

Glossary and Abbreviations

Glossary of Terms

Term	Definition
Abbey Shale Formation	Dark grey, greenish or blueish black mudstones with thin beds of limestone and glauconitic sandstone.
Abnormal Indivisible Load	Large or heavy loads that cannot be divided into smaller parts without losing their functionality, requiring special transport arrangements due to their size or weight.
Abnormal/Hazardous Loads	Large, heavy, or dangerous cargo that exceeds standard legal size or weight limits, or contains materials posing safety risks (e.g. chemicals, explosives). These loads require special permits, routeing, and handling to ensure safe transport.
Above Ordnance Datum	An Ordnance Datum is a vertical datum used by an ordnance survey as the basis for deriving altitudes on maps. A spot height may be expressed as Above Ordnance Datum, typically in metres. Usually the mean sea level is used for the datum.
Abstraction	The process of withdrawing water from a water body, either temporarily or permanently.
Access points	A location connecting a construction site(s) to the public highway.
Access routes	Public highways and constructed routes used by construction traffic to access a construction site(s).
Accidents	'Accidents' are an occurrence resulting from uncontrolled developments in the course of construction, operation, and maintenance, and decommissioning (e.g. a major emission, fire or explosion).
Additional mitigation/measures	Further measures required in order to achieve the anticipated outcome. These may be implemented as part of the development consent or through inclusion at ES stage. These are sometimes referred to as 'secondary' mitigation/measures.
Additionality	The concept of assessing the net impact of a project after accounting for leakage, displacement, and multiplier effects.
Advanced Water Treatment Plant	A facility that treats recycled wastewater to a very high standard so it can be transferred or reused safely.
Agricultural Land Classification	The standard method for classifying agricultural land according to its versatility, productivity and workability, based upon inter-related parameters including climate, relief, soil characteristics and drainage. These factors form the basis for classifying agricultural land into one of five grades (with Grade 3

Term	Definition
	land divided into Subgrades 3a and 3b), ranked from excellent (Grade 1) to very poor (Grade 5). Agricultural Land Classification is determined using the Ministry of Agriculture, Fisheries and Food's 'Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land, 1988'.
Air Quality Assessment Level	Air Quality Assessment Level, which may be an air quality objective, European Union limit or target value, or an Environment Agency 'Environmental Assessment Level'.
Air Quality Management Area	A designation for an area that is failing to meet national Air Quality Objective values.
Air Quality Objective value	Concentrations recorded over a given time period, which are considered to be acceptable in terms of what is scientifically known about the effects of each pollutant on health and on the environment.
Algal Bloom	A rapid increase in algae (including blue-green algae, Cyanobacteria) in a water body, often due to excess nutrients, which can reduce oxygen and harm aquatic life.
All Company Working Group	The All Company Working Group is a collaborative forum of UK water companies established to support the development of Strategic Water Resource Options (SRO). It brings together all water companies involved in SRO development to ensure consistency, shared learning, and alignment across the sector.
Alluvium	Alluvium is a general term for clay, silt, sand and gravel. It is the unconsolidated detrital material deposited by a river, stream or other body of running water.
Amenity	The ability of human receptors to achieve enjoyment and/or quality of life.
Ancient Semi-Natural Woodland	Ancient woodland mainly made up of trees and shrubs native to the site, usually arising from natural regeneration.
Ancient Woodland	Area of woodland that has persisted since the year 1600 in England. These areas are generally relatively undisturbed by human development.
Anker Sand and Gravel	Sand and gravel, with possible lenses of silt, clay or peat.
Applicants	The Applicants for the Development Consent Order application of the Proposed Development are Affinity Water and Severn Trent.
Application	The application for a Development Consent Order for the Proposed Development submitted by the Applicants.

Term	Definition
Aquatic Ecology	The study of plants, animals, and ecological processes occurring in freshwater systems such as rivers, canals, and lakes.
Aquifer Designation	The Environment Agency helps to protect groundwater by identifying different types of aquifer designations, both for bedrock and superficial deposits (drift).
Aquifer Designation – Principal Aquifer	Rocks that provide significant quantities of water and can support water supply and/or baseflow to rivers, lakes and wetlands on a strategic scale. They typically have a high intergranular and/or fracture permeability, meaning they usually provide a high level of water storage.
Aquifer Designation – Secondary A Aquifer	Permeable layers that can support local water supplies and may form an important source of base flow to rivers.
Aquifer Designation – Secondary B Aquifer	Mainly lower permeability layers that may store and yield limited amounts of groundwater through characteristics like thin cracks (called fissures) and openings or eroded layers.
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. These have only a minor value.
Aquifer Designation – Unproductive strata	Are largely unable to provide usable water supplies and are unlikely to have surface water and wetland ecosystems dependent on them.
Archaeological interest or potential	There may be archaeological interest or potential where a location indicates it holds, or potentially holds, evidence of past human activity worthy of expert investigation at some point.
Archaeological remains	The material remains of human activity from the earliest persons of human evolution to present. These may be buried traces of human activities, sites visible above ground, or moveable artifacts.
Bank raising	Along sections of the canals, the impermeable lining of the canal banks may need to be raised by 100 mm to 250 mm to accommodate the increase in water level within the canals. This may include the raising of the following features (collectively referred to as 'bank raising'): a. The top of piling or other hard engineered lining that forms the vertical side of the canal; b. The impermeable clay liner for soft banks; c. The re-instatement of canal sides where there has been erosion or failing of hard vertical lining, which forms an effective 'low spot' in that section of canal; or

Term	Definition
	d. Other bespoke works.
Baseline	The situation prevailing before the Proposed Development is commenced (the current baseline), and also to the situation that would prevail in the future without the Proposed Development (the projected future baseline).
Baseline Conditions	A description of an area's existing environment (air, water, land, biodiversity, social aspects) before a proposed project begins, establishing a reference point to measure future changes, distinguish natural fluctuations from project impacts, and identify sensitive receptors, often including both "existing" (current) and "future" (without the project) scenarios for comprehensive assessment.
Baseline studies	Work done to determine and describe the environmental conditions against which any future changes can be measured or predicted and assessed.
Basic Noise Level	The underlying level of ambient noise in an area, representing typical background sound levels without the influence of unusual or intrusive noise sources.
Best and Most Versatile Agricultural Land	Agricultural land of excellent (Grade 1), very good (Grade 2) and good (Subgrade 3 a) agricultural quality as defined under the National Planning Policy Framework.
Biodiversity Net Gain	A way of creating and improving natural habitats to make sure development has a measuredly positive impact ('net gain') on biodiversity, compared to what was there before development.
Biological Water Quality	A measure of water quality based on the types and abundance of living organisms (e.g. macroinvertebrates, fish, macrophytes).
Blisworth Limestone Formation	Pale grey to off-white or yellowish limestones with thin marls and mudstones, fossiliferous, bioturbated peloidal, ooidal and shell-fragmental more-or-less argillaceous packstones and wackestones, subordinate cross-bedded ooidal shell-fragmental grainstones.
Blue Anchor Formation	Typically comprises pale green-grey, dolomitic silty mudstones and siltstones with thin argillaceous or arenaceous laminae and lenses and a few thin, commonly discontinuous beds of hard, dolomitic, pale-cream to buff, porcellanous mudstone and siltstone.
Blue Lias Formation (Rugby Limestone Member)	Alternating grey, argillaceous limestones and mudstones.

Term	Definition
Blue Lias Formation (Saltford Shale Member)	Mostly grey, fissile or blocky, fossiliferous calcareous mudstones; a few limestones.
Bridleway	A path where the public has the right to travel on foot, horseback, or leading a horse. Cycling is also permitted, but motor vehicles are not allowed.
Caldecote Volcanic Formation	Grey, massive, feldspar and quartz crystal-lapilli tuff with subordinate angular to subrounded lithic blocks. Intercalations of grey to green, fine, well-laminated to massive tuffaceous mudstone, siltstone and sandstone.
Canal network	The Coventry, Oxford and Grand Union Canals and connecting canals, including towpath where the Trust is the owner, as shown on the Trust's website here UK Canal Network Map Canal & River Trust
Canal pound	The length of canal between two adjacent locks.
Canalside Design Principles	A checklist to guide the design of canalside buildings and structures, to ensure that new interventions are locally appropriate and connected to their setting.
Capital Carbon	Greenhouse gas emissions from the extraction and processing of raw materials, manufacturing of products, transportation of materials to site, and construction or installation of assets.
Carbon Budget	The legally binding limit on the total amount of greenhouse gases the UK can emit during a five-year period.
Carbon dioxide equivalent (CO ₂ e)	Carbon dioxide equivalent is a standard unit for measuring greenhouse gas emissions. It expresses the impact of different greenhouse gas emissions based on their global warming potential. This allows for all greenhouse gas emissions to be reported using a single, comparable metric.
Catchment	The total land area draining rainfall into a river, canal, reservoir, or other water body.
Characterisation (of Landscape)	The process of identifying areas of similar landscape character, classifying and mapping them and describing their character.
Charmouth Mudstone Formation	Dark grey laminated shales, and dark, pale and bluish grey mudstones.
Chemical Contamination	The presence of pollutants or hazardous substances that can alter the chemical composition of water and harm organisms.
Clay-with-Flints	Reddish brown, stiff, clay containing abundant clasts of orange-brown stained nodular and broken flints, commonly associated with deposits of sand, sandy clay, silt, loam and pebbles that have been mixed with the clay by solution, cryoturbation and solifluction.

Term	Definition
Climate Change Hazard	An adverse weather condition that has the potential to cause negative impacts e.g. fluvial flooding.
Climate Change Impact	A negative consequence that may result from a climate hazard (e.g. inundation of infrastructure).
Climate Change Risk	The rating of a climate change impact by likelihood and consequence.
Climate Parameters	Physical properties measured to determine the characteristics of a climate system.
Compensation	Measures devised to offset for residual adverse effects which cannot be prevented/avoided or further reduced.
Conceptual Site Model	A representation of the characteristics of the site. It shows the possible relationships between contaminants, pathways and receptors.
Connectivity (Ecological/ Hydrological)	The degree to which water bodies, habitats, or species populations are linked or able to interact across the landscape.
Conservation Area	An area of special architectural or historic interest the character or appearance of which it is desirable to preserve or enhance. (Section 69 of the Planning (Listed Buildings and Conservation Areas) Act 1990).
Construction Environmental Management Plan	A site-specific plan developed to ensure that appropriate environmental management practices are followed during the construction phase of a project.
Consultation bodies	Any 'body' specified in the relevant EIA Regulations which the Applicant must consult in respect of an EIA, and which also has a duty to provide information.
Consultation report	A report forming part of the Development Consent Order application, outlining the consultation undertaken on the Proposed Development.
Contaminated Land: Application in Real Environments (CL:AIRE)	Framework for assessing the sustainability of soil and groundwater remediation.
Cornbrash Formation	Limestone, medium- to fine-grained, predominantly bioclastic wackestone and packstone with sporadic peloids.
Cumulative Effects	The combined effects of several development schemes which may, on an individual basis be insignificant but, cumulatively with the Proposed Development, have a new or different likely significant effect.
Day Noise Level (L_d)	The A-weighted equivalent noise level (L_{Aeq}) over 12-hour period during daytime (07:00-19:00).
Decibel	The decibel unit is used to measure the intensity of a sound or the power level of an electrical signal by comparing it with a given level on a logarithmic scale.

Term	Definition
	The decibel is a logarithmic ratio of two values of a variable. Decibels can be used to represent measured values by using a known reference value in the ratio. When using decibels to measure something it is therefore important to specify what variable is actually being measured and what reference level has been used. This is done by adding a reference value statement. Decibels are used in acoustics to measure different things, there is a notation system that identifies what a decibel value is for: - L_{xxx} denotes a level measured in decibels by comparison with a reference value. - D_{xxx} denotes a difference between two levels. - R_{xxx} denotes a rating which is the measure of the acoustic performance of a material or construction based on a difference between two levels. - C_{xxx} denotes a correction or constant.
Demographic	Relating to the structure of populations.
Deployable output	For the Proposed Development, this is 112 million litres. Deployable output is defined in Section 235 of the Planning Act 2008, in relation to a given facility, as the annual average volume of water that can be produced per day from that facility under drought conditions, having regard in particular (where applicable) to (a) the hydrological yield of the facility; (b) the quantity of water licensed for abstraction; (c) the state of the local environment; (d) the properties of any — (i) pumping plant; (ii) well; (iii) aquifer; (iv) raw water main; (v) aqueduct; (vi) transfer main; (vii) output main; (e) any water treatment processes; (f) any requirements relating to water quality.
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	A site legally protected for its conservation value (e.g. Special Areas of Conservation, Special Protection Areas, Ramsar, Site of Special Scientific Interest, National Nature Reserve, Local Nature Reserve).
Designated heritage asset	A World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area designated under the relevant legislation. As defined in the glossary of the National Planning Policy Framework 2024.

Term	Definition
Desk Study	A review of existing information and data relevant to the environmental assessment, typically sourced from literature, maps, and databases.
Development	Carrying out of building, engineering, mining or other operations in, on over or under land, or the making of any material change in the use of any buildings or other land.
Development Consent Order	Development consent is required for projects of national significance. A development consent order is the order which grants development consent when an application is made to the Secretary of State.
Diffusion or Dilution Regime	The mixing and dispersion of substances (e.g., effluent) in a water body, affecting chemical concentrations and water quality.
Direct effects	An effect that is directly attributable to the Proposed Development.
Disaster	'Disasters' are naturally occurring extreme weather events or ground related hazard events (e.g. subsidence, landslide, earthquake).
Dissolved oxygen	The amount of oxygen dissolved in water; essential for aquatic life. Low dissolved oxygen levels can cause stress or death in fish.
Downflow locks	When travelling downhill through locks, the water in the lock will be the same level as the water on the uphill side of the lock when entering, this will then empty to lower the boat and water to the same height as the water on the downhill side of the lock, to allow onwards navigation.
Drinking water	Water that is clean enough for consumption.
Driver Delay	Assessment category identified within the Environmental Assessment of Traffic and Movement in relation to traffic delays to vehicle drivers.
Dry-day reservoir flood extent	Predicted flooding that would occur if a reservoir or dam were to fail when rivers are at normal levels.
Dust Management Plan	A document that describes the site-specific methods to be used to control dust emissions.
Dyrham Formation	Pale to dark grey and greenish grey, silty and sandy mudstone, with interbeds of silt or very fine-grained sand (locally muddy or silty), weathering yellow.
Ecological feature/receptor	A species, habitat, or site that may be affected (positively or negatively) by a proposed development.
Ecological Impact Assessment	A structured process for identifying and evaluating likely significant effects of a project on ecology.
eCountability Ltd.	Birmingham and the Black Country Biodiversity Data Search Service.

Term	Definition
Effect	The consequence of a project's impact on specific environmental or human receptors.
Effect Interactions	The combined ('intra-project') effect derived from combinations of Proposed Development-specific impacts which, when acting together, would 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.
EIA Scoping Boundary	An EIA Scoping Boundary was adopted for the purposes of the EIA Scoping Report to define the potential extent of land assumed to be necessary to construct, operate and maintain the Proposed Development. The extent of works associated with the Proposed Development, as shown by the EIA Scoping Boundary, was subject to change as the Proposed Development design progresses, taking into account the findings of the ongoing environmental and technical assessments and consultation responses. It was however considered to provide a sound basis for the purpose of identifying potential significant environmental effects. The EIA Scoping Boundary has now been superseded by the 'Preliminary Order Limits'.
[EIA] Scoping	The process of identifying the issues to be addressed by an Environmental Impact Assessment. It is a method of ensuring that an Environmental Impact Assessment focuses on the important issues and avoids those that are considered to be less significant.
[EIA] Scoping Opinion	The EIA Scoping Opinion confirms the matters to be included within the scope of the Environmental Impact Assessment, the contents of which has been taken account of in preparing this PEI Report. A request for an EIA Scoping Opinion was submitted to the Planning Inspectorate on behalf of the Applicants on 28 March 2025 in accordance with Regulation 10 of the EIA Regulations. Through the scoping process the views of the statutory consultees and other relevant organisations on the proposed scope of the EIA are sought.
[EIA] Scoping Report	The report supported the formal request for an EIA Scoping Opinion. It outlined the proposed scope and methodology for the EIA, including baseline data collection, assessment parameters, and topic-specific approaches. It also identified potential environmental effects and proposed early mitigation strategies, associated with the anticipated construction and operation phases of the Proposed Development.

Term	Definition
Embedded mitigation	Refers to environmental protection measures (including embedded design) that are integrated directly into the project's design phase, aiming to prevent or significantly reduce negative impacts from the outset, rather than adding them later as separate add-ons (i.e. 'additional mitigation').
Embodied Carbon	Greenhouse gas emissions from raw material extraction and manufacturing of products, as well as the transportation of materials prior to manufacture.
Enhancement	Proposals that seek to improve the environmental resource, over and above its baseline condition.
Entrainment/Impingement	When fish or other organisms are drawn into (entrained) or trapped against (impinged) intake or pumping structures.
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: • 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 Environmental Impact Assessment process to ensure that potential negative impacts are minimised and appropriate mitigation measures are implemented.
Environmental Impact Assessment (EIA)	A process by which information about environmental effects of a proposed development is collected, assessed and used to inform decision making. The Environmental Impact Assessment for the Proposed Development has been undertaken in accordance with The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the 'EIA Regulations').
EIA Regulations	The EIA Regulations relevant to the Proposed Development are The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. The EIA Regulations specify which developments are required to undergo EIA and Proposed Developments relevant to the Nationally Significant Infrastructure

Term	Definition
	Projects and Development Consent Order planning process are listed under either of 'Schedule 1' or 'Schedule 2' of the EIA Regulations.
Environmental Statement	A statement that includes the information that is reasonably required to assess the environmental effects of the development and which the applicant can, having regard in particular to current knowledge and methods of assessment, reasonably be required to compile, but that includes at least the information referred to in the EIA Regulations.
Etruria Formation	Red, purple, brown, ochreous, green, grey and commonly mottled mudstone, with lenticular sandstones and conglomerates referred to as 'espleys'.
Eutrophication	Excessive nutrient enrichment of a water body, potentially leading to algal blooms and oxygen depletion.
Examining Authority	The person(s) appointed by the Secretary of State to assess an application and make a recommendation on the decision to the Secretary of State. On this occasion, the Examining Authority is the Planning Inspectorate.
Façade Noise Level	Noise level measured at one metre from a building. It includes noise reflections from the building and it is typically one to two decibels higher than a free-field measurement.
Fear and intimidation on and by road users	Assessment category identified within the Environmental Assessment of Traffic and Movement in relation to volume of traffic flow, heavy vehicle composition, vehicle speeds, and the proximity of traffic to people.
Felmersham Member	Fluviatile gravel with sand.
Field capacity	The amount of water remaining in soil after excess water has drained from large soil pores by gravity.
Field capacity days	Field capacity days refers to the number of days in the year when the soil is at or above Field Capacity. Field capacity days are important in relation to soil wetness for plant growth and the potential for damage to soils from farm machinery.
Find or Findspot	As defined by the Chartered Institute for Archaeologists, finds are all artefacts, building materials, industrial residues, environmental material, biological remains (including human remains) and decay products. A finds assemblage consists of all the finds recovered and recorded during an archaeological project. A findspot is the location recorded on the historic environment record where the find was discovered.

Term	Definition
Fish Pass/Passage	A structure that allows fish to bypass obstacles such as weirs or dams to continue migration.
Flood Zone 1	Low probability – Land having a less than 0.1% (1 in 1000) annual probability of flooding.
Flood Zone 2	Medium probability – Land having between 0.1% - 1% (1 in 1000 and 1 in 100) annual probability of flooding from rivers or between 0.1% - 0.5% (1 in 1000 and 1 in 200) annual probability of flooding from the sea, or accepted recorded flood outlines.
Flood Zone 3	High probability – Areas shown to be at a 1% (1 in 100) or greater annual probability of flooding from rivers or 0.5% (1 in 200) or greater annual probability of flooding from the sea.
Flow Control Structure	An engineered feature (e.g. weir, sluice) that regulates the flow rate of water leaving or entering a system.
Flow Regime	The characteristic pattern of water flow (volume, timing, variability) in a river or canal over time.
Future Baseline	This is the theoretical situation that would exist in the absence of the Proposed Development. This is based upon extrapolating the current baseline using technical knowledge of likely changes over the identified period (e.g. anticipated habitat change over time, climate change projections, traffic and waste volume growth over time).
Gault Formation	Pale to dark grey or blue-grey clay or mudstone, glauconitic in part, with a sandy base. Discrete bands of phosphatic nodules (commonly preserving fossils), some pyrite and calcareous nodules.
Geophysical surveys	Geophysical surveys are non-invasive techniques that measure physical properties of the Earth's subsurface to detect buried features, structures, or geological changes, using tools like magnetometers , Ground Penetrating Radar (GPR) , and electrical resistivity to map anomalies from archaeology (ditches, foundations) to engineering (voids, contamination, utilities) without disturbing the ground, providing cost-effective data for informed decision-making in construction, heritage, and environmental projects.
Glaciofluvial Deposits	Sand and gravel.
Glaciolacustrine Deposits	Deposits include sands, silts and clays of deltaic origin, shoreface sand and gravel and lake bottom varved, fine-grained (fine sand, silt and clay) sediments.
Gravity bypass	Gravity system for flow diversion around 'downhill' locks/lock flights: as water levels in the canal rise during operation, flow will overflow into a new weir

Term	Definition
	chamber adjacent to the upper lock, and flow via an underground pipe into a second new chamber downstream of the lower lock, from where the flow will weir into the lower pound.
Gross Value Added	A measure of the total value of goods and services produced in an economy. It is the difference between the total value of output and the intermediate costs that went into producing it.
Groundwater Abstraction – Private Abstraction	Abstraction is the removal or diversion of water from the natural water environment by means including pumps, pipes, boreholes and wells.
Groundwater Dependant Terrestrial Ecosystem	A terrestrial ecosystem of importance at Member State level that is directly dependent on the water level in or flow of water from a groundwater body (that is, in or from the saturated zone).
Groundwater Vulnerability	An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one-kilometre square grid.
Groundwater Vulnerability – High Risk	Areas that can easily transmit pollution to groundwater. They are characterised by high-leaching soils and the absence of low-permeability superficial deposits.
Groundwater Vulnerability – Low Risk	Areas that provide the greatest protection to groundwater from pollution. They are likely to be characterised by low-leaching soils and/or the presence of low-permeability superficial deposits.
Groundwater Vulnerability – Medium Risk	Areas that offer some groundwater protection. Intermediate between high and low vulnerability.
Groundwater Vulnerability – Unproductive	Areas comprised of rocks that have negligible significance for water supply or baseflow to rivers, lakes and wetlands. They consist of bedrock or superficial deposits with a low permeability that naturally offer protection to any aquifers that may be present beneath.
Gunthorpe Member	Mudstone, red-brown, with subordinate dolomitic siltstone and fine-grained sandstone, greenish grey, common gypsum veins and nodules.
Habitat Degradation	The process by which habitat quality declines, reducing its ability to support species.
Habitat Fragmentation	Separation of habitats into smaller, isolated patches, reducing connectivity and species movement.
Habitat of Principal Importance	A habitat type listed under the Natural Environment and Rural Communities Act 2006 as being of conservation priority in England.
Halesowen Formation	Grey-green, micaceous sandstone (litharenite), and grey-green mudstone, with thin coals and limestone

Term	Definition
	beds known as the 'Spirobis' limestone, with local intraformational conglomerate, strata may be reddened, locally.
Hands-off Flow	A hands-off flow is a flow rate at which water abstraction must stop or be reduced. It is a threshold that protects low river flows from abstraction and ensures a minimum flow for in-river ecology.
Hartshill Sandstone Formation	Grey to maroon medium-grained sandstone, glauconitic in upper part. Mudstone present only as rare beds 0.10 metres thick, or as drapes to sandstone beds.
Hazard	A hazard is defined as an event that may cause harm. Hazards for the purposes of the Major Accident and Disasters assessment are defined as non-malicious events including natural disasters, industrial accidents and industrial action.
Head	Head is poorly sorted and poorly stratified, angular rock debris and/or clayey hillwash and soil creep, mantling a hillslope and deposited by solifluction and gelifluction processes.
Heavy Duty Vehicle	A commercial motor vehicle with a total gross weight of over 3,500 kilograms.
Heavy Goods Vehicle	Vehicles with 3 axles (articulated) or 4 or more axles (rigid and articulated).
Helsby Sandstone Formation	Fine- to medium-grained, locally micaceous, cross-bedded and flat-bedded sandstones, weathering to sand near surface.
Heritage asset	A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. Heritage assets include designated heritage assets and assets identified by the local planning authority (including local listing).
High Flood Risk (Surface Water)	The area has a chance of flooding greater than 1 in 30 year (>3.33% Annual Exceedance Probability).
High Speed 2 (HS2)	A high-speed rail line under construction between London and Birmingham.
Highly treated recycled water	Water that has been treated in the proposed Advanced Water Treatment Plant and will be piped into the canal at Atherstone.
Historic buildings	Architectural, designed, or other structures with a significant historical value. These may include structures that have no aesthetic appeal or structures not usually thought of as buildings, such as milestones or bridges.
Historic Environment Record	Information services that seek to provide access to

Term	Definition
	comprehensive and dynamic resources relating to the historic environment of a defined geographic area for public benefit and use. As defined in the glossary of the National Planning Policy Framework 2024.
Historic fabric	The physical material belonging to a place that contributes to its architectural, historical or archaeological significance (value).
Historic landscape	The current landscape, whose character is the result of the action and interaction of natural and/or human factors.
Holywell and New Pit Chalk Formation	Principally blocky, white firm to moderately hard chalk with numerous marls or paired marl seams. Flint occurs sporadically in the upper part in the deeper basin areas of the Southern Province.
Hydraulic (and Hydrological) Modelling	Computer-based simulation of water flow and level changes within rivers, canals, or drainage systems.
Hydromorphology	The physical characteristics and processes of water bodies, including shape, flow, sediment transport, and habitat form.
Impact on hazardous/ large loads	Assessment category identified within the Environmental Assessment of Traffic and Movement in relation to transportation of hazardous loads or movement of large (abnormal) loads by road.
Impacts	For the purposes of the EIA and the PEIR, the term 'impacts' is used to describe the changes that arise as a result of the Proposed Development.
In-Combination Climate Change Impact	An environmental impact which is the result of the Proposed Development and climate change impacts.
Index of Multiple Deprivation	The IMD is the official measure of relative deprivation for small areas (neighbourhoods) in England. The IMD are calculated based on the following factors: income deprivation, employment, health and disability, education, skills and training, barriers to housing and services, crime and living environment.
Indicative Non-Work Area	The Indicative Non-Work Area includes areas of land where no works are proposed, however, which are required to operate the Proposed Development. For the avoidance of doubt, it is only Part 2 of the Proposed Development, where a differentiation between Indicative Work Areas and Non-Work Areas is necessary. For all other parts of the Proposed Development, there are no Non-Work Areas.
Indicative Work Area	The Indicative Work Area for Part 2 of the Proposed Development includes areas in which land, or rights over or under land, are anticipated, at this stage, to

Term	Definition
	potentially be required for works associated with the Proposed Development.
Indirect and secondary effects	Indirect and secondary effects are those which are not caused immediately by the Proposed Development but arise as a consequence of it. As such they would normally occur later in time or at locations farther away than direct effects. An example would be where water or gas pipes are damaged as a result of the Proposed Development, and the consequences of that damage is fire or flood risk to other receptors.
Institute of Air Quality Management	A professional body that produces guidance on the assessment of air quality.
Intervisibility	Intervisibility is defined as the ability to see in a direct line of sight from one position on the earth's surface to another, considering the intervening terrain.
Invasive Non-Native Species	Plants or animals that are not native to an area and have the potential to cause harm to the environment, economy, or human health.
Iterative Design Process	The process by which project design is amended and improved by successive stages of refinement which respond to growing understanding of environmental issues.
Kellaways Formation	Mudstone, grey, commonly silici-silty or silici-sandy, with (predominantly in the upper part) beds of generally calcareous siltstone and sandstone.
$L_{A90, T}$	The $L_{A90, T}$ is the A-weighted sound level exceeded for 90% of the specified time period T .
$L_{Aeq, T}$	The $L_{Aeq, T}$ is the equivalent continuous A-weighted sound level measured over a specified time period T , representing the average noise energy during that period.
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 Void Capacity	The remaining capacity of landfill for waste disposal.
Landscape and Visual Impact Assessment	A tool used to identify and assess the likely significance of the effects of change resulting from development both on the landscape as an environmental resource in its own right and on people's views and visual amenity.
Landscape Character Type	Typologies of landscape at local level.
Lewes Nodular Chalk Formation	Composed of hard to very hard nodular chalks and hardgrounds (which resist scratching by fingernail) with interbedded soft to medium hard chalks (some grainy) and marls; some griotte chalks. The softer

Term	Definition
	chalks become more abundant towards the top. Nodular chalks are typically lumpy and iron-stained (usually marking sponges). Brash is rough and flaggy or rubbly and tends to be dirty. First regular seams of nodular flint, some large, commence near the base and continue throughout.
Life Cycle Assessment	A systematic approach to assessing environmental impacts associated with all stages of a product or project's life, from raw material extraction through manufacture, use, and disposal.
Light Duty Vehicle	A commercial motor vehicle with a total gross weight of 3,500 kg or less.
Light Goods Vehicle	A commercial motor vehicle with a total gross weight of 3,500kg or less.
Lilstock Formation	Langport Member (porcellanous limestone below, calcareous mudstone above).
Listed Building	A building or structure of special historical or architectural/artistic interest. Designated by the Department for Digital, Culture, Media and Sport. All buildings built before year 1700 which survive in anything like their original condition are likely to be listed, as are most buildings built between years 1700 and 1850.
Local planning authority	The public authority whose duty it is to carry out specific planning functions for a particular area.
Low Flood Risk (Surface Water)	The area has a chance of flooding of between 1 in 1000 year (0.1% Annual Exceedance Probability) and 1 in 100 year (1% Annual Exceedance Probability).
Lower Layer Super Output Area	LSOAs are a geographic hierarchy designed to improve the reporting of small area statistics in England and Wales.
Lowest Observed Adverse Effect Level	Lowest Observed Adverse Effect Level is the level below which no negative effect on health and quality of life due to noise emissions can be detected.
Macroinvertebrate	Small aquatic animals (e.g. insect larvae, snails) that are sensitive indicators of water quality.
Macrophyte	Large aquatic plants (e.g. reeds, pondweeds) that provide habitat and influence water chemistry.
Made Ground	Made Ground is an area where the pre-existing (natural or artificial) land surface is raised by artificial deposits.
Magnitude of impact	A term that combines judgements about the size and scale of the impact, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short or long term in duration.

Term	Definition
Mancetter Shale Formation	Grey to dark grey, sporadically greenish, micaceous and pyritic mudstone with common current ripple-bedded sandy wisps.
Marlstone Rock Formation	Sandy, shell-fragmental and ooidal ferruginous limestone interbedded with ferruginous calcareous sandstone, and generally subordinate ferruginous mudstone beds.
Medium Flood Risk (Surface Water)	The area has a chance of flooding of between 1 in 100 year (>3.33% Annual Exceedance Probability) and 1 in 30 year (2.22% Annual Exceedance Probability).
Megatonnes of carbon dioxide equivalent (MtCO ₂ e)	Megatonnes of carbon dioxide equivalent, or one million tonnes of CO ₂ e, used to express large-scale or national-level greenhouse gas inventories and carbon budgets.
Mercia Mudstone Group – mudstone, siltstone and sandstone	Dominantly red, less commonly green-grey, mudstones and subordinate siltstones with thick halite-bearing units in some basinal areas.
Merevale Shale Formation – mudstone	Greyish green to dark grey mudstone with pale buff dolomitic bands and lenticles. Becomes darker and more carbonaceous downwards.
Midlands Minor Intrusive Suite	Numerous thin sills of grey green spessarite, lamprophyre and thicker composite sills of hornblende diorite, commonly melanocratic at the base, intruded into strata ranging from Precambrian to Ordovician (Tremadoc) age.
Millstone Grit Group	Broadly upward-coarsening cyclic sequences of sandstone, siltstone and grey mudstone, with subordinate and typically thin coal seams and seatearth (palaeosol) horizons.
Mitigation	The action of reducing the severity and magnitude of change (impact) to the environment. Measures to avoid, reduce, remedy or compensate for significant adverse effects.
Mitigation Planting	Proposed planting to screen or filter views and integrate development.
Modelling (Hydrological/ Water Quality)	The use of mathematical or computer models to predict changes in water movement and quality.
Monks Park Shale Formation	Grey micaceous shaly mudstones in lower part. Black, locally calcareous and phosphatic mudstones in upper part.
Moor Wood Sandstone Formation	Massive to convoluted sandstone and siltstone, with interbedded wavy-bedded micaceous and shaly mudstone.
Moorings (canal)	There are different types of moorings along the canal network:

Term	Definition
	• Long-term: Long term moorings (sometimes called permanent moorings or 'home moorings') are where boats can stay for the duration of any mooring permit granted by the Trust. These may be leisure, residential, or trade moorings. • Residential: Residential moorings are long term moorings which provide a primary or sole place of residence. • Leisure: Leisure moorings are a type of long-term mooring used for leisure use where occupiers can stay on their boat for a short period of time, but it's not their primary or sole place of residence. • Trade: Trade moorings are allocated to specially licenced operators of commercial boats. • Short-stay: Short-stay moorings, also known as visitor moorings, along the towpath are available to all boaters for a period of 14 days (for example 24 hour or 48 hours). • General towpath moorings: Any other side mooring on the towpath side that is not a signed as a permanent mooring or a short stay mooring that is available to all boaters for a period of time of up to 14 days.
National Character Area	National landscape character units used for baseline/effects assessment.
National Landscape	A formal designation for an area of land that is of national importance for its natural beauty. Protection falls under the 1949 National Parks and Access to the Countryside Act and the Countryside Rights of Way Act 2000. The single purpose of National Landscape designation is 'to conserve and enhance the natural beauty of the area'.
National Policy Statement	National Policy Statements are produced by government. They comprise the government's central policy documents for the development of nationally significant infrastructure.
National Road Traffic Forecast	A forecast for traffic demand, congestion and emissions in England and Wales.
National Trip End Model	A forecasting tool used in the UK to predict future travel demand by estimating trip origins and destinations based on factors like population, employment, and land use.
Nationally Significant Infrastructure Projects	Large scale developments such as certain new harbours, power generating stations (including solar farms), highways developments and electricity transmission lines, which require a development consent under procedures governed by the Planning Act 2008 (and amended by the Localism Act 2011).

Term	Definition
Natural Superficial Deposits	Geologically recent deposits that consist of various sediments (clay, sand, gravel etc.) and sit on top of the bedrock.
Nature Improvement Area	Areas where partnerships have been set up to enhance the natural environment.
New Pit Chalk Formation	Principally blocky, white firm to moderately hard chalk with numerous marls or paired marl seams.
Night Noise Level (L_n)	The A-weighted equivalent noise level (L_{Aeq}) over 8-hour period during night-time (23:00-07:00).
NMU amenity	Assessment category identified within the Environmental Assessment of Traffic and Movement in relation to the relative pleasantness of a journey, and is considered to be affected by traffic flow, traffic composition and pavement width/separation from traffic.
No Observed Adverse Effect Level	The level of noise exposure below which no adverse effects on health or quality of life due to noise emissions are observed.
Noise	It has no strict definition and is often used interchangeably with sound however it is usually taken to mean unwanted sound.
Noise and Vibration Sensitive Receptor	Considered to be any location sensitive to both noise and vibration (e.g. residential building, hospital, or school) that may be affected by the proposed development.
Non-designated heritage asset	A building, site, place, or landscape with local historic, architectural, or cultural significance (value) that is not nationally protected but still warrants consideration in planning decisions, often listed by local authorities on the historic environment record.
Non-motorised users	A person traveling without a motor vehicle, typically on foot, by bicycle, or using mobility aids such as wheelchairs.
Non-Road Mobile Machinery	Any mobile machine, transportable equipment or vehicle which is not intended to carry passengers or goods but included machinery installed on the chassis intended for the transport of passengers or goods on roads and has a combustion engine. Examples include bulldozers, construction machinery and forklifts.
Non-Statutory	Guidance, policies, or frameworks not legally mandated by legislation.
Northampton Sand Formation	Sandy, berthierine-ooidal and sideritic ironstone, greenish grey where fresh, weathering to brown limonitic sandstone, typically displaying a box-stone structure.

Term	Definition
Nutrient Enrichment	Increase in nutrients (especially nitrogen and phosphorus) in a water body, often from effluent or agriculture, leading to algal growth.
Odour Management Plan	A live working document that formalises and describes how odour issues will be managed on site.
Operational Carbon	Greenhouse gas emissions arising from the day-to-day running and maintenance of the completed infrastructure during its operational phase, including energy consumption, process emissions, and maintenance activities.
Order Limits	The limits shown on the land plans and works plans within which the authorised development may be carried out and land acquired or used.
Outwoods Shale Formation	Interbedded grey burrowed, and dark-grey or greenish grey pyritic, mudstone. Beds of siltstone and sandstone increase in upper part.
Oxford Clay Formation	Silicate-mudstone, grey, generally smooth to slightly silty, with sporadic beds of argillaceous limestone nodules.
Pathway for Contamination	A route by which a receptor is or could be affected by a contaminant: examples include ingestion of contaminated soil and leaching of contaminants from soil into watercourses.
Peak Particle Velocity	The greatest instantaneous particle velocity during a given time interval. If measurements are made in 3-axis then the resultant PPV is: $PPV = \sqrt{(PPV_{X \text{ axis}})^2 + (PPV_{Y \text{ axis}})^2 + (PPV_{Z \text{ axis}})^2}$
Peat	Peat is a partially decomposed mass of semi-carbonised vegetation which has grown under waterlogged, anaerobic conditions, usually in bogs or swamps.
Pedestrian Delay	The delay that other modes of NMUs may experience when using footways, PRoW and crossing roads.
Penarth Group	Grey to black mudstones with subordinate limestones and sandstones; predominantly marine in origin.
Pennine Lower Coal Measures Formation	Interbedded grey mudstone, siltstone and pale grey sandstone, commonly with mudstones containing marine fossils in the lower part, and more numerous and thicker coal seams in the upper part.
Pennine Middle Coal Measures Formation	Interbedded grey mudstone, siltstone, pale grey sandstone and commonly coal seams, with a bed of mudstone containing marine fossils at the base, and several such marine fossil-bearing mudstones in the upper half of the unit.
Permanent effects	These are effects that will remain even when the Project is complete, although these effects may be

Term	Definition
	caused by environmental changes that are permanent or temporary.
Permissive Path	A route on private land that a landowner allows the public to use.
Photomontage	A visualisation which superimposes an image of a proposed development upon a photograph or series of photographs.
Plantation on Ancient Woodland Sites	Ancient woodland sites that have been replanted with conifer or broadleaved trees that retain ancient woodland features, such as undisturbed soil, ground flora and fungi.
Potamodromous Species	Freshwater fish that migrate within rivers or lakes (do not enter the sea), e.g., barbel, dace.
Preliminary Environmental Information	Preliminary Environmental Information is defined in the EIA Regulations as: <i>“information referred to in Regulation 14(2) which – (a) has been compiled by the applicant; and (b) is reasonably required for the consultation bodies to develop an informed view of the likely significant environmental effects of the development (and of any associated development).”</i>
Preliminary Environmental Information Report	The report (this document) that contains the Preliminary Environmental Information for the Proposed Development.
Preliminary Order Limits	Defines the preliminary outer boundary within which it is currently envisaged all works, land acquisition and associated activities for the Proposed Development will take place. The Preliminary Order Limits shown in the PEI Report are therefore draft and may be further subject to change due to ongoing design development, surveys, stakeholder engagement and feedback from the Statutory Consultation. Updated and final Order Limits will be published as part of the Development Consent Order application.
Preliminary Risk Assessment	A report that presents a summary of readily-available information on the geotechnical and/or geo-environmental characteristics of the site and provides a qualitative assessment of geo-environmental and/or geotechnical risks in relation to the proposed development.
Project of national significance	In England and Wales, a Nationally Significant Infrastructure Project is a major infrastructure development that bypasses normal local planning requirements – these projects are managed by the Planning Inspectorate. A Section 35 direction from the Secretary of State for Environment, Food & Rural Affairs deemed the Grand Union Canal Transfer is to

Term	Definition
	be treated as development for which development consent is required.
Proposed Development	The Grand Union Canal Transfer project, as described in Chapter 3: The Proposed Development in PEI Report Volume 2 .
Proximity Principle	The concept that waste should be managed as close as practicable to its source. This means having an integrated and adequate network of waste management facilities to ensure that waste can be disposed of or recovered at the nearest appropriate installation.
Public Rights of Way	Designated routes under the Countryside and Rights of Way Act 2000, which the public can use at any time.
Pumped bypass	Pumping system for flow diversion around 'uphill' locks: as water levels in the canal rise during operation, flow will overflow into a new weir chamber adjacent to the bottom lock, and feed into a new pumping station wet well. Flows will be pumped via a new below ground pipeline past the lock flight into a second new chamber upstream of the existing top lock, from where the flow will weir into the pound at the top of the lock flight.
Purley Shale Formation	Blocky to shaly red or maroon mudstone and siltstone at the base; green and grey fissile mudstones in the middle and red and green interbedded shaly mudstones at the top.
Ramsar Site	A wetland of international importance designated under the Ramsar Convention (1971).
Raw water	Water that has not yet been treated to make it safe for drinking.
Reach (River Reach)	A defined stretch or segment of a river or canal between two points.
Receptors	Any component of the natural environment, like plants, animals, habitats, or ecosystems, that could be potentially affected by a pollutant or environmental stressor, essentially acting as the "target" that experiences the impact of a contaminant released into the environment.
Recycled water	The treated water from Minworth Wastewater Recycling Centre which would usually be discharged into the adjacent River Tame.
Registered Battlefield	Register of nationally significant military engagements maintained and designated by Historic England.
Registered Park and Garden	Register of historic parks, gardens, grounds, and planned open spaces maintained and designated by Historic England.

Term	Definition
Removals	Processes that extract greenhouse gases from the atmosphere and store them in natural or engineered sinks, such as vegetation, soils, or carbon capture and storage systems.
Representative Concentration Pathway	As defined by the Intergovernmental Panel on Climate Change, a Representative Concentration Pathway refers to the emissions scenario experienced into the future. This is measured in watts per square metre and denotes the amount of additional energy remaining in the Earth's atmosphere.
Representative Viewpoint	Selected location illustrating typical views and receptor experiences.
Residual effects	Arise as a result of the Proposed Development in combination with other large-scale developments or projects or effects that occur as a result of two or more impacts acting together (i.e. combined, to result in a new or changed effects on a single receptor).
Riparian	Pertaining to or situated on the banks of a canal, river or watercourse.
Riparian Zone/Habitat	The land immediately alongside a river, canal, or reservoir that influences and supports aquatic ecosystems.
River Terrace Deposits	Sand and gravel, locally with lenses of silt, clay or peat.
Rochdale Envelope	The 'Rochdale Envelope' or 'Design Envelope' approach is employed where the nature of a proposed development means that some details of a development have not been confirmed (for instance, the precise dimensions of structures) when an application is submitted, and flexibility within clearly defined parameters is therefore sought to address uncertainty.
Rutland Formation	Interpreted as a succession of up to seven shallowing upward, essentially delta-type rhythms, comprising ideally of a grey marine mudstone passing up into non-marine mudstone and siltstone, with a greenish-grey rootlet bed at the top.
Rutland Formation (Stamford Member)	A pale greenish grey to yellowish and white, generally massive, fine-grained, generally friable, quartzose, unfossiliferous sandstone or siltstone.
Rutland Formation (Wellingborough Limestone Member)	A massive argillaceous, sandy, shelly and shell-detrital limestone associated with rubbly oyster-rich limestone and marl and mudstones, passing northwards into sandstone.
Salop Formation	Red and red-brown mudstone, and red-brown (mostly sublitharenite) sandstone containing beds of pebbly

Term	Definition
	sandstone and conglomerate itself containing Carboniferous limestone and chert clasts.
Scheduled Monuments	Nationally important archaeological sites. They can be above or below ground and can consist of remains as well as structures that are still in use. Monuments are added to the Schedule if the Secretary of State considers that they are of national importance and that the protection which comes with scheduling would assist the monument's conservation.
Scheme	Term to refer to the Proposed Development in community-focused documents.
Seaford Chalk Formation	Firm white chalk with conspicuous semi-continuous nodular and tabular flint seams. Hardgrounds and thin marls are known from the lowest beds. Some flint nodules are large to very large.
Secretary of State	A senior government official responsible for various departments. In this context, it refers to the official responsible for determining whether to grant a Development Consent Order. The relevant Secretary of State for the Proposed Development is the Secretary of State for Environment, Food and Rural Affairs.
Sediment Resuspension	The disturbance of particles on the bed of a river or canal, which can release pollutants or increase turbidity.
Sensitive Receptor	A sensitive receptor refers to human beings or aspects of the environment that could be adversely affected by the Proposed Development. These receptors are typically vulnerable to changes or impacts on the baseline environment.
Sensitivity	A term applied to specific receptors, combining judgements of the susceptibility of the receptors to the specific type of change or development proposed and the value related to that receptor.
Setting	The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate an asset, or may be neutral.
Severance	The separation of people from places and other people and places or impede pedestrian access to essential facilities.
Severance of Communities	Assessment category identified within the Environmental Assessment of Traffic and Movement in relation to Severance which is the perceived

Term	Definition
	division that can occur within a community when it becomes separated by major transport infrastructure.
Sidmouth Mudstone Formation	Dominantly red-brown mudstone and siltstone with common grey-green reduction patches and spots.
Significance	A measure of the importance or gravity of the environmental effect, defined by significance criteria specific to the environmental topic.
Significant Observed Adverse Effect Level	Significant Observed Adverse Effect Level is the level above which significant negative effect on health and quality of life due to noise emissions occurs.
Siltation	The accumulation of fine sediments in a water body, often reducing depth and water quality.
Site of Special Scientific Interest	A Site of Special Scientific Interest (SSSI) is a conservation designation designed to protect areas of land or water that are considered particularly valuable for their wildlife, geology or landform features.
Smelt	A small migratory fish species (<i>Osmerus eperlanus</i>) found in estuaries and rivers, sensitive to oxygen and temperature.
Social value	Broader benefits the project may bring to the communities near to and around the scheme. This includes social, environmental and economic benefits beyond those delivered directly by the scheme.
Soil associations	Groupings of related soil series, where soil series are the lowest category in the soil classification system and are precisely defined based upon particle-size distribution, parent material (substrate) type, colour and mineralogical characteristics.
Soil Management Plan	A site-specific plan developed to ensure appropriate management practices are followed during excavation, storage, and restoration of soils.
Sound	Any vibration that propagates through air or another medium and can be heard by a human or animal.
Source of Potential Contamination	A contaminant or pollutant that is in, on, or under the land and that has the potential to cause harm or pollution.
Source Protection Zone – Outer zone – SPZ2	This is defined as: “A groundwater SPZ2 is the area around an abstraction point for domestic supply or for food production purposes that meets one of the following definitions. 1. The area within 250 metres of the abstraction point if the maximum allowable annual volume, divided by 365, is less than 2,000 cubic metres per day. This is when this is authorised by either: an abstraction licence under section 24 of the Water Resources Act 1991

Term	Definition
	the right to abstract small quantities under section 27 of the Water Resources Act 1991 2. The area within 500 metres of the abstraction point if the maximum allowable annual volume, divided by 365, is equal to or greater than 2,000 cubic metres per day. This is when this is authorised by an abstraction licence under section 24 of the Water Resources Act 1991 3. The area where it takes groundwater that is used to supply water for domestic or food production purposes up to 400 days to travel to the groundwater abstraction point. For any given abstraction point, whichever area is largest applies.”
Source Protection Zone	Source Protection Zones 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. Source Protection Zones 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 (SPZ) – Inner zone – SPZ1	This is defined as: “A groundwater SPZ1 is the area immediately around an abstraction point for domestic supply or for food production purposes. Groundwater in a SPZ1 is most vulnerable to pollution given the close proximity of the abstraction point and the water’s intended use for human consumption. It is defined within the Environmental Permitting (England and Wales) Regulations 2016 as one of the following. 1. The area within 50 metres of a point where the groundwater is abstracted for domestic supply or food production purposes. 2. The area where it takes groundwater that is intended to be used to supply water for domestic or food production purposes up to 50 days to travel to the groundwater abstraction point. For any given abstraction point, whichever area is largest applies.”
Statutory	Legislation required or established by law.
Stoke Goldington Member	Fluviatile gravel with sand.
Strategic Resource Option	Strategic Water Resource Options are a set of options developed by water companies to address the challenges of future water resource management. These options are designed to ensure a secure and sustainable water supply, considering factors such as climate change, a growing population, and environmental protection.

Term	Definition
Study area	The spatial area within which environmental effects are assessed (i.e. extending a distance from the footprint of the Proposed Development in which environmental effects have the potential to occur). The study area may be different for the different parts of the Proposed Development, depending on the extent of works proposed within the specific part.
Subsoil	Layer (or horizon) of soil immediately beneath the surface of the topsoil. Generally, less structurally developed and less nutrient rich than the topsoil. .
Suitable Alternative Natural Green Space	Suitable Alternative Natural Greenspace (SANG) is an area of land designated for recreational purposes that is designed to offset disturbance and pressures on sites that are protected for their habitat value under The Conservation of Habitats and Species Regulations 2017 (as amended).
Superficial geology	Uncemented sediments, such as alluvium, immediately beneath the soil and above the bedrock.
Temporary effects	These are effects that are related to environmental changes associated with a particular activity and that will cease when that activity finishes.
Temporary Traffic Regulation Order	A legal order that temporarily changes traffic arrangements—such as road closures, speed limits, or parking restrictions—to allow works, events, or emergencies to take place safely.
The Trust	The Canal & River Trust. A project partner and charity, who are the owner and navigation authority of the canals in England and Wales.
Threat	Threats for the purposes of the MA&D assessment are defined as malicious attacks.
Tonnes of carbon dioxide equivalent (tCO ₂ e)	Tonnes of carbon dioxide equivalent – the standard unit of measurement for GHG emissions.
Topsoil	Natural topsoil or manufactured topsoil, varies in depth with soil type but usually covering the top 20-30 centimetres in which plants can grow healthily.
Transfer Lock	Transfer locks are designed to minimise the amount of bank raising required by breaking up the hydraulic gradient across a long pound during high flows. They are designed to provide a small change in water levels from the upstream to the downstream side to avoid water breaching the canal banks, and will only come into operation in flows >approximately 80Ml/d.
Transport Assessment	A study that examines how a proposed development will affect local transport networks, including traffic, accessibility, and public transport, to ensure sustainable planning.

Term	Definition
Travel to Work Area	The principal labour market catchment area, defined by a 60-minute drive time in the socio-economic assessment.
Trenchless Techniques	Trenchless pipeline techniques are "no-dig" methods for installing, repairing, or renewing underground pipes. Example techniques include: Horizontal Directional Drilling, Pipe Bursting, Pipe Jacking, and Cured-In-Place Pipe lining to avoid open trenches. These methods typically work from small pits, which do have to be excavated, but the pipe between them is tunnelled under the ground, which means they are less disruptive than traditional open-cut excavation and provide an alternative engineering option where existing features (e.g. rivers, roads) are a major constraint.
Trial Trenching surveys	Trial trenching surveys are a common archaeological method using machine-dug trenches to quickly assess a development site for buried remains, revealing potential structures, features, or artifacts by exposing layers of soil and deposits, guiding further mitigation if significant finds are made, and often required by planning authorities before development.
Tufa	Tufa is a sedimentary rock composed of calcium carbonate or silica, formed by evaporation as a thin, surficial, soft, spongy, semifriable encrustation around the mouth of springs, seeps or along streams carrying calcium carbonate in solution, and exceptionally as a thick deposit along lake shores.
Turbidity	The cloudiness of water caused by suspended particles, affecting light penetration and plant growth.
Uphill locks	When travelling uphill through locks, the lock will be almost empty when entering, this will then fill up with water to elevate the boat and water to the same height as the water on the uphill side of the lock, to allow onwards navigation.
Upper Greensand Formation	Sand and sandstone, fine-grained, silt, glauconitic, shelly.
Vibration Dose Value	Cumulative measurement of the vibration value recorded over a 16-hour (daytime) or 8-hour (night-time) period. $VDV = \left(\int_0^T a^4(t) dt \right)^{1/4}$ This parameter is used to assess the acceptability of building vibration with respect to human response, following BS 6472 guidance.

Term	Definition
Visualisation	A computer simulation, photomontage or other technique illustrating the predicted appearance of a development.
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 the Major Accidents and Disasters assessment, the term 'vulnerability' is used to describe the ability of the Project to plan, control, resist and recover from a Major Accidents and Disasters event in a timely manner.
Waste Hierarchy	The aim to prioritise waste prevention, followed by preparing for reuse, recycling, recovery (including incineration with energy recovery), and lastly disposal to landfill.
Water Dependent Ecological Feature	A species, habitat, or site that is directly dependent on water for its survival and function, and may be affected (positively or negatively) by a proposed development.
Water Framework Directive	UK legislation (originally EU) setting objectives for achieving good ecological and chemical status in surface and groundwater bodies.
Water Quality Parameters	Quantifiable chemical or physical measures of water health, such as pH, dissolved oxygen, nutrients, and temperature.
Water Treatment Works	A facility that treats raw water to make it safe for human consumption.
Watercourse	A channel through which water flows, such as rivers, canals, or streams.
West Melbury Marly Chalk Formation	Buff, grey and off-white, soft, marly chalk and hard grey limestone arranged in couplets.
West Walton Formation	Calcareous mudstone, silty mudstone and siltstone, with subordinate fine-grained sandstones and argillaceous limestone (cementstone) or siltstone nodules.
Wet-day reservoir flood extent	Predicted flooding that would occur if a reservoir breach occurs when rivers are already overflowing.
Wetness Class	A classification of soil wetness according to depth and duration of waterlogging in the soil from Class I (least wet) to Class VI (wettest).
Whitby Mudstone	Medium and dark grey fossiliferous mudstone and siltstone, with thin siltstone or silty mudstone beds and rare fine-grained calcareous sandstone beds.
Woburn Sands Formation	Sandstone (or loose sand). Fine- to coarse-grained rounded marine quartz sand, glauconitic in part.

Term	Definition
	Commonly silty with few clay wisps or seams. Locally clean silver sands. Locally cemented to iron pan or gritty carstone. Cross-bedded. Some pebbles and phosphatic nodules to base. Typically, grey or greenish grey weathering to ochreous yellow-brown. Minor lignite and pyrite. Local developments of fuller's earth. Commonly barren but nodule layers to base fossiliferous as at Upware and Brickhill.
Wolston Formation (Oadby Member)	Diamicton, grey, weathering brown, characterised by Cretaceous and Jurassic rock fragments; subordinate lenses of sand and gravel, clay and silt. Clay, brown to grey, and silty clay, with chalk and flint fragments.
Wolston Formation (Thrussington Member)	Diamicton, brown to reddish-brown with stones and matrix derived primarily from Upper Carboniferous and Triassic rocks; subordinate sand, gravel and stoneless clay and silt. Red pebbly clay and silty clay with rock fragments.
Wolston Sand and Gravel	Comprises the pre-Devensian glacial succession of much of the English Midlands.
World Heritage Site	A natural or man-made site, area, or structure recognised as being of outstanding international importance and therefore as deserving special protection. Sites are nominated to and designated by the World Heritage Convention.
Written Scheme of Investigation	This is a technical document which sets out the detailed methodology and scope of works governing archaeological fieldwork programmes.
Zig Zag Chalk Formation	Mostly firm, pale grey to off-white blocky chalk with a lower part characterised by rhythmic alternations of marls and marly chalks with firm white chalk. Thin gritty, silty chalk beds act as markers in the sequence.
Zone of Influence	The spatial area over which a project's direct and indirect effects may occur.
Zone of Theoretical Visibility	The likely (or theoretical) extent of visibility of a development, usually shown on a map.

Acronyms and Abbreviations

Term	Definition
µg/m ³	micrograms per cubic metre
µm	micrometres
AA EQS	Annual Average Environmental Quality Standards
AADT	Annual Average Daily Traffic
AAWT	Annual Average Weekday Traffic
AEP	Annual Exceedance Probability
AfW	Affinity Water
AGLV	Area of Great Landscape Value
AIL	Abnormal Indivisible Loads
ALARP	As Low As Reasonably Practicable
ALC	Agricultural Land Classification
AMS	Archaeological Mitigation Strategy
ANC	Acid Neutralising Capacity
AOD	Above Ordnance Datum
AQAL	Air Quality Assessment Level
AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQS	Air Quality Strategy
ARN	Affected Road Network
AWS	Anglian Water Services
AWTP	Advanced Water Treatment Plant
BAC	Biological Activated Carbon
BAP	Biodiversity Action Plan
BAT	Best Available Techniques
BAU	Business as Usual
BDP	Birmingham Development Plan
BGS	British Geological Society
BHLC	Buckinghamshire Historic Landscape Character
BMV	Best and Most Versatile (agricultural land)
BNG	Biodiversity Net Gain
BNL	Basic Noise Level
BNS	Biological Notification Site
BOD	Biological Oxygen Demand
BPC	Braunston Parish Council
BPT	Break Pressure Tank
BRES	Business Register and Employment Survey
BRMC	Bedfordshire and Luton Biodiversity Recording

Term	Definition
	and Monitoring Centre
BS	British Standard
BSi	British Standard Institute
BSSS	British Society of Soil Science
BTO	British Trust of Ornithology
CAMS	Catchment Abstraction Management Strategy
CAR-SOIL	Control of Asbestos Regulations
CBC	Central Bedfordshire Council
CBDP	Carbon Budget Delivery Plan
CBLCA	Central Bedfordshire Landscape Character Assessment
CCB	Chiltern Conservation Board
CCC	Climate Change Committee
CCRA	Climate Change Risk Assessment
CDM	Construction Design and Management
CEMP	Construction Environmental Management Plan
CESSM4	Civil Engineering Standard Method of Measurement, Fourth Edition
CFMP	Catchment Flood Management Plan
CH ₄	Methane
CIEEM	Chartered Institute of Ecology and Environmental Management
CIEH	Chartered Institute of Environmental Health
ClfA	Chartered Institute for Archaeologists
CIRIA	Construction Industry Research and Information Association
CL:AIRE	Contaminated Land: Applications in Real Environments
cm	centimetres
CMS	Credible Maximum Scenario
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
CoCP	Code of Construction Practice
COMAH	Control of Major Accident and Hazards
CoPA	Control of Pollution Act 1947
COSHH	Control of Substances Hazardous to Health
CPET	Chironomid Pupal Exuviae Technique
CRoW	Countryside and Rights of Way Act 2000
CRTN	Calculation of Road Traffic Noise
CSM	Conceptual Site Model
CSZ	Core Sustenance Zone
CTMP	Construction Traffic Management Plan
CWAH	Canal Work Area Heritage

Term	Definition
CWS	County Wildlife Site
dB	Decibel
DBA	Desk-Based Assessment
DCO	Development Consent Order
Defra	Department for Environment, Food & Rural Affairs
DESNZ	Department for Energy Security and Net Zero
DfT	Department for Transport
DLUHC	Department for Levelling Up, Housing and Communities
DM	Development Management
DMOY	Do-Minimum Opening Year
DMP	Dust Management Plan
DMRB	Design Manual for Roads and Bridges
DO	Dissolved Oxygen
DoWCoP	Definition of Waste Code of Practice
DPD	Development Plan Document
DWPA	Drinking Water Protected Areas
DSOY	Do-Something Opening Year
DWSZ	Drinking Water Safeguard Zones
EA	Environmental Agency
EC	European Commission
EcIA	Ecological Impact Assessment
eDNA	Environmental DNA
EIA	Environmental Impact Assessment
ELF	Extreme Low Flow
EPSML	European Protected Species Mitigation Licence
EQS	Environmental Quality Standards
EQSD	Environmental Quality Standards Directive
ES	Environmental Statement
EU	European Union
FAAG	Fisheries and Angling Advisory Group
FCD	Field capacity days
FFR	Fish Recovery and Return
FIS	Fundamental Intermittent Standards
FMfP	Flood Map for Planning
FRA	Flood Risk Assessment
FST	Final Settlement Tanks
FTE	Full-Time Equivalent
FWRA	Foundation Works Risk Assessment
GAC	Granular Activated Carbon

Term	Definition
GCN	Great Crested Newt
GCR	Geological Conservation Review
GDR	Geotechnical Design Report
GHG	Greenhouse Gas
GI	Ground Investigations
GIR	Geotechnical Investigation Report
GIS	Geographic Information System
GLTA	Ground-Level Tree Assessment (bats)
GLVIA3	Guidelines for Landscape and Visual Impact Assessment, 3rd Edition
GPP	Guidance for Pollution Prevention
GRP	Glass-Reinforced Plastic
GUC	Grand Union Canal
GVA	Gross Value Added
GWDTE	Ground Water Dependent Terrestrial Ecosystem
ha	hectares
HCA	Homes and Communities Agency
HDV	Heavy Duty Vehicle
HEP	Hydroelectric Power
HER	Historic Environment Record
HERC	Hertfordshire Environmental Records Centre
Herptile	Amphibian and reptile
HFCs	Hydrofluorocarbons
HGV	Heavy Goods Vehicle
HLC	Historic Landscape Character
HLCA	Historic Landscape Character Areas
HMP	Heritage Management Plan
HoF	Hands off Flow
HPI	Habitats of Principal Importance
HRA	Habitats Regulations Assessment
HS2	High Speed 2
HSI	Habitat Suitability Index
IAQM	Institute of Air Quality Management
IAS	Invasive Alien Species
ICCI	In-Combination Climate Change Impact
ICE	Inventory of Carbon and Energy
IDB	International Drainage Board
IEF	Important Ecological Features
IEMA	Institute of Environmental Management and Assessment

Term	Definition
IHBC	Institute of Historic Building Conservation
IMD	Index of Multiple Deprivation
INNAS	Invasive Non-Native Animal Species
INNPS	Invasive Non-Native Plant Species
INNS	Invasive Non-Native Species
IoQ	Institute of Quarrying
IPCC	Intergovernmental Panel on Climate Change
ISEP	Institute of Sustainability and Environmental Professionals
IWA	Indicative Working Area (temporary and permanent works)
JNCC	Joint Nature Conservation Committee
l	Litres
km	kilometres
LAQM	Local Air Quality Management
LBAP	Local Biodiversity Action Plan
LCA (Carbon)	Life Cycle Assessment
LCA (Landscape)	Landscape Character Area
LCCG	Low Carbon Concrete Group
LCRM	Land Contamination: Risk Management
LCT	Landscape Character Type
LDV	Light Duty Vehicle
LEAFPACS	LEAF ('aquatic plants') Prediction and Classification System
LEMP	Landscape and Ecological Management Plan
LERC	Local Environmental Records Centre
LFRMS	Local Flood Risk Management Strategies
LGS	Local Geological Sites
LiDAR	Light Detection and Ranging
LLFA	Lead Local Flood Authority
LNR	Local Nature Reserve
LOAEL	Lowest Observed Adverse Effect Level
LOD	Loss on Drying
LPA	Local Planning Authority
LRERC	Leicestershire and Rutland Environmental Record Centre
LRN	Local Road Network
LSE	Likely Significant Effect
LSOA	Lower Layer Super Output Area
LWS	Local Wildlife Site
m	meters
m ²	square metres

Term	Definition
m ³	cubic metres
MA&D	Major Accident and Disaster
MAC EQS	Maximum Acceptable Concentration Environmental Quality Standards
MAFF	Ministry of Agriculture Fisheries & Food
MAGIC	Multi-Agency Geographic Information for the Countryside
MBBR	Moving Bed Biofilm Reactor
MCA	Mineral Consultation Areas
MHCLG	Ministry of Housing, Communities & Local Government
MKHLC	Milton Keynes Historic Landscape Character
MMP	Materials Management Plan
M/ld	Megalitres Per Day
MPA	Minerals Planning Authority
MRA	Mining Remediation Authority
MSA	Mineral Safeguarding Areas
MtCO ₂ e	Megatonnes of carbon dioxide equivalent
N ₂ O	Nitrous Oxide
NATMAP	Digitised national soil map of England and Wales
NAU	National Appraisal Unit (part of Environment Agency)
NBRC	Northamptonshire Biodiversity Record Centre
NBW	Nighttime Bat Walkover
NCA	National Character Areas
NCN	National Cycle Network
NE	Natural England
NERC	Natural Environment and Rural Communities
NF ₃	Nitrous Trifluoride
NGR	National Grid Reference
NHBC	National House Building Council
NHLE	National Heritage List for England
NHS	National Health Service
NIA	Nature Improvement Area
NIT	National Infrastructure Team (part of Environment Agency)
NL	National Landscape
NMU	Non-Motorised Users
NNR	National Nature Reserve
NO ₂	Nitrogen Dioxide
NOEL	No Observed Effect Level
NOZ	Normal Operating Zone
NPPF	National Planning Policy Framework

Term	Definition
NPS	National Planning Statement
NPSE	Noise Policy Statement for England
NPSWRI	National Policy Statement for Water Resource Infrastructure
NR	Network Rail
NRMM	Non-Road Mobile Machinery
NSIP	Nationally Significant Infrastructure Project
NTEM	National Trip End Model
NVSR	Nosie and Vibration Sensitive Receptor
NVZ	Nitrate Vulnerable Zone
OCEMP	Outline Construction Environmental Management Plan
OD	Ordnance Datum
OEMP	Operational Environmental Management Plan
OHID	Office for Health Improvement and Disparities
OMP	Odour Management Plan
ONS	Office for National Statistics
OPC	Ordinary Portland Cement
OS	Ordnance Survey
OSWMP	Outline Site Waste Management Plan
OWSI	Overarching Written Scheme of Investigation
PAH	Polycyclic Aromatic Hydrocarbons
PAS	Publicly Available Specification
PAWS	Plantation on Ancient Woodland Sites
PEAR	Preliminary Ecological Appraisal Report
PBDE	Polybrominated Diphenyl Ethers
PCV	Permitted Concentration or Value
PEI	Preliminary Environmental Information
PFC	Perfluorocarbons
PFOS	Perfluorooctane Sulfonate
PIA	Personal Injury Accident
PINS	Planning Inspectorate
pLWS	Potential Local Wildlife Site
PM ₁₀	Particulate matter of 10 micrometres (µm) diameter or less.
PM _{2.5}	Particulate matter of 2.5 micrometres (µm) diameter or less.
PPE	Personal Protective Equipment
PPG	Planning Practice Guidance
PPGNE	Planning policy guidance for the natural environment
PPP	Pollution Prevention Plan
PPV	Peak Particle Velocity
PRA (ground)	Preliminary Risk Assessment

Term	Definition
PRA (ecology)	Preliminary Roost Appraisal (bats)
PRoW	Public Rights of Way
PSYM	Predictive System of Multimetrics (pond/canal survey methodology)
PWMS	Precautionary Working Method Statement
RAPID	Regulators' Alliance for Progressing Infrastructure Development
RBMP	River Basin Management Plan
RCP	Representative Concentration Pathway
RIGS	Regionally Important Geological and Geomorphological Sites
RNR	Roadside Nature Reserve
ROWIP	Rights of Way Improvement Plan
RPG	Registered Park and Garden
RSPB	Royal Society for the Protection of Birds
SAC	Special Areas of Conservation
SAS	Surplus Activated Sludge
SBTi	Science Based Targets initiative
SF ₆	Sulphur hexafluoride
SFRA	Strategic Flood Risk Assessment
SIMCAT	Catchment scale modelling (Simplified Catchment)
SINC	Site of Importance for Nature Conservation
SLINC	Sites of Local Importance for Nature Conservation
SMF	Sidmouth Mudstone Formation
SMP	Soil Management Plan
SOAEL	Significant Observed Adverse Effect Level
SoS	Secretary of State
SPA	Special Protection Areas
SPI	Species of Principal Importance
SPZ	Source Protection Zones
SRN	Strategic Road Network
SRO	Strategic Resource Option
SSP	Shared Socio-Economic Pathways
SSSI	Sites of Special Scientific Interest
ST	Severn Trent
SuDS	Sustainable Drainage Systems
SUE	Sustainable Urban Extension
SWDTE	Surface Water Dependent Ecosystems
SWMP (waste)	Site Waste Management Plan
WMP (water)	Water Management Plan
TA	Transport Assessment

Term	Definition
TAG	Technical Advisory Group
tCO ₂ e	Tonnes of Carbon Dioxide Equivalent
TEMPRO	Trip End Model Presentation Program
TFWM	Transport for West Midlands
TG22	LAQM Technical Guidance 2022
TEL	Threshold Effect Level
TTRO	Temporary Traffic Regulation Order
UK	United Kingdom
UKCP18	United Kingdom Climate Projections 2018
UKWIR	UK Water Industry Research
UNESCO	United Nations Educational, Scientific and Cultural Organization
UXO	Unexploded Ordnance
VDV	Vibration Dose Value
VOC	Volatile Organic Compounds
VP	Viewpoint
w/m ²	watts per square metre
WAC	Waste Acceptance Criteria
WBCSD	World Business Council for Sustainable Development
WBRC	Warwickshire Biological Record Centre
WC	Wetness Class – Classification of soil wetness from Class I (least wet) to Class VI (wettest).
WCA	Wildlife and Countryside Act 1981
WFD	Water Framework Directive
WHLC	Warwickshire Historic Landscape Characterisation
WHO	World Health Organization
WMRG	West Midlands (Bird) Ringing Group
WNJCS	West Northamptonshire Joint Core Strategy
WPA	Waste Planning Authority
WPZ	Water Protection Zone
WRAP	Waste and Resources Action Programme
WRI	World Resources Institute
WRMP	Water Resources Management Plan
WRMP24	Water Resource Management Plan 2024 (Affinity Water)
WRZ	Water Resources Zone
WSI	Written Scheme of Investigation
WTW	Water Treatment Works
WwRC	Wastewater Recycling Centre
ZoI	Zone of Influence
ZTV	Zone of Theoretical Visibility