



## Stag Brewery, Mortlake

**Environmental Statement Volume 1: Main Text** 

For Reselton Properties

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### Quality Assurance – Approval Status

This document has been prepared and checked in accordance with Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS OHSAS 18001:2007)

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## **Glossary of Terms**

Term used within ES	Definition
A-Weighting	The auditory system is not equally sensitive throughout this frequency range. This is taken into account when making acoustic measurements by the use of A-weighting, a filter circuit which has a frequency response similar to the human auditory system. All the measurement results referred to in this report are A-weighted.
AADF/T Annual Average Daily Flow/Total	A daily total traffic flow (24 hours), expressed as a mean daily flow across all 365 days of the year.
Above Ordnance Datum (AOD)	Land levels in the UK are measured relative to the average sea level at Newlyn in Cornwall. This average level is referred to as 'Ordnance Datum'. Benchmarks, spot heights and contours on Ordnance Survey maps of the UK show heights above Ordnance Datum in metres.
Acoustic Environment	Sound from all sound sources as modified by the environment.
Air Quality Standards	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. They can also be used as a benchmark to indicate whether air pollution is getting better or worse.
Archaeology	The scientific study of ancient or historic physical remains of human activity, both above and below ground.
Archaeological interest	There will be archaeological interest in a heritage asset if it holds, or potentially may hold, evidence of past human activity worthy of expert investigation at some point. Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.
Applicant	Reselton Properties Limited.
Application A	Hybrid planning application for comprehensive mixed use redevelopment of the former Stag Brewery site consisting of:  Land to the east of Ship Lane applied for in detail; and  Land to the west of Ship Lane (excluding the school) applied for in outline.
Application B	Detailed planning application for the school (on land to the west of Ship Lane).
Ambient Noise	The totally encompassing sound in a given situation.
Annual Mean	The average (mean) of the concentrations measured for each pollutant for one year. Usually this is for a calendar year, but some species are reported for the period April to March, known as a pollution year. This period avoids splitting winter season between 2 years, which is useful for pollutants that have higher concentrations during the winter months.
Aquifer	A below ground, water-bearing layer of soil or rock.
Baseline	Existing environmental conditions present on, or near a site, against which future changes may be measured or predicted.
BS	British Standard
Building Luminance	Building Luminance can cause an increase in the brightness of the general area. This is measured in Cd/m2 (L) as an average over the building façade.
Candela (cd)	SI unit of luminous intensity.



Term used within ES	Definition
CO <sub>2</sub> e	The Global Warming Potential (GWP) of all Greenhouse Gases emitted expressed in terms of their GWP relative to CO <sub>2</sub> .
Conservation (for heritage policy)	The process of maintaining and managing change to a heritage asset in a way that sustains and, where appropriate, enhances its significance.
Conservation Area	An area designated under the Planning (Listed Buildings and Conservation Areas) Act 1990 as being of special architectural or historic interest the character or appearance of which it is desirable to preserve or enhance.
Considerate Constructors Scheme	A UK certification scheme operated by the Construction Confederation to reduce the potential for adverse environmental impacts during the construction phase of projects. Widely used in major or sensitive schemes.
Contaminated Land	Defined by section 78A(2) Part IIA of the Environmental Protection Act 1990 as:  "any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that -  a. significant harm is being caused or there is a significant possibility of such harm being caused; or  b. pollution of controlled waters is being, or is likely to be caused;"
Contamination	Contamination is the addition, or the result of addition, or presence of a material or materials to, or in, another substance to such a degree as to render it unfit for its intended purpose.
Cumulative Effects	Impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions.
Curfew	The time after which stricter requirements (for the control of obtrusive light) will apply; often a condition of use of lighting applied by an LPA.
Decibels (dB)	Noise can be defined as unwanted sound. Sound in air can be considered as the propagation of energy through the air in the form of oscillatory changes in pressure. The size of the pressure changes in acoustic waves is quantified on a logarithmic decibel (dB) scale firstly because the range of audible sound pressures is very great, and secondly because the loudness function of the human auditory system is approximately logarithmic.
	The dynamic range of the auditory system is generally taken to be 0dB to 140dB. Generally, the addition of noise from two sources producing the same sound pressure level, will lead to an increase in sound pressure level of 3dB. A 3dB noise change is generally considered to be just noticeable, a 5dB change is generally considered to be clearly discernible and a 10dB change is generally accepted as leading to the subjective impression of a doubling or halving of loudness.
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.
Development	The proposals defined by the planning applications.



Term used within ES	Definition
Directive	European Commission (EC) Directives impose legal obligations on European Member States. They are binding as to the results to be achieved, but allow individual states the right to decide the form and methods used to achieve the results.
Dust	Fine particles of solid materials ranging in size from 1 to 75 um diameter (see British Standard 3405) capable of being resuspended in air and settling only slowly under the influence of gravity where it may cause nuisance.
$D_w + C_{tr}$	An on-site measure of airborne sound insulation. The $C_{tr}$ correction is a spectrum adaptation term which 'penalises' low frequency noise.
Environmental Impact Assessment (EIA)	A technique for ensuring that the likely effects of new development on the environment are fully understood and taken into account before the development is allowed to go ahead. It provides a focus for public scrutiny of the project and enables the importance of the predicted effects, and the scope for modifying or mitigating them, to be properly evaluated by the decision-making authority.
EIA Regulations (2011)	Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (as amended 2015).
EIA Regulations (2017)	Town and Country Planning (Environmental Impact Assessment) Regulations 2017.
Environmental Statement (ES)	Document that reports the findings of an Environmental Impact Assessment.
Exceedance	A period of time (defined for each standard) where the concentration is higher than that set out in the Standard. In order to make useful comparisons between pollutants, (the Standards may be expressed in terms of different averaging times), the number of days on which an exceedance has been recorded is often reported.
Façade	Generally one side of the exterior of a building, especially the front, but also sometimes the sides and rear.
Façade Noise Level	A noise level measured or predicted at the façade of a building, typically at a distance of 1m, containing a contribution made up of reflections from the façade itself (+3dB).
Flood plain	The area of land available for floodwaters to occupy.
Footprint	Perimeter of a building's ground floor plan.
Free Field	Free field noise levels are measured or predicted such that there is no contribution made up of reflections from nearby building façades.
Frequency	Frequency (or pitch) of sound is measured in units of Hertz. 1 Hertz (Hz) = 1 cycle/second. The range of frequencies audible to the human ear is around 20Hz to 18,000Hz. The capability of a person to hear higher frequencies will reduce with age. The ear is more sensitive to medium frequency than high or low frequencies.
Glare	The uncomfortable brightness of a light source when viewed against a dark background. This applies to each source in the obtrusive direction and is quantified as source intensity (I) (kcd).
Groundwater	Water associated with soil or rocks below the ground surface but is usually taken to mean water in the saturated zone.



Term used within ES	Definition
Habitat	The living place of an organism characterised by its physical or biotic properties.
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 asset includes designated heritage assets and assets identified by the local planning authority (including local listing).
Heritage Significance	The value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting.
Historic Environment	All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora.
Historic Environment Record	Information services that seek to provide access to comprehensive and dynamic resources relating to the historic environment of a defined geographic area for public benefit and use.
HSE Executive	Health and Safety Executive.
Illustrative Masterplan	An illustrative configuration of the layout of the Development based on the proposed buildings and uses, supporting infrastructure and Development plots.
In situ	In the natural, original or appropriate position.
LAeq,T	The A-weighted sound pressure level of the steady sound which contains the same acoustic energy as the noise being assessed over a specific time period, T.
L <sub>A10</sub>	The noise level exceeded for 10% of the measurement period. It has been used in the UK for the assessment of road traffic noise.
L <sub>A90</sub>	The noise level exceeded for 90% of the measurement period. It is generally used to quantify the background noise level, the underlying level of noise which is present even during the quieter parts of the measurement period.
LAmax	Maximum value that the A-weighted sound pressure level reaches during a measurement period. L <sub>Amax F</sub> , or Fast, is averaged over 0.125 of a second and L <sub>Amax S</sub> , or Slow, is averaged over 1 second. Maximum noise levels were all monitored using the Fast response.
L <sub>10,1</sub> -hour	The L <sub>10</sub> level measured over a 1-hour period.
L <sub>10,18</sub> -hour	The arithmetic average of the $L_{10,1-hour}$ levels for the 18-hour period between 06:00 hours and 24:00 hours on a normal working day. It is a common traffic noise descriptor.
Light Trespass	The spilling of light beyond the Site boundary. This is assessed using vertical illuminance in lux (EV) measured flat on the glazing at the centre of the window.
Limit values	Legally binding parameters that must not be exceeded. Limit values are set for individual pollutants and are made up of a concentration value, an averaging time over which it is to be measured, the number of exceedances allowed per year, if any, and a date by which it must be achieved. Some



Term used within ES	Definition
	pollutants have more than one limit value covering different endpoints or averaging times.
LINSIG	Industry standard software for assessing signalised junctions.
Listed Building	Statutorily listed buildings and other structures that are of special architectural or historic interest and are protected under the terms of the Planning (Listed Buildings and Conservation Areas) Act 1990.
Locally Listed Building	A building or structure identified as having local architectural and historic interest (as opposed to 'special' architectural and historic interest). Defined by LBRuT as 'Buildings of Townscape Merit'.
Lumen	SI unit of luminous flux (lm).
Luminance	Candela per meter squared (cd/m²).
Mitigating factor	A matter to be taken into account as a benefit to offset any perceived or demonstrable harmful impact.
Mitigation (measure)	The measures put forward to prevent, reduce and where possible, offset any adverse effects on the environment.
National Planning Policy Statement	National Planning Policy Statement (NPPF) notes set out the Government's policies on different aspects of planning. Local planning authorities must take their content into account in preparing their development plans and the guidance may also be material to decisions on individual planning applications and appeals.
Net	After all deductions have been made.
Non-Technical Summary	A summary of the Environmental Statement in non-technical language providing a concise, yet comprehensive summary of the likely effects of the project on the environment.
Objectives	The target date on which exceedances of a Standard must not exceed a specified number.
Parameter Plan	A plan submitted for approval, which define the future development as part of the Application.
Particulate matter	Discrete particles in ambient air, sizes ranging between nanometres (nm, billionths of a metre) to tens of micrometres (µm, millionths of a metre).
Peak Particle Velocity	The instantaneous maximum velocity reached by a vibrating element as it oscillates about its rest position.
Permeability	The extent to which an environment allows a variety of access routes through it. A permeable environment is one where there is ease of movement and where people have a choice in the routes they may use.
Piling	Installation or removal of bored, driven and pressured-in piles and the effect of ground treatments by vibratory, dynamic or other methods of ground stabilisation.
PPV	Peak Particle Velocity is the parameter normally used to assess ground vibration measured in mm/s. Peak particle velocity refers to the maximum speed of a particular particle as it oscillates about a point of equilibrium.
Receptor (Sensitive)	A component of the natural, created or built environment such as human being, water, air, a building, or a plant that is affected by an impact.
Residual effects	Those effects of the development that cannot be mitigated following implementation of mitigation proposals.
Risk assessment	An assessment of the likelihood and severity of an occurrence.



Term used within ES	Definition
Road link	A length of road which is considered to have the same flow of traffic along it. Usually, a link is the road from one junction to the next.
R <sub>TRA</sub>	Traffic noise reduction – by adopting an idealised but typical spectrum of road traffic noise dominated by low frequencies, an index $R_{TRA}$ (reduction of road traffic noise) is derived. By comparing this with the sound reduction of the window in dB(A) it represents the likely in service performance for road traffic noise attenuation.
Schedule 2 (development)	Development project types under the EIA Regulations where EIA is not mandatory in all cases but may be required, depending on the size, nature and scale of the development and the potential for significant environmental effects to arise.
Scoping	An initial stage in determining the nature and potential scale of environmental impacts arising as a result of a development, and an assessment of what further studies are required to establish their significance.
Scoping Study	Preliminary study investigated the potential environmental impacts that could arise from the development, used to identify issues for further investigation in the EIA.
Setting of a heritage asset	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 that significance or may be neutral.
Site	The land to which the Planning Applications relate.
Sky Glow	The brightening of the of the night sky over our towns, cities and countryside. This can be quantified by measuring the Upward Light Ratio (ULR). This is the maximum permitted percentage of luminaire flux for the total installation that goes directly into the sky.
Sound Power Level (L <sub>w</sub> ) and Sound Pressure Level (L <sub>P</sub> )	These two units are used to express sound level. Sound power level is the inherent property of a source, whilst sound pressure level is dependent on surroundings/distance/directivity etc. The sound level that is measured on a meter is the sound pressure level, LP.
Sound Reduction Index (R)	The sound reduction index is a single-number rating of the sound reduction through a wall or other building element. Since the sound reduction may be different at different frequencies, test measurements are subjected to a standard procedure which yields a single number that is about equal to the average sound reduction in the middle of the human hearing range.
Sui Generis	Class of land use as set out in Town and Country Planning (Use Classes) Order 1987 (as amended), for buildings that do not fall within particular use class (including drinking establishments, boathouse and cinema uses).
Sustainable Development	Development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.
Target Value	Set out in the same way as limit values. They are to be attained where possible by taking all necessary measures not entailing disproportionate costs.



Term used within ES	Definition
Topography	The natural or artificial features, level and surface form of the ground surface.
Weighted Sound Reduction Index (Rw)	The R <sub>w</sub> incorporates a correction for the ears' response. It is derived from comparing the window sound insulation to frequency curve with a family of reference curves.
Wirelines	Diagrammatic representations showing the outline of the Development.
World Heritage Site	Places of Outstanding Universal Value, as set out in of the 1972 UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage (the World Heritage Convention.
Use Class C1	Class of land use as set out in Town and Country Planning (Use Classes) Order 1987 (as amended), for hotels, boarding and guest houses where no significant element of care is provided (excludes hostels)
Use Class C3	Class of land use as set out in Town and Country Planning (Use Classes) Order 1987 (as amended), for dwelling houses.
Use Class E	Class of land use as set out in Town and Country Planning (Use Classes) Order 1987 (as amended), for retail, sale of food and drink, financial services, professional services, indoor, sport, recreation or fitness, medical or health services, creches, day nursery or day centre, uses which can be carried out in a residential are without detriment to its amenity (including offices, research facilities or industrial processes).
Use Class F1	Class of land use as set out in Town and Country Planning (Use Classes) Order 1987 (as amended), for learning and non-residential institutions such as education, art galleries, museums, public libraries, public halls or exhibition halls, public worship or law courts.
Use Class F2	Class of land use as set out in Town and Country Planning (Use Classes) Order 1987 (as amended), for local community including shops selling essential goods, halls or meeting places for the community, areas for outdoor sport or recreation or indoor or outdoor swimming pools or skating rinks.
VDV	Vibration Dose Value is a measure of vibration exposure.
Vibration	A to-and-fro motion; a motion which oscillates about a fixed equilibrium position.



## **Abbreviations**

Abbreviations	Definition
AADT	Annual Average Daily Traffic
AAWT	Annual Average Weekday Traffic
ADF	Average Daylight Factor
ADMS-Roads	Atmospheric Dispersion Modelling System for Roads
ADMS-Roads	Atmospheric Dispersion Modelling System for Roads
AGL	Above Ground Level
AOD	Above Ordinance Datum
APS	Annual Population Survey
APSH	Annual Probable Sunlight Hours
AQAL	Air Quality Assessment Level
AQC	Air Quality Consultants
AQFA	Air Quality Focus Area
AQMA	Air Quality Management Area
AQS	Air Quality Strategy
ATC	Automatic Traffic Count
AVRs	Accurate Visual Representations
BAP	Biodiversity Action Plan
BEB	Building Emissions Benchmark
BEIS	Department for Business, Energy and Industrial Strategy
BNG	Biodiversity Net Gain
BPM	Best Practicable Means
BRE	Building Research Establishment
BTM	Building of Townscape Merit
CANDELA	Unit of luminous intensity (cd)
CCCG	Clinical Care Commission Group
CEMP	Construction Environmental Management Plan
CFA	Continuous Fight Augur
CHP	Combined Heat and Power
CIBSE	Chartered Institute of Building Services Engineers
ClfA	Chartered Institute for Archaeologists
CIRIA	Construction Industry Research and Information Association
CLEA	Contaminated Land Exposure Assessment
CLG	Community Liaison Group
CLP	Construction Logistics Plan



Abbreviations	Definition
CLP	Construction Logistics Plan
CLR11	The Model Procedures for the Management of Contaminated Land
CNEA	Clean Neighbourhoods and Environmental Act (2005)
CO <sub>2</sub> e	Carbon Dioxide Equivalent
CoPA	Control of Pollution Act 1974
COSHH	Control of Substances Hazardous to Human Health
CRTN	Calculation of Road Traffic Noise
CSM	Conceptual Site Model
DAS	Design and Access Statement
dB	Decibels
DBA	Desk Based Assessment
DCLG	Department for Communities and Local Government
Defra	Department for Environment, Food and Rural Affairs
DfE	Department for Education
DMRB	Design Manual for Roads and Bridges
DoS	Degree of Saturation
DSP	Delivery and Servicing Plan
EA	Environment Agency
EAL	Environment Assessment Level
EHO	Environmental Health Officer
EIA	Environmental Impact Assessment
EPUK	Environmental Protection UK
EQS	Environmental Quality Standard
ES	Environmental Statement
ESFA	Education and Skills Funding Authority
EU	European Union
EV	Vertical illuminance
FCMS	Framework Construction Management Statement
FFL	Finished Floor Levels
FRA	Flood Risk Assessment
FTE	Full Time Equivalent
GACs	Generic Assessment Criteria
GEA	Gross External Area
GHG	Greenhouse Gas
GIA	Gross Internal Area



Abbreviations	Definition
GIGL	Greenspace Information for Greater London
GIS	Geographical Information System
GLA	Greater London Authority
GLAAS	Greater London Archaeology Advisory Service
GLHER	Greater London Historic Environmental Record
GLVIA	Guidelines for Landscape and Visual Impact Assessment
GQRA	Generic Quantitative Risk Assessment
GWP	Global Warming Potential
На	Hectares
HAPs	Habitat Action Plans
HCA	Homes and Communities Agency
HDV	Heavy Duty Vehicles (> 3.5 tonnes)
HE	Highways England
HER	Historic Environment Record
HGV	Heavy Good Vehicles
HMSO	Her Majesty's Stationery Office
HoPI	Habitats of Principal Importance
HSCIC	Health and Social Care Information Centre
HSE	Health and Safety Executive
HUDU	Health Urban Development Unit
HV	High Voltage
IAQM	Institute of Air Quality Management
ICE	Inventory of Carbon and Energy
ICOMOS	International Council on Monuments and Sites
IEF	Important Ecological Features
IEMA	Institute of Environmental Management and Assessment
ILP	Institute of Lighting Professionals
JNCC	Joint Nature Conservation Committee
KCD	Kilocandela
LAQM	Local Air Quality Management
LB	London Borough
LBAP	London Biodiversity Action Plan
LBH	London Borough of Hounslow
LBRuT	London Borough of Richmond upon Thames
LCC	London County Council



Abbreviations	Definition
LDF	Local Development Framework
LEAP	Locally Equipped Area for Play
LFMF	London View Management Framework
LGV	Light Goods Vehicle
LI	Landscape Institute
LIA	Local Impact Area
LLFAs	Lead Local Flood Authorities
LOAEL	Lowest Observed Adverse Effect Level
LPA	Local Planning Authority
LUMEN	SI unit of luminous flux (lm)
LV	Low Voltage
LVIA	Landscape and Visual Impact Assessment
LZC	Low and Zero Carbon
MAGIC	Multi-Agency Geographic Information for the Countryside
MUGA	Multi Use Games Area
NAEI	National Atmospheric Emissions Inventory
NEAP	Neighbourhood Equipped Area for Play
NERC	Natural Environment and Rural Communities
NGR	National Grid Reference
NHLE	National Heritage List for England
NHS	National Health Service
NO	Nitric oxide
NO <sub>2</sub>	Nitrogen dioxide
NOAEL	No Observed Adverse Effect Level
NO <sub>x</sub>	Nitrogen oxides (taken to be NO2 + NO)
NPPF	National Planning Policy Framework
NPPG	National Planning Policy Guidance
NPSE	Noise Policy Statement for England
NRMM	Non-Road Mobile Machinery
NSC	No Sky Line Contour
NSR	Noise Sensitive Receptors
NTS	Non-Technical Summary
ODPM	Office of the Deputy Prime Minister
ONS	Office for National Statistics
OOLTI	Other Open Land of Townscape Importance



Abbreviations	Definition
os	Ordnance Survey
PAH	Polyaromatic hydrocarbons
PBA	Peter Brett Associates LLP
PEA	Preliminary Ecological Appraisal
PEM	Project Environmental Manager
PM <sub>10</sub>	Small airborne particles less than 10 micrometres in aerodynamic diameter
PM <sub>2.5</sub>	Small airborne particles less than 2.5 micrometres in aerodynamic diameter
POB	Process Office Building
PPC	Pollution Prevention and Control
PPE	Personal Protective Equipment
PPG	Planning Practice Guidance
PPS	Planning Policy Statement
PPV	Peak Particle Velocities
PRA	Preliminary Risk Assessment
PROW	Public Rights of Way
PSR	Protected Species Report
PTAL	Public Transport Accessibility Rating
PV	Photovoltaic Panels
PVI	Private, independent and voluntary
RBAP	London Borough of Richmond upon Thames Biodiversity Action Plan
RICS	Royal Institution of Chartered Surveyors
RPV	Respiratory Protective Equipment
Rw	Weighted sound reduction index
SAC	Special Areas of Conservation
SAP	Species Action Plans
SEL	Sound Exposure Level
SFRA	Strategic Flood Risk Assessment
SGV	Soil Guideline Values
SI	Site Investigation
SINC	Site of Importance for Nature Conservation
SMI	Site of Metropolitan Importance
SOAEL	Significant Observed Adverse Effect Level
SoLHAM	South London Highway Assignment Model
SoPI	Species of Principal Importance



Abbreviations	Definition
SPA	Special Protected Area
SPD	Supplementary Planning Document
SPG	Supplementary Planning Guidance
SPZ	Source Protection Zone
SRN	Strategic Road Network
SSSI	Site of Special Scientific Interest
SUDS	Sustainable Urban Drainage System
SVOC	Semi-Volatile Organic Compounds
SWMP	Site Waste Management Plans
TCA	Townscape Character Area
TE2100	Thames Estuary 2100
TEB	Transport Emissions Benchmark
TfL	Transport for London
TLRN	Transport for London Road Network
TP	Travel Plan
TPH	Total Petroleum Hydrocarbons
TPO	Tree Preservation Order
TRAVL	Trip Rate Assessment Valid for London
ULR	Upward Light Ratio
UXO	Unexploded Ordnance
VDV	Vibration Dose Value
VOC	Volatile Organic Compounds
VSC	Vertical Sky Component
WAC	Waste Acceptance Criteria
WCA	Wildlife and Countryside Act
WFD	Water Framework Directive
WHO	World Health Organisation
WRA	Water Resources Act
ZoL	Zone of Influence
μg/m3	Micrograms per cubic metre



# UK and Ireland Office Locations

