

Stocktons, Manchester
Environmental Statement Volume 3:
Environmental Management Plan (EMP)

March 2025

Turley

This document provides a summary of all the mitigation committed to within **Volume 1: Technical Chapters 7 – 14**, to manage the environmental effects during the construction and operational stages of the Proposed Scheme and to establish a suitable mechanism to link to planning conditions, thereby delivering and securing mitigation. This will give Manchester City Council (MCC) confidence in the residual effects identified in this ES.

This Environmental Management Plan (EMP) has been produced as a separate Volume in the ES. However, this document should be read in conjunction with **Volume 1: Primary Report and Supporting Figures**, **Volume 2: Technical Appendices to the Primary Report** and **Volume 4: Non-Technical Summary**.

As set out within **Volume 1: Chapter 2: Approach to EIA**, the EIA has considered primary, secondary and tertiary mitigation in line with Institute of Environmental Management & Assessment's (IEMA) Environmental Impact Assessment Guide to Delivering Quality Development (2016).

Each of the **Technical Chapters 7 – 14**, in **Volume 1** have considered primary and tertiary mitigation prior to undertaking the assessment of likely significant effects. Following the conclusion of effects based on the Proposed Scheme, any further mitigation measures (i.e. secondary mitigation) or monitoring arrangements have been detailed. The appraisal within **Chapter 6: Topics which are Not Significant** also considers primary and tertiary mitigation to support scoping out technical topics.

The three types of mitigation considered are defined as:

- **Primary** – modifications to the location or design of the Proposed Scheme made during the pre-application stage that are an inherent part of the project;
- **Secondary** – actions that will require further activity in order to achieve the anticipated outcome; and
- **Tertiary** – actions that would occur with or without input from the EIA feeding into the design process. These include actions that will be undertaken to meet other existing legislation requirements, or actions that are considered to be standard practices used to manage commonly occurring environmental effects.

All primary, secondary and tertiary mitigation referenced throughout the Environmental Statement (ES) has been collated and are summarised in the EMP (**Table 1**).

It should be noted that, given the definition of primary mitigation and the fact that the measures are inherent to the Proposed Scheme, all primary mitigation is to be secured through the plans submitted for approval referred to in **Volume 1, Chapter 4: Development Specification** and any associated design strategies / principles referenced in **Volume 1, Chapter 4: Development Specification** that are submitted in support of the ES or the Application.

With respect to tertiary and secondary mitigation, it is assumed these measures will be secured through appropriately worded planning condition(s) and / or a Section 106 Agreement as determined by MCC, as the determining authority.

Mitigation measure	Description / details of measure
Primary Mitigation	
Massing arrangement	Careful incorporation of various features in both Buildings A and B has been an integral factor in reduction of overall mass and an improvement in composition of the tall building cluster at this point. These include: the vertical full height 'holding' piece, the intermediate volumes broken at regular intervals at levels 9,19 and 31 and a fenestration pattern that adds texture and grain to the façade. The massing and orientation of Building A, with its narrow façade facing the commonly occurring southwestern wind direction, and its corners oriented towards the prevailing southern and western wind sectors, helps limit the effect of downdraft. Also, its wide façade faces uncommon winds from the southeast while Building B provides some shelter to the tower for north-westerly wind. The primary mitigation exists via the enclosure of the amenity spaces within Building A, which shelters these areas from exposure to the wind.
Landscaping and Public realm	A new public square will be located off Great Ancoats street and accessed from Store Street and Ducie Street and will include areas of new tree and shrub planting, along with defined accessible routes punctuated with seating opportunities. The proposed landscape and public realm supports the creation of a safe and attractive active travel route from Piccadilly Gardens through the wider East Village SRF area to Islington Wharf. A series of roof terraces associated with both the office and residential elements of the Proposed Scheme are proposed at various levels within Buildings A and B.
Parking	The Proposed Scheme has been designed to limit the use of cars (no car parking spaces proposed^a), by prioritising for walking, cycling and public transport use to and from the Site given the location of the Site within the city centre.
Surface Water Drainage Strategy	The proposed surface water drainage system will collect the rainwater from the building roofs, and impermeable external areas before discharging into the realigned Shooters Brook Culvert crossing under the Site. The diversion line and any associated easements over the culvert are to be agreed with MCC, and the proposed connection into the Shooters Brook Culvert will be subject to agreement with MCC.

^a The existing public on-street parking bays on Ducie Street and Store Street may be reduced with the scheme by 2 as part of the Proposed Scheme. These pay and display spaces can be used by Blue Badge disabled users for free.

Mitigation measure	Description / details of measure
	The design of the Proposed Scheme will ensure Finished Floor Levels (FFL) are set above external levels with falls provided away from Buildings A and B. Overland flood routing for the Proposed Scheme will be away from sensitive areas of the Site in an exceedance event or failure of the below ground drainage system. The proposed surface water drainage will not increase the runoff rate (see below use of Sustainable Drainage Systems) and will include an allowance for climate change in accordance with relevant guidance¹. The post development discharge rates include an increase in the rainfall intensity of 40% and 45% for the 1 in 30-year and 1 in 100-year storm events respectively to allow for climate change. The proposed drainage system will be designed in accordance with BS EN 752:2017 and Sustainable Drainage Systems (SuDS) will be incorporated into the surface water drainage network as rain gardens and permeable surfacing, in accordance with CIRIA 753 – The SuDS Manual² where practical. The design of the Proposed Scheme will ensure Finished Floor Levels (FFL) are set above external levels with falls provided away from the building plots. The design also includes a dedicated surface water drainage network that will actively drain the Site, whilst providing attenuation and flow reductions to the surrounding sewerage infrastructure.
Foul water drainage strategy	The Proposed Scheme will have two dedicated foul water networks that will collect the foul water associated with each of the blocks. The network serving Building A will connect into the 600x450mm combined water sewer within Ducie Street and the network serving Building B will connect into the 1500mm diameter combined sewer in store street. The proposed connections to the public sewer system will be subject to agreement with United Utilities under the Section 106 Agreement. The proposed drainage system will be designed in accordance with BS EN 752:2017³, Building Regulation Approved Document Part H⁴.

Mitigation measure	Description / details of measure
Energy and Carbon strategy	A Whole Life Carbon Assessment (WLCA) of the Buildings A and B is currently being undertaken to assess and where possible reduce construction carbon through consideration of scheme design (e.g. slab thickness), construction materials, specifications and suppliers, and with a particular focus on typical carbon ‘hot spot’ materials such as concrete and steel. Buildings will be designed and built aiming to achieve the LETI’s Upfront Embodied Carbon Targets. Performance at this level is in line with good practice and exceeds current performance and the requirements of the Building Regulations which does not currently assess embodied carbon. Both buildings will be constructed to a high standard of fabric insulation and airtightness and will utilise a range of renewable energy technologies including roof mounted solar PV and Air Source Heat Pumps. The development will be all-electric, with no gas boilers, meaning that the carbon intensity of each building will reduce over time, ultimately reaching net zero in line with the decarbonisation of the grid. An Energy Strategy has been prepared for the Proposed Scheme demonstrating how dwellings will comply with the requirements of the current Building Regulations Part L 2021 and the requirements of Places for Everyone policies JP-S1, JP-S2 and JP-S3, through incorporation of energy hierarchy principles. Further energy modelling will be undertaken prior to construction, with the development aiming to achieve RIBA 2025 operational energy target for domestic buildings of 60 kWh/m²/y.
Lighting Design / Strategy	Artificial lighting will largely be contained to the areas of public realm and the interior of the proposed buildings. Lighting is assumed to be operational 24 hours/day to provide a safe place for pedestrians, members of the public and future users of the Site (i.e. reduction in crime measures) as well as to ground the Proposed Scheme within the context of the surrounding urban realm. All lighting proposed will be designed and installed in line with best practice guidance such as the ILP GN01 - Guidance Notes for the Reduction of Obtrusive Light 2021⁵, CIE 150: 2017 – Guide on the Limitation of the Effects of Obtrusive Light from Outdoor Lighting Installations, 2nd Edition⁶, and ILP Lighting Landscapes⁷.
Building Safety	The required emergency producers/practices (i.e. Fire Emergency Evacuation Plan) or apparatus/instruments (i.e. smoke detectors/sprinklers) required by law for the proposed uses will be in place by the final building management company.

Mitigation measure	Description / details of measure
	The buildings will be designed, in line with Building Regulations Approved Document B: Fire Safety, with appropriate fire preventative measures (i.e. fire doors, extinguishers etc.) and all external façades and materials will meet the necessary fire resistance standards set out within Building Regulations. The design of the Proposed Scheme will be informed by ‘Secure by Design’ principles and appropriate design and site management measures (including appropriate lighting (as described above) and digital entry systems). Whilst the majority of the Site has been purposely developed to be publicly accessible, there will be areas where controlled access is required (i.e. entry to the residential areas).
Waste Arisings and Strategy	A Waste Management Strategy has been submitted with the Application which sets out the principles, strategy and targets for the management and storage of waste and maximise recycling, in accordance with MCC established policy. The Proposed Scheme will be designed in order to take account of appropriate provision for waste storage and handling facilities/areas, inclusive of areas for segregation of waste and recycling. All waste storage/handling facilities will be designed in accordance with BS 5906:2005 Waste Management in Building – Code of Practice.
Climate change resilience measures	The following key climate resilience measures are considered to be integral to the Proposed Scheme and embedded within the design: • The Building Regulations⁸ will be met in relation to the impact of ground movement in foundation design. • Incorporation of landscaping proposals to maximise ecological value which will include the selection of climate change tolerant species. • In accordance with national guidance the potential effects of climate change to minimise risk of flooding will be considered in the surface water drainage system, which will take into account the 1 in 100 year storm event and required climate change allowances. • The operational development will include water saving measures built into the design of the Proposed Scheme, such as water saving fixtures and fittings, and buildings will target as a minimum two Wat01 Water Efficiency BREEAM Credits to reduce water consumption for commercial elements and 110 l/p/d in line with the Building Regulations higher water efficiency standard for the residential element of the Proposed Scheme.

Mitigation measure	Description / details of measure
Plant noise mitigation	Noise limits have been provided for the noise from proposed mechanical services plant, in absence of selections being made at this stage. Therefore, the noise from fixed plant will be controlled to meet the noise limits set out below at the nearest noise sensitive receptors: - At the residential apartment building to the north-west on Ducie Street; - Daytime (07:00 – 23:00): 50 $L_{Ar,Tr, 1hr}$; and - Nighttime (23:00 – 07:00): 37 $L_{Ar,Tr, 15min}$; and - At the residential apartment building (Oxygen Building) to the south-east on the corner of Great Ancoats Street and Store Street; - Daytime (07:00 – 23:00): 49 $L_{Ar,Tr, 1hr}$; and - Nighttime (23:00 – 07:00): 34 $L_{Ar,Tr, 15min}$. Primary mitigation measures that may be included to meet the above limits are attenuators, enclosures, acoustic screens and the selection of lower noise generating equipment. This list of examples is not exhaustive and other measures may be utilised as deemed necessary and appropriate.
Tertiary Mitigation	
Construction Environmental Management Plan (CEMP)	A CEMP will be prepared by the Principal Contractor before the construction stage commences, which will take account of all known risks, which have been identified at pre-construction stage by the Architect / Contractor (once appointed), the design team and also through ground investigations. This will be secured by planning condition. The proposed works will be carried out in accordance with current good environmental practice and guidance for construction. Measures will include: <u>General Measures</u> The Site will be secured through a combination of secure fencing, barriers and hoarding.

Mitigation measure	Description / details of measure
	- The Site security arrangements for the Proposed Scheme during the construction stage will be in line with the requirements set out in the Construction (Design and Management) Regulations 2015 and appropriate levels of security (personnel / CCTV) will be provided. - A central compound will be required for the contractor and appointed subcontractors. The exact location of the construction compound(s) is unknown at this time, but it will be within the Site. - Construction working hours⁹ (noisy work) will be 07:30 to 18:00 Monday to Friday; 08:30 to 14:00 on Saturday; and no noisy work on Sundays and Bank Holidays. Operations outside of these hours will be agreed with MCC. - Measures to reduce risks to human health from overheating such as provision of shaded refuges and potable water supplies during construction.
	<u>Construction Traffic Management and Access</u> The CEMP will outline measures to control and minimise the risk of adverse effects from construction activities. A Construction Traffic Management Plan (CTMP) will be prepared by the principal contractor (when appointed) which will set out the proposed routing of construction traffic and measures to enforce such routing (i.e. signage). This will be agreed with MCC Highways.

Mitigation measure	Description / details of measure
	<u>Demolition and Construction Waste Strategy</u> • If required, the remedial solution may require removal of hazardous substances¹⁰ which will require specialist removal. All such works will be undertaken by an appointed contractor and disposed of by the contractor in line with relevant regulations and legislation requirements. • Any waste considered to be hazardous, arising from demolition or remedial activities, will be handled, processed and removed from Site by suitability qualified contractors, all being undertaken in line with The Hazardous Waste (England and Wales) Regulations 2005. • It is anticipated that typical non-hazardous demolition/construction waste materials produced during construction would be controlled through the implementation of a CEMP, secured by planning condition, which will be informed by the waste provisions of the Environmental Protection Act 1990¹¹ and the Environmental Protection (Duty of Care) Regulations 1991¹². This sets out the principles and legal requirements relating to waste, including any hazardous waste that is encountered and required to be exported off-Site for disposal. • The CEMP will describe how materials will be managed efficiently and disposed of legally during construction. It will also outline the aims, objectives and on-going responsibilities, including management practices, to be implemented during the construction stage, and will set targets for the reduction, diversion from landfill and reuse of waste. <u>Drainage and Surface Water</u> • A Surface Water Management Plan (in accordance with best practice guidance such as The SuDS Manual (C753)¹³ and BS8582:2013 Code of practice for surface water management for development sites¹⁴) will be required to be established on Site by the contractor to control and manage surface water run-off, and will include the use of the existing drainage system to collect and contain run-off including any discharge agreements with the local sewer authority. It may also be necessary to introduce perimeter cut off drains to prevent overland run-off and additional interceptors for pollution and debris collection.

Mitigation measure	Description / details of measure
	- The Principal Contractor will be responsible for implementing the drainage system to manage storm water run-off and foul water effluent generated during the temporary construction stage (including water arising from excavations, rainfall and staff welfare). The management of this may include the ongoing use of the existing channels, gullies and outlets, construction in part of the final development drainage system or by providing temporary connections into the existing public sewer network. - Wheel cleaning of vehicles prior to leaving the Site. - Existing drainage networks protected via capping off any temporary free ends and protecting existing gullies/downpipes to prevent sediment spills into the network.
	<u>Noise and Vibration</u> - The CEMP will define all mitigation measures to be adopted to minimise noise and vibration emissions at surrounding sensitive receptors and will incorporate specific measures within all phases of the works where noise and vibration may give rise to disturbance. Mitigation includes (noting this list of not exhaustive): - Site hoarding will be installed around the site perimeter. - As the core is constructed, shuttering would be erected that would offer some noise mitigation against works being undertaken within the core. - Best Practicable Means as defined by the Control of Pollution Act 1974, will be implemented as part of the working methodology, which will serve to minimise the noise and vibration effects at receptors in the vicinity of the construction works. - If work is required to extend into periods beyond daytime hours, separate authorisation would be secured with MCC via the CEMP process and/or the Control of Pollution Act 1974¹⁵. - Community liaison and communication regarding construction works will be undertaken throughout the demolition and construction stage to provide information to people residing in properties located in the vicinity of the construction

Mitigation measure	Description / details of measure
	works and reduce the likelihood of adverse effects on the local community which could result in potential noise complaints. • As a general principle, lower noise and vibration generating demolition and construction practices must be adopted where practicable to do so. • All vehicles and mechanical plant used for the purpose of carrying out the works shall be fitted with effective exhaust silencers and shall be maintained in good and efficient working order so that extraneous noise shall be reduced to a minimum. • All compressors and generators shall be "sound reduced" models fitted with properly lined and sealed acoustic covers which shall be kept closed whenever the machines are in use. All ancillary pneumatic percussion tools shall be fitted with mufflers or silencers of the type recommended by the manufacturers. Generators shall be positioned and enclosed so as to minimise noise transmission to the inhabitants in the neighbourhood as agreed with the Employer's Agent. • All pumps shall be positioned and enclosed so as to minimise noise transmission to inhabitants in the neighbourhood. • All machines in intermittent use shall be shut down in the intervening periods between work or, where this is impracticable, throttled down to a minimum. • No machine shall be permitted which uses a system of dropping a heavy weight, power assisted or by gravity, for the purpose of breaking up paving or foundations. • Access to the Site shall be such as to ensure a minimum of disturbance to people in adjacent buildings by vehicles or plant entering or leaving the Site. No deliveries to Site shall take place outside the agreed working hours. • Any work agreed to be undertaken outside daytime hours (as set out above) will be subject to agreement of noise levels with Environmental Health Officer. The Contractor shall provide details on work involved, machinery or plant used, exact location, and calculated noise levels at suitable assessment points. • Any fixed or static plant operating outside normally permitted working hours shall not give rise to a 'rating level', as defined in BS 4142 in excess of the existing free-field background LA90 noise levels nearest noise-sensitive receptors (all of which are residential units).

Mitigation measure	Description / details of measure
	- Without prejudice to the foregoing and to requirements of particular clauses in the Conditions of Contract, the Contractor shall not be permitted to carry out works as stated below, except where such work is absolutely necessary for the saving of life or property and the safety of the Works or as is required under the terms of the Contract: - Piling, including sheet piling, by percussive methods outside the hours of 08:00 to 18:00 Mondays to Fridays. - The maintenance of mechanical or other construction plant in the proximity of noise sensitive buildings outside the hours set out above.
	<u>Air Quality</u> The CEMP will be informed by the Institute of Air Quality Management (IAQM) guidance and would include prevention measures, such as screening stockpiles of materials, deployment of windbreak netting and dampening exposed soils as appropriate and set out requirements for ongoing monitoring.
	<u>Ground Contamination</u> - Site workers will be made aware of the possibility of encountering contamination through toolbox talks and good standards of personal hygiene, including welfare facilities on-site and the use of appropriate levels of personal protective equipment, will be enforced by the Principal Contractor as per CDM16 requirements. - Works will be carried out in line with the approved remediation strategy and materials management plans (which will form part of the CEMP) for the Site.
	<u>Biodiversity</u> At least one further emergence survey will be required to reaffirm the lack of bat roosts in the building. This will be secured by planning condition. Should a bat roost be identified during the development works, an ecologist will be notified and development works paused for further surveys and a licence obtained (if surveys confirm this is required).
	<u>Lighting</u>

Mitigation measure	Description / details of measure
	Lighting will be controlled on Site by the Principal Contractor through a series of best practice measures, in line with lighting industry standards and guidance including the CIE publication 'Technical Report Document 12917 and BS EN 12464-2:201418.
Remediation Strategy	Contaminated made ground had been recorded in one area on-Site (contaminated with heavy metals and PAHs, with asbestos) and therefore, where required, a cover system in areas of soft landscaping will be provided as a minimum. Where required, a programme of mitigation or remediation work will be carried out as part of the enabling works in line with a Remediation Strategy prepared by the Principal Contractor (to be secured by planning condition), approved by MCC.
Piling risk assessment	A piling risk assessment will be provided following further investigation to specifically assess the risks associated with piling works.
Demolition method statement	Prior to any demolition, a method statement by a suitably trained contractor will be submitted to MCC. This will include relevant protection measures to avoid unnecessary dust, noise and debris impacts upon the surrounding built environment. As part of this an audit will be carried out to review opportunities for the reuse and recycling of materials from the existing buildings. It is anticipated that, where possible, materials will be reused or recycled which can help reduce GHG emissions and waste.
Foundation design	The Building Regulations¹⁹ require new developments to consider the impact of ground movement in foundation design. The buildings will be constructed on piled rafts/ piles and ground movement will be a key consideration of the design of the sub and superstructure. A specialist basement impact assessment will be completed to inform the impact of the basement excavation works on neighbouring properties and boundaries with the design / construction principles informed to limit ground movement to mitigate risks of damage to properties / infrastructure beyond the boundary of the Site. The foundation design will be in accordance with industry best practice (including CIRIA Report C572: Treated ground engineering properties and performance²⁰, British Research Establishment document FB75: Building on Fill - Geotechnical Aspects²¹ and British Standard 6031:2009: Code of Practice for Earthworks²²).
Archaeological investigation	An archaeological investigation will be undertaken after the demolition of the buildings and prior to any construction within the Site, which would include a surface layer material strip, mapping and recording of features identified followed by evaluation of any remains associated with the iron works within the Site. Greater Manchester Archaeological Advisory

Mitigation measure	Description / details of measure
	Service will be informed of the proposals and mitigation will be agreed. This will be secured through a condition of planning in line with paragraph 216 and 218 of the National Planning Policy Framework ²³ .
Overheating analysis	The residential development within both Buildings A and B has undergone overheating assessment in line with the requirements of Part O of the Buildings Regulations ²⁴ using CIBSE TM59 methodology in order to assess and reduce the risk of summer overheating by taking into account future climate scenarios. All apartments will have access to natural ventilation via perimeter purge panels within the unitised facade. Auxiliary ventilation will be provided with MVHR's. The results from the final overheating simulation showed that all of the assessed bedrooms and Kitchen/Living/Dining Areas comply with the TM59 overheating criteria. Additionally, residential corridors will be assessed from an overheating perspective during the stage 3 design process. Commercial units will be comfort cooled, as such any impacts from increasing temperatures and overheating will be accommodated.
Secondary Mitigation	
Non-Designated Heritage Asset Building Record	Prior to demolition, it is recommended that a Level 1 or 2 building record of the building is undertaken, which will provide a record of the historic built form on the Site, which is to then be submitted to a local archive. This is to be secured by planning condition, but the inclusion of this is ultimately up to the decision maker.
Detailed façade specification	The Proposed Scheme has been assessed with the following wind mitigation measures: - At the south-western façade of Building B: 50% porous, 1.6m (deep) x 11.2m (tall) baffles, x 9; 50% porous, 1.6m (tall) upstands, x 2; and 50% porous entrance canopy. - On the terrace of Building B: - Solid, 3.6m (tall) balustrade;

Mitigation measure	Description / details of measure
	– Solid, 2m (deep) x 26.5m (length) canopy, at balustrade level; • At the ground level between Building A and Building B: – 4m (tall) deciduous trees, x 22; and • At the north-east of Building A: – 50% porous, 1.5m (tall) x 4m (length) screens, x 2. The above mitigation has been developed by the architect and validated by CFD and wind tunnel testing. A suitably worded planning condition will be adopted in order to ensure that the final version of this structure is (if not already) validated quantitatively by further modelling.
Glazing specification	Low Visible Light Reflectance (VLR) glazing will be specified for the following elevations to reduce the intensity of any reflections that occur within 10° of a driver's direct line of sight: • Woodward Street – North-west elevations of Building A and Building B; • Pickford Street – North-east elevation of Building B; • Old Mill 1 – Lower half of north-east elevation of Building A; and • Old Mill 2 – Lower half of north-east elevation of Building A. The exact glazing to be specified will be subject to further, more detailed analysis undertaken at the later detailed design stages to ensure safety concerns do not arise and will be secured via a condition. In relation to reflections at Old Mill 3, fixed shading elements are to be applied to the area of facade capable of generating reflections towards this junction. The shading may comprise of fins, louvres or a Bres Soliel and would need to shield reflections from the upper section of the double height lobby glazing on the north-east elevation. The exact screening to be specified would be subject to further, more detailed analysis undertaken at the later detailed design stages to ensure safety concerns do not arise and could be secured via a condition.

Mitigation measure	Description / details of measure
Noise mitigation	The noise mitigation measures that are required to ensure the building envelopes provide appropriate levels of noise mitigation for future residents are detailed within Appendix 14.1, with the respective glazing performance requirements set out for the specific façades and storeys. The mitigation measures presented within Appendix 14.1 provide a strategy to how the internal noise levels could be achieved. Meeting internal noise level targets will be secured via planning condition with reference to meeting the internal noise level targets.

References

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- ¹ Flood risk assessments: climate change allowances (2022). Available at: [Flood risk assessments: climate change allowances - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/flood-risk-assessments-climate-change-allowances)
- ² CIRIA (2015). The SuDS Manual C753. Available at: [SuDS Manual C753 Chapter List \(ciria.org\)](https://www.ciria.org/publications/suds-manual-c753)
- ³ BS EN 752:2017. Drain and sewer systems outside buildings. Sewer system management
- ⁴ Ministry of Housing, Communities and Local Government. Building Regulation Approved Document Part H
- ⁵ ILP (2021). Guidance Note on the Reduction of Obtrusive Light. Available at: <https://theilp.org.uk/publication/guidance-note-1-for-the-reduction-of-obtrusive-light-2021/>
- ⁶ CIE (2017). Guide on the Limitation of the Effects of Obtrusive Light from Outdoor Lighting Installations, 2nd Edition. Available at: <https://cie.co.at/publications/guide-limitation-effects-obtrusive-light-outdoor-lighting-installations-2nd-edition>
- ⁷ ILP (2014) Lighting Landscapes. Available at: <https://theilp.org.uk/publication/lighting-landscapes/>
- ⁸ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/540328/BR_PDF_AD_L2A_2013_with_2016_amendments.pdf
- ⁹ Manchester City Council. Tackle a noise problem – Noise from building sites. Available at: [Noise from building sites | Tackle a noise problem | Manchester City Council](https://www.manchester.gov.uk/~/media/Manchester%20City%20Council/Assets/Noise%20from%20building%20sites/Tackle%20a%20noise%20problem/Tackle%20a%20noise%20problem%20-%20Manchester%20City%20Council.pdf)
- ¹⁰ The Hazardous Waste (England and Wales) Regulations 2005, No. 894.
- ¹¹ Environmental Protection Act 1990 No. 43 Available at: <https://www.legislation.gov.uk/ukpga/1990/43/contents>
- ¹² Environmental Protection (Duty of Care) Regulations 1991 No. 2839. Available at: <https://www.legislation.gov.uk/uksi/1991/2839/made#:~:text=The%20duty%20requires%20such%20persons,person%20or%20to%20a%20person>
- ¹³ CIRIA (2015). The SuDS Manual (C753).
- ¹⁴ BSI (2013). BS8582:2013 Code of practice for surface water management for development sites. Available at: [BS 8582:2013 | 30 Nov 2013 | BSI Knowledge \(bsigroup.com\)](https://www.bsigroup.com/Standards/BS-8582)
- ¹⁵ Control of Pollution Act 1974. Available at: [Control of Pollution Act 1974](https://www.legislation.gov.uk/ukpga/1974/41/contents)
- ¹⁶ The Construction (Design and Management) Regulations 2015
- ¹⁷ CIE - Technical Report Document 129 (1998) Guide for Lighting Exterior Work Areas.
- ¹⁸ British Standards (2014) BS EN 12464-2 – Lighting of Work Places – Part 2: Outdoor Work Places.
- ¹⁹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/540328/BR_PDF_AD_L2A_2013_with_2016_amendments.pdf
- ²⁰ CIRIA (2002). Treated ground - engineering properties and performance (C572).
- ²¹ BRE (2015). Nuliding on fill: geotechnical aspects 3rd edition 2015 (FB 75).
- ²² BSI British Standards (2009). BS 6031:2009 Code of practice for earthworks. Available at: <https://geotechnicaldesign.info/download/bs6031-2009.pdf>
- ²³ Ministry of Housing, Communities and Local Government. 2024. National Planning Policy Framework (NPPF). London: Ministry of Housing, Communities and Local Government.
- ²⁴ <https://www.gov.uk/government/publications/overheating-approved-document-o>