.6.11 A **WFD Screening and Scoping Assessment** has been undertaken in accordance with Planning Inspectorate Advice on The Water Framework Directive and is provided as a standalone document. It has concluded that there are potential risks from the Proposed Scheme to the WFD objectives of those water bodies screened in. A scoping review has also been undertaken to identify which WFD elements may be at risk from Proposed Scheme activities. The risks of WFD impacts are currently considered to be low, and it is likely that all WFD risks can be designed out or mitigated through the application of standard protection measures. However, until designs affecting water bodies including appropriate mitigation measures become available, risks to WFD objectives cannot be ruled out. The assessment therefore concludes, on a precautionary basis, that a detailed WFD Impact Assessment will need to be undertaken to demonstrate WFD compliance.

19.6.12 At the ES stage, when more construction and design information is available, the existing screening and scoping assessment will be extended to determine the potential for any non-compliance of the Proposed Scheme with WFD objectives for affected water bodies, using readily available information and Site observations obtained during site walkover surveys. This will include a qualitative examination of the potential construction and operation phase impacts of the Proposed Scheme on relevant WFD hydromorphological, biological and physio-chemical parameters. Depending on the outcomes of the assessment, more detailed investigations may be required, which will be determined in consultation with the Environment Agency.

Surface Water Drainage Strategy

19.6.13 The design of drainage systems aims to ensure that there would be no significant increases in flood risk downstream, during storms up to and including the 1 in 100 (1%) annual probability design flood, with an allowance for climate change.

19.6.14 Outline drainage documentation will be prepared as part of the DCO Application to ensure the risk of surface water flooding is not increased as a result of the Proposed Scheme, including any increased land take for new impermeable areas and any access roads.

19.6.15 Careful consideration of the SuDS features, in keeping with local planning policy, the new SuDS standards and through liaison with the LLFA and Environment Agency, will be undertaken to ensure that the Surface Water is adequately attenuated and treats runoff from the Proposed Scheme, whilst minimising flood risk to the Site and surrounding areas.

19.6.16 In accordance with planning policies of the LLFA (i.e. LBB, RBG, LBLe, LBS, LBLa, LBBd, LBTH, CoL, CoW and RBKC) and general good practice, mitigation will be provided by restricting surface water discharge rates and providing on-site attenuation, primarily via SuDS techniques or attenuation tanks or other appropriate solutions.

19.6.17 A water quality risk assessment of the transmission sites will be undertaken using the Simple Index Approach described in The SuDS Manual (Version 6) (CIRIA C753) (Ref 19.89). This will inform what, if any, treatment measures are required to manage the risk from diffuse urban runoff to watercourses or ground.

Flood Risk Assessment (FRA)

19.6.18 An FRA will be prepared for the Proposed Scheme to assess the current and future flood risk to the 1km Study Area. This will be a technical appendix to the ES submitted with the DCO Application. The FRA will include a review of the

current and future flood risk to the 1km Study Area from all sources (including surface water, groundwater, tidal and fluvial sources and other artificial sources), in keeping with the NPS (Ref 19.22) and NPPF (Ref 19.23) guidance, to inform the Proposed Scheme design and set out any proposed mitigation requirements that are to be addressed within the FRA and within the surface water drainage documentation.

- 19.6.19 It is considered that the Proposed Scheme is 'Essential Utility Infrastructure', as categorised in the NPPF Annex 3: Flood risk vulnerability classification.
- 19.6.20 Below ground utility routes are not generally considered in flood risk terms. However, the approach to the Sequential and Exception Tests for the Transmission pipeline will be clarified with the Environment Agency and with each LLFA in the different London boroughs.
- 19.6.21 Given the likelihood that a number of MAP Zones will be located within Flood Zone 3, flood compensation or mitigation measures may be required where development is proposed in areas at risk of flooding. These measures would ensure that the Proposed Scheme does not give rise to increased flood risk within the catchment or adversely affect surrounding watercourses during operation. The conclusions of this will be referred to within the water environment assessment presented in the ES.
- 19.6.22 As the Proposed Scheme is classified as "Essential Infrastructure" and the MAP Zones are likely to be located in Flood Zone 3, the Sequential Test and Exception Test will be required to be undertaken as part of the FRA. For the Exception Test to be passed allowing development in Flood Zone 3, the FRA will be required to demonstrate that the development would be safe for its lifetime, taking into account the effects of climate change. This requirement will inform the positioning of the MAP zones and the design of new impermeable areas.

Determining the Significance of Effects

- 19.6.23 The significance of effects will be determined using the principles of the guidance and criteria set out in the DMRB LA113 Road Drainage and the Water Environment (Ref 19.87) adapted to take account of hydromorphology, and DMRB LA 104 Environmental Assessment and Monitoring (Ref 19.88). This can be applied to all development types and represents the most robust and nationally accepted criteria for the determination of potential effects on the water environment.
- 19.6.24 In accordance with the stages of the methodology, there are three stages to the assessment of likely significant effects on water environment, drainage, and flood risk as follows:

- a. a level of importance (negligible to very high) is assigned to the water resources receptor from **Table 19-5** (adapted from DMRB LA 113 (Ref 19.87)) and is based on a combination of attributes (such as water supply, biodiversity, recreation) and on receptors to flood risk based on the vulnerability of the receptor to flooding (i.e. as shown in **Table 19-5**, essential infrastructure would be very high importance, to water compatible development which would be of low importance);
- b. the magnitude of potential and residual impact (classified as negligible, minor, moderate or major adverse/ beneficial) is determined based on the criteria listed in **Table 19-6** and the assessor's knowledge of the Proposed Scheme. Embedded or standard mitigation measures are considered in the initial assessment, but any other mitigation is not considered until the assessment of residual effects. The magnitude of impact will be determined considering the likelihood of the effect occurring. The likelihood of an effect occurring is based on a scale of certain, likely or unlikely. Likelihood has been considered in the case of water resources only, as likelihood is inherently included within the FRA; and
- c. a comparison of the importance of the resource and magnitude of the impact (for both potential and residual impacts) results in an assessment of the overall significance of the effect on the receptor using the matrix presented in **Table 19-7**. The significance of each identified effect (both potential and residual) will be classed as very large, large, moderate, slight or neutral and either beneficial or adverse significance. Effects that are moderate or worse are significant in EIA terms (shaded cells in **Table 19-7**).

Table 19-5: Criteria to Determine Receptor Importance (Adapted from DMRB LA 113 (Ref 19.87))

Importance	General Criteria	Surface Water	Groundwater	Hydromorphology	Flood Risk
Very High	Nationally significant attribute of high importance - the receptor has little or no ability to absorb change without fundamentally altering its present character and is therefore of very high environmental value.	Designated Salmonid/Cyprinid fishery. Watercourse having a WFD classification as shown in a RBMP and $Q95 \geq 1.0 \text{ m}^3/\text{s}$. Site protected / designated under UK habitat legislation (SAC, SPA, SSSI, Water Protection Zones, Ramsar site). Species protected by UK legislation. Critical social or economic uses (e.g. public water supply and navigation).	SPZ 1. Principal aquifer providing a regionally important resource and/or supporting a site protected under UK legislation. Groundwater locally supports GWDTE. Water abstraction: $>1,000 \text{ m}^3/\text{day}$.	Unmodified, near to or pristine conditions, with well-developed and diverse geomorphic forms and processes characteristic of river and lake type.	Essential Infrastructure or highly vulnerable development.
High	The receptor has low ability to absorb change without fundamentally altering its	Watercourse having a WFD classification as shown in a RBMP and $Q95 < 1.0 \text{ m}^3/\text{s}$; Major Cyprinid Fishery. Species protected	Principal aquifer providing locally important source supporting river ecosystem; SPZ 2; Groundwater supports	Conforms closely to natural, unaltered state and will often exhibit well-developed and diverse geomorphic forms and processes	More vulnerable development.

Importance	General Criteria	Surface Water	Groundwater	Hydromorphology	Flood Risk
	present character, is of high environmental value, or of national importance.	under UK habitat legislation. Critical social or economic uses (e.g. water supply and navigation). Important social or economic uses such as water supply, navigation or mineral extraction.	GWDTE; Water abstraction: 500-1,000 m ³ /day.	characteristic of river and lake type. Deviates from natural conditions due to direct and/or indirect channel, floodplain, bank modifications and/or catchment development pressures.	
Medium	Locally significant attribute of high importance - the receptor has moderate capacity to absorb change without significantly altering its present character.	Watercourses not having a WFD classification shown in a RBMP and Q95 >0.001m ³ /s. May be designated as a local wildlife site and support a small/ limited population of protected species. Limited social or economic uses.	Secondary Aquifer providing water for agricultural or industrial use with limited connection to surface water SPZ 3. Water abstraction: 50-499 m ³ /day.	Shows signs of previous alteration and/or minor flow/ water level regulation but still retains some natural features or may be recovering towards conditions indicative of the higher category.	Less vulnerable development.

Importance	General Criteria	Surface Water	Groundwater	Hydromorphology	Flood Risk
Low	Lower quality, common place - the receptor is tolerant of change without detriment to its character and is of a local and low environmental value.	Watercourses not having a WFD classification shown in a RBMP and Q95 <0.001m ³ /s. Low aquatic fauna and flora biodiversity and no protected species. Minimal economic or social uses.	Generally Unproductive Strata. Water abstraction: <50 m ³ /day.	Substantially modified by past land use, previous engineering works or flow/ water level regulation. Watercourses likely to possess an artificial cross-section (e.g. trapezoidal) and will probably be deficient in bedforms and bankside vegetation. Watercourses may also be realigned or channelized with hard bank protection or culverted and enclosed. May be significantly impounded or abstracted for water resources use. Could be impacted by navigation, with	Water compatible development.

Importance	General Criteria	Surface Water	Groundwater	Hydromorphology	Flood Risk
				associated high degree of flow regulation and bank protection, and probable strategic need for maintenance dredging. Artificial and minor drains and ditches will fall into this category.	
Negligible	The receptor is resistant to change and is of little environmental value	Not applicable	Not applicable	Not applicable	Not applicable

Table 19-6: Magnitude of Impact Criteria (Adapted from DMRB LA 113 (Ref 19.87))

Magnitude	Description
Major Adverse	Results in a loss of attribute and/or quality and integrity of the attribute.
Moderate Adverse	Results in impact on integrity of attribute, or loss of part of attribute.
Minor Adverse	Results in some measurable change in attribute's quality or vulnerability.
Negligible	Results in impact on attribute, but of insufficient magnitude to affect the use or integrity.
Minor Beneficial	Results in some beneficial impact on attribute or a reduced risk of negative impact occurring.
Moderate Beneficial	Results in moderate improvement of attribute quality.
Major Beneficial	Creation of new attribute or major improvement of attribute quality.
No Change	No loss or alteration of characteristic, features of elements; no observable impact in either direction.

Table 19-7: Determination of Significance Matrix

Magnitude of Impact (Table 19-6)						
Importance of Receptor (Table 19-5)		Major	Moderate	Minor	Negligible	No Change
	Very High	Very large	Large or very large	Moderate or large	Slight	Neutral
	High	Large or very large	Moderate or large	Slight or moderate	Slight	Neutral
	Medium	Moderate or large	Moderate	Slight	Neutral or slight	Neutral
	Low	Slight or moderate	Slight	Neutral or slight	Neutral or slight	Neutral
	Negligible	Slight	Neutral or slight	Neutral or slight	Neutral	Neutral

19.6.25 The following significance categories will be used for both potential and residual effects:

- a. beneficial: a beneficial/ positive effect on the quality of a water resources receptor; or
- b. adverse: a detrimental/ negative effect on the quality of a water resources receptor.

19.7 Design, Mitigation and Enhancement Measures

19.7.1 Where possible, likely significant adverse effects will be avoided through embedded design measures. However, where this is not possible, additional mitigation or compensation measures may be required. These will be determined and developed as part of an iterative design and impact assessment process.

Construction Phase

19.7.2 Mitigation measures applicable to the Proposed Scheme's construction phase will be included in a Framework Construction Environment Management Plan (CEMP) which will be prepared as part of the DCO Application. The Framework CEMP would be developed into a detailed (or construction issue) CEMP by the appointed construction contractor prior to the start of construction. The Framework CEMP will include a range of measures that will be adopted throughout the construction period, topics will include but not be limited to:

- a. pollution prevention and pollution incident response;
- b. dust management and control measures;
- c. location and protection of sensitive environmental sites and features;
- d. adherence to protected environmental areas around sensitive features;
- e. working hours and noise and vibration reduction measures;
- f. working with potentially contaminated materials;
- g. waste management and storage; and
- h. flood risk response actions.

19.7.3 It is envisaged that the Framework CEMP will require the preparation of other detailed management plans, such as a water management plan, prepared with reference to good practice guidance. It is also likely to include a hydraulic fracture (frac-out) risk assessment/frac-out management plan to manage the potential risks from a frac-out event.

- 19.7.4 All works near watercourses and/or water features would be buffered from any new above ground development or construction activities (save for crossings, drainage connections and any other works that must be located closer to the watercourse/water feature) by at least 10m for ordinary watercourses and 16m for main rivers, where reasonably practicable. This would be measured from the top of the bank, batter, edge of a culvert or landward toe of any existing flood defence. This would limit hydromorphological impacts.
- 19.7.5 Temporary surface water drainage will adopt SuDS, where reasonably practicable, supported by proprietary treatment, if necessary following appropriate risk assessment.
- 19.7.6 If hydrostatic testing is to be undertaken during construction, the appropriate environmental consents may be required for the abstraction (where an existing source is not used).
- 19.7.7 Construction activities which could disturb the aquifer would be avoided in SPZ1 and SPZ2 where reasonably practicable, as outlined in The Environment Agency's approach to groundwater protection (Ref 19.73) which states:
- a. B1: Initial screening tools: The Environment Agency will use SPZ as a screening tool to identify areas to which they would object to activities that would potentially damage or pollute groundwater;
 - b. C5: Infrastructure pipelines: Pipelines which pass through SPZ1 or SPZ2 will normally be objected to by the Environment Agency. If it is unavoidable, operators are to adopt best available techniques (BAT) and operate in accordance with the Energy Networks Association guidance;
 - c. N7: Hydrogeological risk assessment: Any Proposed Scheme which presents a hazard to groundwater resources, quality or abstractions must provide an acceptable Hydrogeological Risk Assessment to the Environment Agency and planning authority. Unacceptable risks identified in the hydrogeological risk assessment must be mitigated, or planning permission will be conditioned and proposal may be rejected;
 - d. N8: Physical disturbance of aquifers in SPZ1: The Environment Agency will normally object to any application for development which may physically disturb an aquifer within an SPZ; and
 - e. N11: For any proposal that may physically disturb aquifers, the Environment Agency will seek protection for water resources and any related groundwater-dependent environment equivalent to if the effect were caused by a licensable abstraction.

Operation Phase

19.7.8 Design measures will be developed as the Proposed Scheme progresses. Important examples of design and mitigation are included below:

- a. the Proposed Scheme would include an appropriately designed surface water collection and treatment system;
- b. SuDS would be incorporated to attenuate runoff from the Proposed Scheme to a rate agreed with the Environment Agency and or the LLFA to avoid increasing flood risk, and to reduce the quantities and concentration of diffuse urban pollutants found in runoff. Their design and use would depend on factors, such as site-specific constraints. SuDS, where possible, will be supported by proprietary treatment if necessary following appropriate risk assessment;
- c. the Proposed Scheme would include design measures to ensure that it does not generate any adverse flood risks to adjacent areas (e.g. appropriate design of watercourse crossings and potential floodplain compensation provisions);
- d. the design depth of the London SHM beneath riverbeds will be a minimum of 5m. For this reason, there are considered to be no impacts from thermal pollution to surface water bodies, and thus this has been scoped out of further assessment. While the 5m minimum depth applies to crossings beneath the River Thames, it is anticipated that the typical crossing depth will more realistically range between approximately 20m and 30m, confirmation of anticipated depths is dependent on further design refinement.
- e. pipejacking may be used to install the pipeline, this would reduce the risk to hydromorphology and risk of frac-out events;
- f. all watercourses and/or water features would be buffered from any new above ground development or construction activities by at least 10m for ordinary watercourses and 16m for main rivers, measured from the top of the bank, batter, edge of a culvert or landward toe of any existing flood defence, where reasonably practicable, other than if crossings are required, drainage or other essential infrastructure that has to be located nearer to the watercourse. This would limit hydromorphological and flood risk likely significant effects from during operation; and
- g. where reasonably practicable, any permanent access watercourse crossings would be by a clear-span structure with abutments set back from the top of the bank, unless culverts can be justified and agreed with regulators.

19.8 Assumptions, Limitations and Uncertainties

19.8.1 The following limitations and assumptions have been identified:

- a. Minimum tunnelling depths will be adhered to (minimum depth of approximately 5m).
- b. To ensure that the Proposed Scheme operates effectively and efficiently, all pipes/tunnels will be sufficiently insulated to minimise any heat loss. Therefore, there will be negligible thermal loss/emissions.
- c. The locations of PWS and licensed water abstractions have not yet been obtained, and so these are not included as receptors at this time. Water activity permits (i.e. permitted discharges) are also not yet known in detail and have not been considered in the current baseline. These receptors and water feature attributes will be considered as further assessment is undertaken.
- d. Sewer records have not yet been obtained so culverted watercourses have not been included within the baseline, unless they have identified through online mapping.
- e. Groundwater level and quality data for the Study Area is limited. Further understanding of groundwater levels across the EIA Scoping Boundary will be ascertained from information requests to the Environment Agency.
- f. Wastewater generated from the Proposed Scheme during construction will be managed appropriately. Options may include connecting to the nearest available public sewer or a self-contained independent non-mains domestic storage and/or treatment system. If this is not feasible, an alternative would be to provide a self-contained foul drainage system, such as a cesspit or similar arrangements. These would be regularly emptied by a registered recycling and waste management contractor;
- g. Any foul wastewater generated on site during operation would be managed through systems already set up at Riverside Campus or stored in self-contained foul drainage system to a sealed cesspit or similar sealed system.
- h. There are no new or modified planned discharges or intakes from the River Thames.
- i. Visual surveys will be undertaken of accessible water/drainage features to inform the surface water drainage documentation and impact assessment. However, it may not be possible to survey all significant locations or structures due to access constraints or visibility issues (e.g. private land/built on land). Where this is the case, a survey close to the area of interest will be attempted and this data used as a proxy. In

addition, some watercourses may be small, ephemeral and flow only intermittently, and these may not be identified in the field or observed when flowing.

- j. Other than the site walkover survey, the FRA and surface water drainage documentation will be based on desktop surveys and best available site layout proposals in line with best practice. Where available, topographical data will be used to support the FRA. In the absence of topographical data, LiDAR data will be used to inform the FRA and the surface water drainage documentation.
- k. There will be no new formal water supply required, water for the initial fill and hydrostatic testing will be provided by the previously identified Riverside Campus suppliers and by a new supply agreement to be arranged with the Local Water Undertaker (Thames Water). Further details will be provided by the Applicant in advance of submission of the DCO Application. Engagement with Thames Water would be required and potable water usage during construction and testing will be assessed in the ES.
- l. Water required for operation and maintenance of the offices and facilities will not require a new mains water supply connection. The required water for the development will be provided by the previously identified Riverside Campus suppliers and by a new supply agreement to be arranged with the Local Water Undertaker (Thames Water). If this changes then relevant abstraction licences would be obtained, following consultation with relevant authorities. A water resources assessment may be required if a new water supply source is to be used to commission the London SHM, further details will be provided by the Applicant at during the ES stage.
- m. Open cut methodologies will not be employed for WFD surface water body crossings.

19.9 Summary of Elements Scoped In or Scoped Out

- 19.9.1 A summary of the water environment and flood risk items scoped in or out of the ES is provided in **Table 19-8**.

Table 19-8: Summary of Elements Scoped In or Scoped Out

Element	Phase	Scoped in	Scoped out	Justification
Impacts on groundwater quality and quantity	Construction Operation	✓		Groundwater is scoped into the EIA because the Proposed Scheme has the potential to affect groundwater levels, flow or quality within sensitive aquifers.
Impacts on groundwater quality from increased thermal conditions (pipeline network and thermal stores)	Operation		✓	It is considered that there would be no material warming of the groundwater bodies because of the highly insulated design of the Proposed Scheme.
Impacts on GWDTEs	Construction Operation		✓	There are no GWDTE within the 1km Study Area, and given their distance from the Proposed Scheme, impacts are not expected to extend to these habitats.
Impacts on LNRs	Construction Operation	✓		Potential for effects on hydraulically linked LNR due to construction and operation of the Proposed Scheme.
Surface water quality and hydro-morphology	Construction Operation	✓ (all surface water features excluding	✓ (River Thames	Potential for effects on smaller land-based surface water features due to construction and operation of the Proposed Scheme. Effects on

Element	Phase	Scoped in	Scoped out	Justification
		the River Thames WFD water body)	WFD water body)	the River Thames WFD water body has been scoped out due to being less sensitive to runoff.
Surface water impact to watercourses downstream of 500m Study Area	Construction Operation		✓	Potential for effects on the Thames Lower and Thames Coastal North WFD water bodies can be scoped out given distance downstream (beyond the core 500m Study Area) and its scale (offering significant dilution and dispersal potential).
Thermal pollution to surface water (pipeline network and thermal stores)	Operation		✓	Due to the design of the Proposed Scheme, the depth of tunnelling below ground and the watercourse buffer, it is considered that there would be no material warming of the Thames or other watercourses.
Foul drainage	Construction Operation		✓	No new sewer network connections are proposed. Foul wastewater would instead be stored in self-contained foul drainage system for off-site disposal. There will be no new discharges of treated foul water during construction or operation. This will be kept under review.
Water resources / water supply	Construction Operation	✓ (Proposed Scheme construction,	✓ (Potable water	It is unknown if abstraction of water to construct, commission and operate London SHM, for 'top up' and for hydrostatic testing is required, from

Element	Phase	Scoped in	Scoped out	Justification
		commissioning and operation)	supply for offices etc.)	what source and at what quality. This is scoped in for further review. At this stage it is assumed potable water for any offices/maintenance facilities will come from a mains supply (i.e. no new abstraction). As this is managed by the local water company and is a regulated industry, no further assessment is proposed.
Nutrient Neutrality	Construction Operation		✓	No catchment affected by nutrient neutrality restrictions located within the 1km Study Area.
Flood risk from all sources	Construction Operation	✓		Elements of the Proposed Scheme may impact on flood risk in the 1km Study Area.
All elements	Decommissioning		✓	There will be no underground work at the decommissioning stage, and minimal above groundwork which would be managed through good practice pollution prevention measures.

19.11 References

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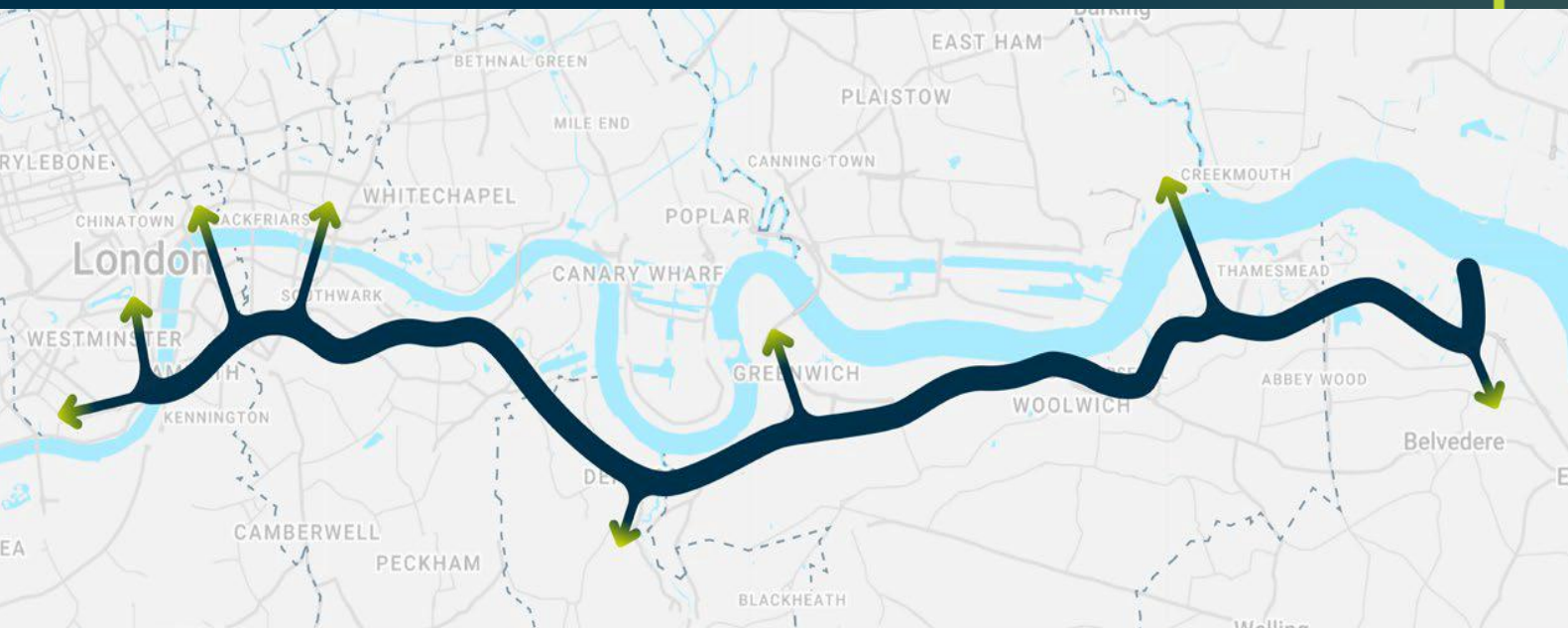
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Environmental Impact Assessment Scoping Report

Volume 1: Main Report

Chapter 20: Approach to Cumulative effects



Cory Environmental Holdings Limited

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20. Approach to Cumulative Effects

20.1 Introduction

- 20.1.1 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (Ref 20.1) (the EIA Regulations) require that an EIA should include consideration of both the interaction between the different aspects of the environment likely to be affected by a development (Regulation 5(2)(e)), and the likely significant effects of a development resulting from the cumulation of effects with other existing or approved projects (Schedule 4, paragraph 5(e)). Collectively, these effects are referred to as cumulative effects.
- 20.1.2 The Overarching National Policy Statement for Energy (EN-1) (NPS-EN-1) (Ref 20.2) acknowledges this requirement, confirming in paragraph 4.3.3 that an assessment of the likely significant effects of a proposed project on the environment should cover cumulative effects at all stages of the project. It also states in paragraph 4.3.19 (Ref 20.2) that *“The Secretary of State should consider how the accumulation of, and interrelationship between, effects might affect the environment, economy, or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place.”*
- 20.1.3 To assist the Secretary of State (SoS) with their decision-making, the cumulative effects of the Proposed Scheme will be assessed as part of the EIA and reported in the Environmental Statement (ES).
- 20.1.4 Accordingly, the cumulative effects assessment (CEA) will consider the following types of effects:
- a. **Intra-project Effects:** these effects derive from combinations of Proposed Scheme specific impacts which, when acting together, may result in a new or different likely significant effect or an effect of greater significance than one impact would result in when considered in isolation. An example could be where a local community is affected by dust, noise, and traffic disruption during the construction of the Proposed Scheme, whereby these impacts combine to cause a greater level of nuisance than that associated with each individual impact acting alone; and
 - b. **Inter-project Effects:** these effects derive from the combination of Proposed Scheme specific effects interacting with the effects associated with other developments in the surrounding area.
- 20.1.5 The assessment of both intra-project and inter-project effects will focus on identifying where the interactions could result in new or different significant effects on environmental receptors and resources.

- 20.1.6 In developing the proposed scope of the above assessments, due regard will be given to stakeholder responses provided as part of the EIA Scoping Opinion and future engagement.
- 20.1.7 The CEA will be based on the best available data from other proposed and committed developments and associated information which is currently in the public domain or has been provided by the relevant scheme. The assessment will assume that any publicly available information used as part of the assessment is accurate. The assessment is also reliant on collaboration with a range of statutory consultees and other developers to identify changes in information that may be relevant to the assessment.
- 20.1.8 Where there are specific limitations with data use, these will be highlighted as the CEA progresses.

20.2 Intra-project Effects

Approach and Methodology

- 20.2.1 No established methodology exists for quantifying and assessing intra-project effects; however, advice provided by the Planning Inspectorate in 'Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment' (Ref 20.3) summarises the requirements for reporting such an assessment in the ES. As a result, the intra-project effects assessment will be undertaken on a qualitative basis, using the results of the individual technical assessments, informed by professional judgement.
- 20.2.2 Regulation 5(2)(e) of the EIA Regulations (Ref 20.1) requires that the ES considers the interaction between effects on population and human health, biodiversity, land, soil, water, air and climate, material assets, cultural heritage and the landscape associated with a proposed scheme. Intra-project effects are those that result from the interaction between the individual effects of a proposed scheme (i.e. interaction of environmental aspects such as air quality and noise), combined on a single receptor or resource at a single point in time. The interaction between the individual effects may combine to result in a significant effect, even where the individual effects were not significant.
- 20.2.3 A combination of the general EIA methodology presented in **Volume 1, Chapter 5: EIA Approach and Methodology** and professional judgement will be used in the intra-project effects assessment to identify whether environmental receptors or resources are likely be affected by more than one type of impact as a consequence of the Proposed Scheme.
- 20.2.4 The intra-project effects assessment will be undertaken using the following three-stage methodology and will be informed by the topic-specific assessment Study Areas and conclusions reported within the ES.

- a. **Stage 1** will involve a pre-screening exercise to establish the relationships between environmental receptors and resources, to determine whether an environmental receptor or resource is common to more than one environmental topic and could therefore be exposed to more than one type of Proposed Scheme effect. Those environmental receptors or resources confirmed as potentially experiencing combined or 'grouped' exposure will then be taken forward to Stage 2.
- b. **Stage 2** will involve a review of the form, nature and significance of each effect identified on the environmental receptors and resources taken forward from Stage 1. Stage 2 will focus on identifying genuine interactions that have the potential to become significant (i.e. only those residual effects of the Proposed Scheme that have an individual significance rating of greater than negligible will be considered and taken forward).
- c. **Stage 3** will involve undertaking an assessment of the effect interactions identified at Stage 2. This stage will consider whether the combination of effects on an environmental receptor or resource is likely to lead to an overall effect of greater significance than the effects in isolation, or whether the combined effect could result in a new or different effect. Any requirements for additional mitigation (i.e. measures over and above those accounted for in the individual effects assessments) will also be identified, where practicable.

20.2.5 In identifying the potential for topic-related interactions to arise within the three stages, due regard will be given to the following considerations:

- a. The degree to which certain assessment topics are inherently cumulative, and therefore already consider intra-project effects to an extent. An example is the ecology assessment topic, which considers the relationships and interactions between effects related to visual disturbance, noise, vibration, air quality and water environment on ecological receptors from the outset. Accordingly, such interactions would not be considered further in the intra-project effects assessment.
- b. The degree to which effects on environmental receptors and resources would be wholly contained within a single topic assessment. An example would be the assessment of greenhouse gas emissions on global climate. Environmental receptors and resources such as this would not be taken forward for consideration in the intra-project effects assessment as no potential for effect interactions exists.

Study Area Definition

- 20.2.6 Intra-project effects assessment Study Area(s) will be defined in relation to the maximum extent over which two (or more) effects may combine or interact on an environmental receptor or resource.
- 20.2.7 The spatial coverage and extent of these Study Area(s) will be informed by the spatial extent of individual effects, and the Study Area(s) adopted within each individual topic assessment.

Significance of Intra-project Effects

- 20.2.8 The significance of intra-project effects on environmental receptors and resources will be determined using professional judgement, referencing the generic assessment criteria presented in **Table 20-1**. Very large, large and moderate intra-project effects would be considered significant, and slight intra-project effects would be considered not significant.
- 20.2.9 Input will also be sought from the competent experts responsible for the production of the individual topic assessments, where required.

Table 20-1: Intra-project Effects Assessment Criteria

Effect category	Descriptor of Effect
Very large (adverse or beneficial)	Where the combined impacts of the Proposed Scheme upon an individual or collection of environmental receptors would be very highly significant (positive or negative). Effects would be permanent for receptors of very high value.
Large (adverse or beneficial)	Where the combined impacts of the Proposed Scheme upon an individual or collection of environmental receptors would be highly significant (positive or negative). Effects would be: - widespread/large-scale for receptors of high value; - permanent for a receptor or receptors of high value; - localised for a receptor or receptors of very high value; or - temporary for a receptor or receptors of very high value.
Moderate (adverse or beneficial)	Where the combined impacts of the Proposed Scheme upon an individual or collection of environmental receptors would be significant (positive or negative). Effects would be: - permanent for a receptor or receptors of medium value; - localised for a receptor or receptors of high value; or - temporary for a receptor or receptors of high value.
Slight (adverse or beneficial)	Where the combined impacts of the Proposed Scheme upon an individual or collection of environmental receptors would be noteworthy but not significant (positive or negative). Effects would be:

Effect category	Descriptor of Effect
	• permanent for a receptor or receptors of low value; • localised for a receptor or receptors of medium value; or • temporary for a receptor or receptors of medium value.
No significant intra-project effect	Where the combined impacts of the Proposed Scheme are not likely to lead to a change in the significance of effects at a receptor, when compared with considering these impacts in isolation.

20.3 Inter-project Effects

Approach and Methodology

- 20.3.1 As outlined in Schedule 4 paragraph 5(e) of the EIA Regulations (Ref 20.1), the ES is required to consider the “...*cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources*”. Inter-project effects of the Proposed Scheme together with the effects of other developments/schemes may result in significant effects.
- 20.3.2 ‘Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment’ (Ref 20.3) comprises published guidance and advice and has been referenced as part of the scoping process to inform the proposed scope of, and approach to, the assessment. This advice summarises the process for undertaking cumulative effects assessments in the context of nationally significant infrastructure projects. It provides guidance about the type and scale of other developments that should be considered when undertaking an inter-project effects assessment, and how the assessment should be reported.
- 20.3.3 In line with the published advice (Ref 20.3) the inter-project effects assessment will be undertaken using the four-stage approach described below.
- a. Stage 1: Establish the Zone(s) of Influence (Zoi) and identify a long list of ‘other developments’ (the ‘development schedule’).
 - b. Stage 2: Identify a short list of ‘other developments’.
 - c. Stage 3: Information gathering.
 - d. Stage 4: Assessment.
- 20.3.4 In general, where the Proposed Scheme results in a negligible effect, it will not be considered that the Proposed Scheme could significantly contribute to a cumulative effect with other developments. This is because negligible effects are considered imperceptible changes to an environmental resource or receptor. Therefore, the cumulative effects assessment will focus on effects of the Proposed Scheme that are minor, moderate and major.

Stage 1: Establishing the Long List of Other Developments

- 20.3.5 In accordance with the published advice (Ref 20.3), Stage 1 will involve establishing the Proposed Scheme’s likely Zoi associated with each of the environmental topic areas assessed. The Zoi are the areas within which interactions may occur and result in potentially significant effects on the environment for each environmental aspect considered within the EIA. The ES will set out the Zoi for each environmental aspect area, which will reflect the Study Areas defined within the topic assessments. The Zoi are used to

establish an area of search within which other developments are identified to be included in the inter-project effects assessment.

20.3.6 To establish the long list of other developments within the area of search, the following types of proposed and consented plans and projects will be identified:

- a. Nationally significant infrastructure projects (NSIP) and projects of national significance (PNS) listed on the Planning Inspectorate's Programme of Projects.
- b. Plans and projects that are considered to represent 'major development' under the Town and Country Planning Act 1990 (Ref 20.4) regime¹ – for example major transport proposals, minerals and waste sites, housing developments and local authority land-based allocations for future development.
- c. Projects advancing through other statutory consenting regimes (e.g. Hybrid Bills and Transport and Works Act Order applications).

20.3.7 Inclusion criteria or thresholds for establishing the long list of other developments are provided in **Table 20-2**. The search criteria have been based on definitions within the EIA Regulations and Planning Practice Guidance with regards to developments that may constitute EIA development (and, therefore, have the potential to result in likely significant effects on their own and in-combination with other schemes). This will ensure the searches are proportionate and remain focused on identifying proposals of a size or scale that have potential to generate likely significant cumulative effects with the Proposed Scheme. Consents older than 5 years for NSIP/PNS/Hybrid Bills /TWAOs and other consenting regimes and 3 years for applications consented under the TCPA 1990 will be excluded from the long-list of cumulative schemes where there is no evidence of these applications being active, for example through subsequent submission of applications to discharge conditions, amendments or reserved matters applications.

¹ Only major and strategically relevant developments will be considered for the long list, as smaller developments are unlikely to result in likely significant cumulative effects. This ensures a proportionate assessment, while avoiding the dilution of key findings through the inclusion of numerous minor schemes.

Table 20-2: Search Criteria for Other Developments for Inclusion on the Long List

Other Development	Size	Distance from Order Limits	Date of Consent
NSIP/PNS and Hybrid Bills	N/A	Within Zol of the Proposed Scheme determined in the ES.	Within last 5 years
Town and Country Planning Act 1990 applications, Transport and Works Act Orders, Electricity Act Consents, Mineral and Waste applications and allocations within Local Plans	- Residential 150+ dwellings; - Development of floorspace 1000sqm+; - Development of sites 1ha+.		Within last 3 years

20.3.8 Further to the Government's recent consultation on HRA Guidance (Ref 20.5), the Applicant will also review proposals for permitted development (where information is available, and in the context of the restriction that permitted development rights cannot be used (save for limited exceptions) for EIA development) and review if any new permits have been applied for that could affect emissions related to cumulative effects.

20.3.9 Each development identified as part of the Stage 1 search will then be reviewed to determine its current status as part of compiling the long list; this will focus on establishing whether a development:

- a. is consented and is in situ/operational;
- b. is consented and under construction;
- c. is consented but has yet to commence construction;
- d. has a planning application refused and is advancing through appeal procedures;
- e. has a validated planning application but is yet to be determined;
- f. is in preparation (i.e. at the pre-planning application submission stage); or
- g. is identified within local authority development planning documents (e.g. land allocated for accommodating a particular type of development in the future).

20.3.10 Information sources that will be interrogated to identify other developments for inclusion in long list will include, but not be limited to, the following:

- a. the Planning Inspectorate's online Programme of Projects (National Infrastructure Planning);
- b. local authority online planning portals and published development planning documents;
- c. the Planning Inspectorate's online Appeals Casework Portal;
- d. government websites; and
- e. project-specific websites.

20.3.11 Stage 1 will utilise the best available data and information available at the time of compiling the long list.

20.3.12 The status of other developments within the long list will then be used to allocate each development into one of the three tiers indicated in **Table 20-3**, prior to advancing to Stage 2. These tiers have been informed by the guidance presented within the PINS Advice (Ref 20.3).

Table 20-3: Categorising Other Development for Inclusion in the Assessment of Inter-project Effects

Tier	Other Proposed or Approved Development
1	Under Construction
	Consented application(s) including NSIP, PNS and where the project is classified as 'major development,' whether under the TCPA1990 (Ref 20.4), Planning Act 2008 (Ref 20.6), or other consent regimes, but not yet implemented.
	Submitted application(s) including NSIP, PNS and where the project is classified as 'major development,' whether under the TCPA1990 (Ref 20.4), Planning Act 2008 (Ref 20.6), or other consent regimes, but not yet determined.
	Refused applications, including NSIP, PNS and where the project is classified as 'major development,' whether under the TCPA1990 (Ref 20.4), Planning Act 2008 (Ref 20.6), or other consent regimes, that are subject to judicial review or appeal procedures and not yet determined.
2	Projects on the Planning Inspectorate's Programme of Projects and/or on the relevant local authority planning portals or other consenting body platforms, where the project is classified as 'major development' and a scoping report has been submitted.
3	Projects on the Planning Inspectorate's Programme of Projects and/or the subject of pre-application discussion with a relevant local authority or other consenting body, where a scoping report has not been submitted.

	Projects registered on the local planning authority's portal classed as 'major development' but do not require EIA.
	Developments identified in other plans and programmes (as appropriate) which set the framework for future consents/approvals, where such development is reasonably likely to come forward.

20.3.13 For developments that fulfil the criteria in **Table 20-2** but are already in existence, i.e. those which are completed and operational, these will be considered to form part of the existing environmental baseline conditions and be excluded from consideration within the inter-project Cumulative Effect Assessment. Similarly, where developments are expected to be completed and operational prior to construction of the Proposed Scheme, these will be considered as part of future environmental baseline conditions.

Stage 2: Establishing a Short List Other Developments

20.3.14 At Stage 2, the long list of developments will be reviewed in order to identify those to be taken forward ('shortlisted') into the inter-project effects assessment.

20.3.15 A minimum level of environmental information is required to undertake the inter-project effects assessment. At Tier 3, developments that are only at the EIA Screening stage are unlikely to be supported by sufficient environmental information to reliably inform the assessment. Similarly, strategic plans or programmes may not be supported by sufficient environmental information. In both cases, these proposals will be excluded from the initial short list, but this will be reviewed prior to the assessment cut-off (see below) if further environmental information has become available.

20.3.16 Criteria applied to inform the shortlisting process will centre on identifying the following relationships between the Proposed Scheme and the other developments identified in the long list:

- a. Temporal scope – whether the other development's construction, operational and/or decommissioning programmes overlap or coincide with those of the Proposed Scheme (and thereby present potential for cumulative effects to occur).
- b. Nature of the development – whether the other development is of a form and scale that it is likely to result in effects that could interact with those of the Proposed Scheme.
- c. Other relevant factors – whether other considerations are relevant to factor into the shortlisting process (e.g. the capacity of the receiving environment to accommodate change from multiple developments). Such factors may be informed by a combination of available information and professional judgement.

20.3.17 Developments within the long list are unlikely to be shortlisted at Stage 2 where:

- a. no potential pathways exist for effects to interact;
- b. no potential for spatial interaction exists between effects;
- c. no potential for temporal interaction exists between effects; and/or
- d. low levels of data, information and/or confidence exist about a development and its likely environmental effects.

Stage 3: Gathering Information

20.3.18 Stage 3 will involve gathering information for the shortlisted developments, the purpose being to establish their likely environmental effects and obtain sufficient information to undertake a detailed assessment at Stage 4.

20.3.19 Information for the shortlisted developments will comprise the following:

- a. design and location information;
- b. programmes for their construction, operation and decommissioning; and
- c. environmental assessments or appraisals that present baseline data and an indication of their likely environmental effects (for example Scoping Reports, Preliminary Environmental Information Reports, Environmental Statements and/or Environmental Assessment Reports and other technical reports submitted to support planning applications).

Stage 4: Assessment

20.3.20 The assessments will be focused and will be reported to a proportionate level of detail. A combination of quantitative and qualitative analysis will be used to identify the extent of cumulative effects; this will be influenced to an extent by the amount of information available.

20.3.21 The work undertaken as part of Stage 4 will accordingly be guided by the following considerations:

- a. understanding the temporal and spatial limits of the effects associated with the Proposed Scheme and the shortlisted developments;
- b. the sensitivity, value or importance of the relevant environmental resources or receptors and their susceptibility to effects;
- c. whether different types of effect would occur and/or interact in a way that alters their significance;
- d. whether effects would be temporary or permanent, what their timescales would be, and whether the frequency of such effects would be intermittent or constant; and

- e. whether effects would require any additional mitigation measures to reduce their significance.

20.3.22 The assessment will be carried out by the competent experts responsible for undertaking and reporting the topic-specific assessments within the EIA.

20.3.23 As certain topic assessments are inherently cumulative in nature (e.g. future baseline traffic modelling accounts for the increase in traffic flows associated with the delivery of consented schemes), care will be taken to avoid any double-counting of effects within the assessment.

20.3.24 Effects rated as being of negligible or neutral significance will not be considered in the inter-project effects assessment; this is because they are not expected to be of an order that their combination with other effects would generate a new or different significant environmental effect.

20.3.25 Any limitations encountered when undertaking the assessment, and any assumptions adopted, will be reported in the ES. Similarly, the degree of certainty and confidence relating to the identified effects will be reported, as necessary.

Updating the Long List and Short List

20.3.26 Regular reviews will be undertaken once the initial long list and short list are developed, the purpose being to ensure the assessment remains current and reflective of the status of the identified developments. The Applicant will consult with the relevant local authorities to establish the long list of other developments and to confirm their planning status.

20.3.27 Searches for other developments will accordingly be re-run at appropriate points in the EIA process to identify:

- a. new developments that may have come forward since compiling the initial list;
- b. changes in the status of developments contained in the initial lists; and
- c. new (or updated) environmental information published and available in the public domain.

Assessment Cut-Off

20.3.28 A cut-off date will be defined as part of the inter-project effects assessment and reported in the ES, this being the point after which no further data gathering, updates or revisions will be made to the information concerning other developments in the ES.

20.3.29 The purpose of applying a cut-off date will be to allow the information to be frozen at a point in the process, thereby allowing the competent experts sufficient time to undertake and report their cumulative effects assessments.

Significance of Inter-project Effects

20.3.30 Significance criteria for determining cumulative effects with other developments will build upon the criteria adopted within topic-specific assessments within the ES, additionally taking account of the:

- a. duration of effect (e.g. temporary or permanent);
- b. extent of effect (i.e. the geographical area);
- c. type of effect (whether additive or synergistic);
- d. frequency of the effect;
- e. value and resilience of the receptor or resource affected; and
- f. likely success of mitigation measures.

20.4 Reporting Intra-project and Inter-project Effects

20.4.1 The intra-project and inter-project effects assessments will be reported in the ES. The ES will:

- a. explain the approach to the assessment and the methodologies and criteria applied (including engagement with relevant stakeholders);
- b. present the outcomes of the assessment; and
- c. identify any additional mitigation measures required to reduce the significance of cumulative effects (over and above topic-specific measures already defined and accounted for), including any monitoring requirements, where relevant.

20.4.2 Where relevant, these assessments will be supported by graphics to illustrate aspects including the spatial relationships between the Proposed Scheme and other developments in the surrounding area.

20.4.3 Appendices supporting the assessment will include the details of the long list of other developments and those shortlisted. These will be presented in either a tabular or matrix style, in line with the approach and presentation formats detailed in 'Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment' (Ref 20.3).

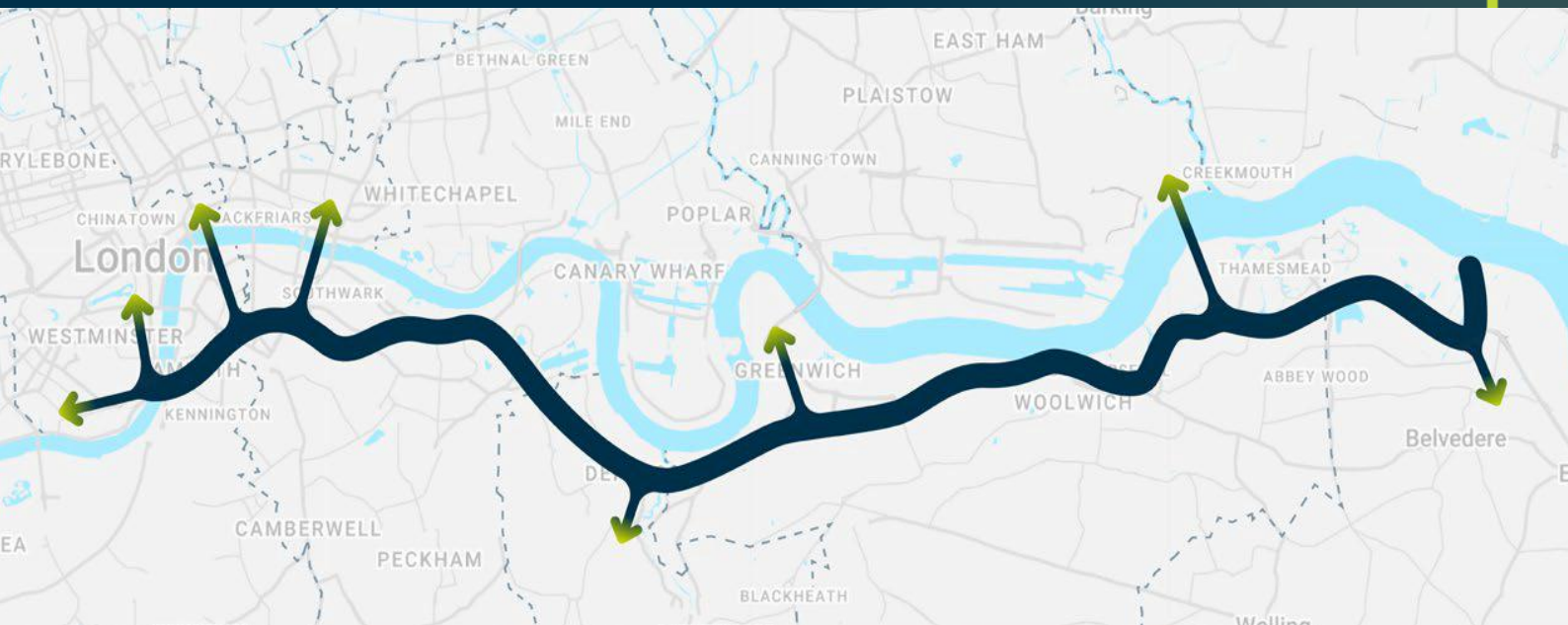
20.5 References

- Ref 20.1 HM Government (2017). The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. Available at: <https://www.legislation.gov.uk/ukxi/2017/572/contents> [Accessed 22 April 2026]
- Ref 20.2 Department for Energy Security and Net Zero (2025). Overarching National Policy Statement for Energy (EN-1). Available at: <https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1-2025/overarching-national-policy-statement-for-energy-en-1-2025-accessible-webpage> [Accessed 22 April 2026]
- Ref 20.3 Planning Inspectorate (2024) Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment. Available at: <https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-cumulative-effects-assessment> [Accessed 22 April 2026]
- Ref 20.4 HM Government (1990). Town and Country Planning Act 1990. Available at: <https://www.legislation.gov.uk/ukpga/1990/8/contents> [Accessed 22 April 2026]
- Ref 20.5 Department for Energy Security and Net Zero (2026). Draft Guidance for competent authorities and applicants about how to carry out a Habitats Regulations Assessment. Available at: https://consult.defra.gov.uk/protected-sites/8c7b61c8/user_uploads/draft-hra-guidance-text.pdf [Accessed 22 June 2026]
- Ref 20.6 HM Government (2008). The Planning Act 2008. Available at: <https://www.legislation.gov.uk/ukpga/2008/29/contents> [Accessed 13 April 2026]

Environmental Impact Assessment Scoping Report

Volume 1: Main Report

Chapter 21: Summary and Conclusions



Cory Environmental Holdings Limited

July 2026

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21. Summary and Conclusions

21.1 Introduction

- 21.1.0 This EIA Scoping Report represents a formal application to the Secretary of State (SoS) for Energy, Security and Net Zero under Regulation 10(1) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the 'EIA Regulations') (Ref 21.1) for a 'Scoping Opinion' as to the information to be provided within the Environmental Statement (ES) that will form part of the Development Consent Order (DCO) Application for the London Strategic Heat Main (SHM).
- 21.1.1 This EIA Scoping Report has identified the impacts of the Proposed Scheme that may give rise to likely significant environmental effects and sets out the assessment approach to be used to undertake the forthcoming EIA.
- 21.1.2 In accordance with Regulation 10 of the EIA Regulations, the consultation bodies prescribed by sub-sections 42(1)(a) and 42(1)(b) of the Planning Act 2008 (Ref 21.2) and listed in Schedule 1 of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (Ref 21.3) must be invited to consider and provide comment on the contents of this EIA Scoping Report. In accordance with Regulation 10(6) of the EIA Regulations, the SoS has a duty to adopt a Scoping Opinion within the statutory 42-day time period.
- 21.1.3 **Table 21-1** presents a summary of which impacts and effects of the Proposed Scheme are to be scoped in or out of the EIA, and the supporting rationale for no likely significant effects. For full details of the technical scope of each chapter, refer to **Volume 1, Chapters 6-19**. In addition, an assessment of cumulative effects of the Proposed Scheme (including intra-and inter-project effects), as described within **Volume 1, Chapter 20: Approach to Cumulative Effects**, will be presented in the ES.
- 21.1.4 This chapter is supported by **Volume 3, Appendix 21-1: Commitments Register**. The Commitments Register has been prepared in accordance with Planning Inspectorate's guidance (Ref 21.4) and summarises where the Applicant has relied on commitments as the basis for scoping matters out or refining the scope of assessment. The Commitments Register will be maintained as a 'live' document that is updated throughout the planning process and will ensure that all commitments are up to date at the time the DCO Application is decided by the SoS.

21.2 Summary of Scoping Conclusions

Table 21-1: Summary of Scoping Conclusions

Topic	Construction	Operation	Decommissioning	Summary of Conclusions
Chapter 6: Air Quality	✓	X	X	The assessment of construction dust, road traffic and plant emissions during the construction phase have been scoped into the EIA. However, all air quality effects associated with the operation phase have been scoped out as emissions would be restricted to those associated with road traffic movements during occasional inspection and maintenance activities. These additional movements will not exceed the air quality assessment screening criteria set out in IAQM guidance (Ref 21.5). In addition, the decommissioning phase, if required, has been scoped out as it would not comprise extensive ground works or vehicle movements of a scale sufficient to trigger a detailed air quality assessment. Any likely significant effects will be avoided through adopting standard good practice dust management measures considering the small scale of potential works required.
Chapter 7: Climate	✓	✓	X	The assessment of greenhouse gas (GHG) emissions from both the construction and operation phases has been scoped into the EIA and will be assessed through a Lifecycle GHG Impact Assessment. Decommissioning works, if required, have been scoped out on the basis that any works would provide a de minimis contribution to emissions. In, addition a Climate Change Resilience (CCR) assessment has been scoped into the EIA. The climate change parameters that have been scoped in for the CCR assessment comprise: extreme weather events; precipitation change; temperature change; sea level rise; and wind conditions. An In-Combination Climate Impacts (ICCI) assessment has been scoped out on the basis that there are not anticipated to be any

Topic	Construction	Operation	Decommissioning	Summary of Conclusions
				significant in-combination climate effects with the Proposed Scheme on the identified receptors.
Chapter 8: Ecology	✓	✓	X	During construction, assessment of likely significant effects to designated sites of international importance has been scoped out due to their distance from the EIA Scoping Boundary¹ and lack of potential impact pathways. Assessment of impacts to all statutory designated sites within 250m of above ground works and 50m of roads affected during construction has been scoped in due to potential for adverse changes to air quality, and habitat degradation, disturbance or displacement. In addition, assessment of likely significant effects on the Inner Thames Marshes Site of Special Scientific Interest (SSSI) has been scoped in due to the potential disturbance of bird populations using the supporting habitat to the SSSI. Assessment of likely significant effects on non-statutory designated sites within 50m of above ground works have also been scoped in due to potential habitat degradation, disturbance or displacement effects during construction. With regards to habitats and species, assessment of likely significant effects in locations with above ground infrastructure has been scoped in during the construction phase due to potential for permanent and temporary habitat loss. Species to be assessed will be confirmed following the completion of extended UK Habitat Classification survey. All effects from below ground features have been scoped out as the London SHM will be at a minimum depth of 5m below ground; this is too deep to result in significant effects on important ecological features above ground.

¹ All references to 'EIA Scoping Boundary' correspond to the area shown in **Volume 2, Figure 1-1**.

Topic	Construction	Operation	Decommissioning	Summary of Conclusions
				During operation, there will only be small scale and short duration works, disturbance to bats is the only potentially significant effect scoped in and is done so on a precautionary basis to consider disturbance/displacement; habitat degradation/alteration as a result of operational lighting. All effects associated with operational maintenance works are scoped out due to their limited nature. All effects during decommissioning, if required, have been scoped out due to their limited nature. Any effects would be mitigated through standard good practice measures.
Chapter 9: Ground Conditions	✓	X	X	Construction phase effects associated with ground conditions have been scoped in to consider the potential for likely significant effects associated with land contamination, damage, disturbance or removal of geological features of interest and ground stability. A Preliminary Risk Assessment for likely significant effects during the construction phase will be produced as part of the DCO Application, which will provide the information for the ES. All effects associated with operation and decommissioning (if required) are scoped out, due to the limited nature of any impacts. Appropriate management practices will be adopted and adhered to through the operation phase. During decommissioning, any effects would be mitigated through standard good practice measures. Given this, no significant effects are considered likely.
Chapter 10: Historic Environment	✓	✓	X	Assessment of likely significant effects to designated and non-designated heritage assets during the construction phase is scoped into the EIA, due to the potential to alter their setting, physical impacts on the historic fabric, and/or removal of archaeological remains. This is with the exception of marine archaeology which has been scoped out.

Topic	Construction	Operation	Decommissioning	Summary of Conclusions
				Effects during the operation phase are scoped in for designated and non-designated heritage assets within the Study Area of any above ground infrastructure at the Riverside Campus and thermal store locations, due to the potential change to the setting. During operation, there is no potential for likely significant effects through a change to the setting from the provision of Maintenance and Access Point (MAP) ground level coverings and kiosks, given the limited scale of these features. All effects associated with the decommissioning phase (if required) are scoped out of the EIA due to their limited nature. Any effects would be mitigated through standard good practice measures.
Chapter 11: Human Health	✓	✓	X	The scoping of likely significant human health effects has been informed by the scoping of effects for other environmental topic areas. The effects scoped into the EIA for further assessment during construction comprise: access to social infrastructure; transport; economic environment; air quality; noise and vibration; townscape and visual amenity; water and land quality; climate; residential properties; and social impacts. Social participation, interaction, and support are scoped into the assessment on a precautionary basis. The effects scoped into the EIA during the operation phase comprise: noise; water quality; and climate. No human health effects associated with the decommissioning phase (if required) are scoped into the EIA, given the limited nature of any works required. Any effects would be mitigated through standard good practice measures.
Chapter 12: Major Accidents &	X	X	X	Volume 3, Appendix 12-1: Scoping of Major Accidents and Disasters Risks provides an overview of the scoping of relevant hazards and threats for the Proposed Scheme. Following a review of the relevant hazards and threats, it is concluded that no potential risk events

Topic	Construction	Operation	Decommissioning	Summary of Conclusions
Disasters (MA&D)				could occur which are not already addressed by other EIA topics or DCO Application documents or are otherwise covered through compliance with existing legislation and design standards. Therefore, the topic of MA&D has been scoped out of the EIA. An updated version of Volume 3, Appendix 12-1: Scoping of Major Accidents and Disasters Risks will be provided within the ES to signpost the relevant topic chapters and supporting assessments which consider risk events which are scoped out of the MA&D assessment, as well as signposting to the relevant mitigation measures that have been included.
Chapter 13: Marine Environment	X	X	X	No further assessment of likely significant effects on the marine environment is required for any stage of the Proposed Scheme. This is because there are no proposed works within the River Thames or its tidal tributaries, including the waterbodies themselves, the riverbed, or their intertidal zone. Any likely significant effects, which could otherwise arise because of nearby works, would be avoided through standard good practice management measures. Any underground tunnelling works would be at least 5m below the riverbed and would not result in significant effects.
Chapter 14: Materials and Waste	✓	X	X	The potential significant materials and waste effects associated with the construction phase that are scoped into the EIA include changes in demand for materials and changes in available landfill void capacity. These effects are scoped in on a precautionary basis. All effects associated with operation and decommissioning (if required) are scoped out of the EIA, due to their limited nature. Good housekeeping and management practices will be adopted and adhered to through the operational phase. During decommissioning, any effects

Topic	Construction	Operation	Decommissioning	Summary of Conclusions
				would be mitigated through standard good practice measures and, given this no significant effects are considered likely.
Chapter 15: Noise & Vibration	✓	✓	X	The noise and vibration assessment will consider noise from construction works and traffic, and vibration effects. For the operation phase, the assessment will only consider noise, as no vibration generating plant would be required. All effects associated with the decommissioning phase (if required) are scoped out of the EIA, given their limited nature. Any effects would be mitigated through standard good practice measures.
Chapter 16: Socio-Economics	✓	X	X	During the construction phase, further assessment of the likely significant socio-economic effects has been scoped in to the EIA for: employment; Gross Value Added (GVA) generation; provision of training; skills development and apprenticeship opportunities; effects to local and private assets; land-use change; changes to Public Rights of Way (PRoW); community facilities and open spaces; the tourism sector and visitor accommodation, and effects on accommodation facilities. Effects on the housing market are scoped out, as the construction workforce of Proposed Scheme is expected to be largely drawn from London, with any non-local workers primarily expected to use visitor accommodation meaning additional demand would be limited, short-term and dispersed. All effects associated with operation and decommissioning (if required) have been scoped out of the EIA, due to their limited nature and the low number of workers required.

Topic	Construction	Operation	Decommissioning	Summary of Conclusions
Chapter 17: Townscape and Visual	✓	✓	X	During the construction phase, assessment of likely significant effects from above ground construction works on the townscape character and visual amenity has been scoped into the EIA. During the operation phase, the only above ground operational infrastructure which could permanently alter either townscape character or views for residential and recreational receptors only will be the Heat Recovery System at the Riverside Campus and any Thermal Store(s) which may require above ground structures. The assessment of MAP ground level coverings and kiosks is scoped out given the limited scale and footprint of the kiosks. Within an existing urban context effects not be considered significant. Consideration of new operational lighting at Riverside Campus is also scoped out, as it would be similar to the existing light levels present across the Site and would not therefore contribute to additional nighttime effects on the surrounding townscape character or views. The assessment of below ground components is scoped out in its entirety, as there is no potential for townscape and visual effects. In addition, the decommissioning phase (if required) is scoped out of the EIA, due to its limited nature. Any effects would be mitigated through standard good practice measures.
Chapter 18: Transport	✓	X	X	All likely significant effects to transport from the construction phase of the Proposed Scheme have been scoped in for further assessment in the EIA. These include: severance; pedestrian, bus, and driver delay; non-motorised users' amenity; fear and intimidation; public transport capacity; road safety; and the transport of large loads. All effects associated with operation and decommissioning (if required) are scoped out of the EIA. Due to their limited nature, these phases of

Topic	Construction	Operation	Decommissioning	Summary of Conclusions
				the Proposed Scheme are unlikely to result in significant traffic movements. During decommissioning, any effects would be mitigated through standard good practice measures.
Chapter 19: Water Environment and Flood Risk	✓	✓	X	Further assessment of the likely significant effects of the construction and operation phases of the Proposed Scheme on the surrounding water environment and flood risk has been scoped into the EIA. This will include assessments of effects to groundwater levels, flow and quality, impacts on hydraulically linked Local Nature Reserves (LNR), surface water quality and hydro-morphology, water resources and supply, and flood risk. Likely significant effects from thermal emissions associated with the underground pipeline network on surface waterbodies and groundwater have been scoped out on the basis that the pipeline network would be sufficiently insulated to minimise heat loss. Furthermore, the pipeline network will be a minimum of 5m below the riverbed of any watercourse, which has been determined as sufficiently deep to not result in any significant effects. Likely significant effects on the River Thames Water Framework Directive (WFD) water body and downstream Thames Lower and Thames Coastal North WFD water bodies have been scoped out of the EIA, given that no works are proposed within these water bodies, and, furthermore, their large scale offers substantial dilution and dispersal potential. There are no Groundwater Dependent Terrestrial Ecosystems (GWDTE) or catchments associated with nutrient neutrality restrictions within the Study Area. Given this, likely significant effects on these receptors have been scoped out.

Topic	Construction	Operation	Decommissioning	Summary of Conclusions
				Effects on foul drainage are also scoped out, as no new sewer connections are proposed. However, this will be reviewed in the ES. Potable water supply for any additional office and maintenance facilities required at the Riverside Campus during the operation phase is scoped out of further assessment, as any connection from the mains supply would be managed by Thames Water through separate consents and agreements. All effects associated with the decommissioning phase (if required) are scoped out of the EIA, due to their limited nature. Any effects would be mitigated through standard good practice measures.

21.3 References

- Ref 21.1 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended). Available at: <https://www.legislation.gov.uk/ukxi/2017/572/contents> [Accessed 22/05/2026].
- Ref 21.2 Planning Act 2008. Available at: <https://www.legislation.gov.uk/ukpga/2008/29/contents> [Accessed 22/05/2026].
- Ref 21.3 The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009. Available at: <https://www.legislation.gov.uk/ukxi/2009/2264/contents/made> [Accessed 22/05/2026].
- Ref 21.4 Planning Inspectorate (2024) Nationally Significant Infrastructure Projects: Commitments Register. Available at: <https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-commitments-register> [Accessed 22/05/2026].
- Ref 21.5 Institute of Air Quality Management (IAQM) (2017). Land-Use Planning & Development Control: Planning for Air Quality. Available at: <https://iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf> [Accessed 07 May 2026]