Longfield Solar Farm Environmental Statement Mitigation Schedule



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1 Mitigation Schedule

1.1 Mitigation Schedule

This document sets out the environmental mitigation measures to be adopted during the construction, operation and maintenance, and decommissioning phases of Longfield Solar Farm (hereafter referred to as the Scheme).

Table 1 lists the environmental mitigation measures to be adopted during the construction, operation and decommissioning phases of the Scheme, and provides a guide to where that mitigation is secured.



Reference	Primary topic (primary driver for mitigation)	Secondary topic(s) (secondary drivers for mitigation)	ES Document Source	Effect	Mitigation Measure (including any monitoring required)	Embedded or Additional Mitigation?	Phase (Construction, Operation or Decommissioning)	Responsibility (e.g. Applicant, Contractor)	Securing mechanism
CC-01	Climate Change	-	Chapter 6: Climate Change of the Environmental Statement [EN010118/APP/6.1]	Minimising greenhouse gas emissions from activities and vehicles during construction and decommissioning.	Good Practice Measures for Climate Change Standards of good practice for climate change will be followed during construction and decommissioning to minimise greenhouse gas emissions from activities and vehicles.	Embedded	Construction Decommissioning	Contractor	Requirement 13. Construction Environmental Management Plan Requirement 20. Decommissioning Strategy
CC-02	Climate Change	-	Chapter 6: Climate Change of the Environmental Statement [EN010118/APP/6.1]	Increasing resilience to greater flood risk during construction and decommissioning.	Managing Flood Risk Suitable measures will be implemented to manage the greater risk of flooding due to climate change and ensure safety of staff during construction and decommissioning. A designated flood warden would be appointed.	Embedded	Construction Decommissioning	Contractor	Requirement 13. Construction Environmental Management Plan Requirement 20. Decommissioning Strategy
CC-03	Climate Change	Human Health	Chapter 6: Climate Change of the Environmental Statement [EN010118/APP/6.1]	Protecting site personnel from extreme weather during construction and decommissioning.	Health and Safety Measures A health and safety plan will be developed to ensure site personnel are protected from extreme weather events resulting from climate change during construction and decommissioning activities.	Embedded	Construction Decommissioning	Contractor	Requirement 13. Construction Environmental Management Plan Requirement 20. Decommissioning Strategy
CC-04	Climate Change	-	Chapter 6: Climate Change of the Environmental Statement [EN010118/APP/6.1]	Minimising greenhouse gas emissions during operation.	Operational Maintenance Regular, planned maintenance of the Scheme will be undertaken during operation to optimise efficiency of the Scheme infrastructure.	Embedded	Operation	Applicant	Requirement 14. Operational Environmental Management Plan
CH-01	Cultural Heritage	-	Chapter 7: Cultural Heritage of the Environmental Statement [EN010118/APP/6.1]	Minimising the impacts on the setting of below ground archaeological remains and other built heritage assets	Archaeological Monitoring An overarching Written Scheme of Investigation (WSI) will set out the objectives for the historic environment mitigation and the mechanisms for the appointed archaeological contractors to design and programme the fieldwork, undertake evaluation, analysis, reporting and archiving.	Additional	Construction	Contractor	Requirement 12. Archaeology Requirement 13. Construction Environmental Management Plan
CH-02	Cultural Heritage	-	Chapter 7: Cultural Heritage of the Environmental Statement [EN010118/APP/6.1]	Minimising visual intrusion from the Scheme on built heritage.	Appropriate and Sensitive Screening Appropriate and sensitive screening will be implemented to minimise visual intrusion of the Scheme, whilst avoiding obscuring or intruding upon views and relationships between heritage assets. This will include planting of hedgerow and other vegetation and enhancement of existing screening to avoid the creation of new impacts.	Embedded	Operation	Applicant	Requirement 9. Landscape and Ecological Management Plan
CH-03	Cultural Heritage	Glint and Glare	Chapter 7: Cultural Heritage of the Environmental Statement [EN010118/APP/6.1]	Minimising glint and glare impacts on existing sensitive receptors.	Screening Solar Glare The Scheme will be positioned to minimise glint and glare impacts on existing sensitive receptors. Existing screening will be maintained and new screening provided within the Order limits.	Embedded	Construction	Contractor	Requirement 9. Landscape and Ecological Management Plan
E-01	Ecology	Landscape and Visual Amenity	Chapter 8: Ecology of the Environmental Statement [EN010118/APP/6.1]	To protect existing wildlife and habitats within and around the Order limits	Design Principles The Scheme has been designed so that impacts during construction, operation and decommissioning upon important habitats (such as designated sites, mature trees and woodland) within and surrounding the Order Limits, are avoided, or reduced where reasonably practicable. Following decommissioning the Order Limits will be returned to landowners, in the condition as of the end of operation, including established habitats.	Embedded	Construction Operation Decommissioning	Contractor Applicant	Requirement 7. Detailed Design Approval Requirement 20. Decommissioning Strategy
E-02	Ecology	-	Chapter 8: Ecology of the Environmental Statement [EN010118/APP/6.1]	To minimise the loss of existing habitats and minimise impact on biodiversity within the Order limits	Habitat Avoidance Habitats temporarily lost or damaged during construction would be fully reinstated on a like-for-like basis, where practical. Measures to enhance existing habitat will be implemented and new areas of habitat and tree planting provided. The perimeter deer fence will be designed strategically to allow small mammals to pass through and reduce impacts on retained vegetation.	Embedded	Construction	Contractor	Requirement 9. Landscape and Ecology Management Plan Requirement 10. Fencing and other means of enclosure



E-03	Ecology	-	Chapter 8: Ecology of the Environmental Statement [EN010118/APP/6.1]	To avoid and minimise impacts on biodiversity associated with construction activities	Good Practice for Ecology The Scheme will comply with industry good practice and environmental protection legislation during both construction and operation.	Embedded	Construction Operation	Contractor Applicant	Requirement 9. Landscape and Ecology Management Plan Requirement 13. Construction Environmental Management Plan Requirement 14. Operational Environmental Management Plan
E-04	Ecology	Human health Water Environment and Flood Risk	Chapter 8: Ecology of the Environmental Statement [EN010118/APP/6.1]	To protect existing wildlife and habitats around the Order limits	Drainage Strategy Surface water management set out in Longfield Sustainable Drainage System Strategy and Bulls Lodge Extension Drainage Strategy ([EN010118/APP/6.2]) which will reduce the likelihood and severity of potential pollution incidents and flooding affecting watercourses and the local ditch network to reduce or eliminate adverse effects for aquatic and riparian species and habitats.	Embedded	Operation	Contractor	Requirement 11. Surface and Foul Water Drainage Requirement 24. Surface and Foul Water Drainage
E-05	Ecology	Landscape and Visual Amenity	Chapter 8: Ecology of the Environmental Statement [EN010118/APP/6.1]	To protect existing wildlife and habitats around the Order limits	Lighting Motion detection security lighting will be used to avoid permanent lighting and a sensitive lighting scheme will be developed ensuring inward distribution of light and avoiding light spill on to existing boundary features.	Embedded	Construction Operation	Contractor Applicant	Requirement 13 Construction Environmental Management Plan Requirement 14 Operational Environmental Management Plan
E-06	Ecology	Human health Landscape and Visual Amenity Noise and Vibration Air Quality Water	Chapter 8: Ecology of the Environmental Statement [EN010118/APP/6.1]	To avoid and minimise impacts on biodiversity associated with construction activities	Standard Management Measures Measures to prevent pollution incidents, minimise effects on ecology from noise and vibration, prevent and minimise dust creation and air pollution will be adopted throughout construction. Precautionary working method statements would be produced, controlled and implemented.	Embedded	Construction Decommissioning	Contractor	Requirement 9. Landscape and Ecology Management Plan Requirement 13. Construction Environmental Management Plan Requirement 20. Decommissioning Strategy
E-07	Ecology	-	Chapter 8: Ecology of the Environmental Statement [EN010118/APP/6.1]	To minimise the loss of existing habitats and minimise impact on biodiversity within the Order limits	Nesting and Breeding Birds Measures will be implemented in order to mitigate for impacts to nesting and breeding birds. Where reasonably practicable, vegetation clearance works would be undertaken outside the bird breeding season (March-August). Bird boxes as alternative nest sites will be erected across the Order limits for a wide range of species (including barn owls).	Additional	Construction Operation Decommissioning	Contractor Applicant	Requirement 9. Landscape and Ecology Management Plan Requirement 13. Construction Environmental Management Plan Requirement 20. Decommissioning Strategy
E-08	Ecology	-	Chapter 8: Ecology of the Environmental Statement [EN010118/APP/6.1]	To minimise the loss of existing habitats and minimise impact on biodiversity within the Order limits	Reptiles and Amphibians Reasonable avoidance measures would be used during habitat clearance suitable for reptiles, encouraging animals to move away from affected areas to adjacent suitable habitat. Reptile and amphibian hibernacula will be provided within the Order limits in shaded locations within 200m of ponds.	Additional	Construction	Contractor	Requirement 9. Landscape and Ecology Management Plan Requirement 13. Construction Environmental Management Plan
E-09	Ecology	-	Chapter 8: Ecology of the Environmental Statement [EN010118/APP/6.1]	To minimise the loss of existing habitats and minimise impact on biodiversity within the Order limits	Badgers Implementation of an appropriate buffer of up to 30m around a badger sett during construction, operation and decommissioning.	Additional	Construction Operation Decommissioning	Contractor Applicant	Requirement 13. Construction Environmental Management Plan Requirement Requirement 14. Operational Environmental Management Plan Requirement Requirement Requirement 20. Decommissioning Strategy
E-10	Ecology	-	Chapter 8: Ecology of the Environmental Statement [EN010118/APP/6.1]	To minimise the loss of existing habitats and minimise impact on biodiversity within the Order limits	Bats Implementation of an appropriate buffer of 25m around trees with bat roost potential during construction, operation and decommissioning.	Additional	Construction Operation Decommissioning	Contractor Applicant	Requirement 13. Construction Environmental Management Plan Requirement Requirement 14. Operational Environmental Management Plan Requirement



									Requirement 20. Decommissioning Strategy
E-11	Ecology	Human Health	Chapter 8: Ecology of the Environmental Statement [EN010118/APP/6.1]	To avoid and minimise impacts on biodiversity associated with construction activities	Invasive Species Pre-construction surveys will be undertaken to provide an update on the presence and location of any invasive species which will inform the production of a Biosecurity Management Plan. In the event that any future infestations of invasive non-native species are identified prior to and or during the development process, exclusion zones will be established around them and the Ecological Clerk of Works (ECoW) contacted for advice as required.	Additional	Construction Decommissioning	Contractor Applicant	Requirement 14. Operational Environmental Management Plan Requirement 20. Decommissioning Strategy
E-12	Ecology	Human Health Water Environment and Flood Risk	Chapter 8: Ecology of the Environmental Statement [EN010118/APP/6.1]	To protect existing wildlife and habitats within and around the Order limits	Watercourses No works will be undertaken within at least 10m of all watercourses, including a minimum of 8m from the edge of the floodplain of the River Ter to mitigate for potential hazards such as chemical and soils spills into watercourses and avoid potential direct impacts to the River Ter and Otters.	Embedded	Construction	Contractor	Requirement 7. Detailed Design Approval Requirement 13. Construction Environmental Management Plan
E-13	Ecology	-	Chapter 8: Ecology of the Environmental Statement [EN010118/APP/6.1]	To avoid and minimise impacts on protected/notable species and existing habitats	Protection of wildlife during construction works Implementation of measures to avoid animals being injured or killed within construction working areas, through excluding them from such areas and preventing them falling into and becoming trapped in excavations.	Embedded	Construction	Contractor	Requirement 13. Construction Environmental Management Plan
E-14	Ecology	Landscape and Visual Amenity	Chapter 8: Ecology of the Environmental Statement [EN010118/APP/6.1]	To protect existing wildlife and habitats within and around the Order limits	Boreham Road Gravel Pits Local Wildlife Site (LoWS) The crossing of Boreham Brook will be undertaken using Horizontal Directional Drilling (HDD) methods to avoid impacts on watercourses.	Embedded	Construction Operation	Contractor	Requirement 13 - Construction Environmental Management Plan
E-15	Ecology	Human Health	Chapter 8: Ecology of the Environmental Statement [EN010118/APP/6.1]	To protect existing wildlife and habitats within and around the Order limits	Ecological Clerk of Works (EcoCoW) A licensed EcoCoW will be employed to advise on relevant environmental commitments, the findings of the updated surveys, protected species licencing requirements and with reference to the relevant project programmes. Site staff would receive toolbox talks in order to comply with legislation. Pre-construction surveys and further site walkover surveys would be undertaken to confirm whether the risks remain as previously assessed. Contact details for the Site Manager will be available through an on-site display board and website.	Additional	Construction	Contractor	Requirement 9 - Outline Landscape Environmental Management Plan Requirement 13. Construction Environmental Management Plan
WE-01	Water Environment	-	Chapter 9: Water Environment of the Environmental Statement [EN010118/APP/6.1]	Minimising the risk of flooding and pollution during construction.	Good Practice Measures for Water Environment and Flood Risk Relevant Good Practice Guidance (GPPs) and Pollution Prevention Guidance (PPGs), as well as additional good practice guidance for the water environment including British Standards and key CIRIA documents, will be followed for the water environment and flood risk during construction.	Additional	Construction	Applicant	Requirement 13. Construction Environmental Management Plan
WE-02	Water Environment	Ground Conditions	Chapter 9: Water Environment of the Environmental Statement [EN010118/APP/6.1]	Minimising impacts and pollution to waterbodies.	Watercourse Crossings Cables will be installed using underground techniques, such as horizontal directional drilling, with appropriate measures to minimise the risk to the environment. Cables will be installed at least 1.5m below the a watercourse. Send and receive pits will be no greater than 2m by 2m and 2m deep, and be positioned at least 10m from waterbodies with shoring system in place. The drilling process will be continuously monitored and backfilled once complete.	Embedded	Construction	Contractor	Requirement 13. Construction Environmental Management Plan
WE-03	Water Environment	-	Chapter 9: Water Environment of the Environmental Statement [EN010118/APP/6.1]	Minimising the risk of pollution during flood events.	Measures in Scheme Design No PV Panels or other infrastructure will be located within Flood Zone 2 or 3. PV Panels will be installed 0.6m above ground level and secured through mounting poles, to an indicative depth of 2m, or concrete foundations. A minimum buffer of 8m and 5m will be established around all watercourses and ponds, respectively.	Embedded	Construction Operation	Applicant Contractor	Requirement 7. Detailed Design Approval Requirement 13. Construction Environmental Management Plan Requirement 14. Operational Environmental Management Plan



WE-04	Water	-	Chapter 9: Water	Minimising erosion and flood	Drainage Design and Strategy	Embedded	Construction	Applicant	Requirement 11. Surface and
	Environment		Environment of the Environmental Statement [EN010118/APP/6.1]	risk resulting from surface runoff.	The drainage design will attenuate surface water runoff from the PV Panels and other infrastructure within the operational Order limits, whilst minimising the flood risk to the Scheme and surrounding areas. This will be supported by the Longfield SuDS Strategy and Bulls Lodge Substation Extension Drainage Strategy ([EN010118/APP/6.2]).		Operation	Contractor	Foul Water Drainage Requirement 24. Surface and Foul Water Drainage
WE-05	Water Environment	-	Chapter 9: Water Environment [EN010118/APP/6.1]	Minimising the risk of flooding and pollution during construction.	Permits and Consents If construction site runoff is treated on site, a Water Discharge Activity Permit will be acquired as necessary during construction.	Other	Construction	Contractor	Requirement 13. Construction Environmental Management Plan Water Discharge Activity Permit.
WE-06	Water Environment	-	Chapter 9: Water Environment of the Environmental Statement [EN010118/APP/6.1]	Minimising the risk of pollution to waterbodies during construction.	Monitoring Water Quality Water quality monitoring will be undertaken during construction, the details for which will be set out in the future Water Management Plan (WMP).	Additional	Construction Decommissioning	Contractor	Requirement 13. Construction Environmental Management Plan. Requirement 20. Decommissioning Strategy.
WE-07	Water Environment	Ecology	Chapter 9: Water Environment of the Environmental Statement [EN010118/APP/6.1]	Minimising impacts to stored materials	Storage of Materials Good industry practice measures will be incorporated for the safe storage of materials, including appropriate containment measures, bunding, drip trays installed as part of plant and machinery used and water suppression will be used to supress fugitive dust emissions.	Additional	Construction Decommissioning	Contractor	Requirement 13. Construction Environmental Management Plan. Requirement 20. Decommissioning Strategy.
WE-08	Water Environment	-	Chapter 9: Water Environment of the Environmental Statement [EN010118/APP/6.1]	Minimising impact from surface runoff during operation.	Monitoring Runoff Regular inspection and maintenance of drainage systems will be undertaken during operation and, if evidence of excessive erosion or sedimentation associated with the Scheme is found, further actions will be considered to remediate the impact.	Additional	Operation	Applicant	Requirement 14. Operational Environmental Management Plan
WE-09	Water Environment	-	Chapter 9: Water Environment of the Environmental Statement [EN010118/APP/6.1]	Increasing resilience to flooding	Resilience to Flooding Regular inspection and maintenance of the drainage systems, SuDS and culverts will take place throughout the operational phase. This will be undertaken in accordance with good practice guidance. Staff on site will undertake regular weather checks to forecast any heavy rain events and to prepare for flooding where necessary.	Additional	Operation	Applicant	Requirement 14. Operational Environmental Management Plan
NV-01	Noise and Vibration	-	Chapter 11: Noise and Vibration [EN010118/APP/6.1]	Minimising noise and vibration from activities and vehicles during construction and decommissioning.	Good Practice Measures for Noise and Vibration Standards of good practice for noise and vibration will be followed during construction and decommissioning to minimise noise and vibration impacts from activities and vehicles.	Embedded	Construction Decommissioning	Contractor	Requirement 13. Construction Environmental Management Plan Requirement 15. Construction Traffic Management Plan Requirement 20. Decommissioning Strategy
NV-02	Noise and Vibration	-	Chapter 11: Noise and Vibration of the Environmental Statement [EN010118/APP/6.1]	Minimising noise and vibration outside standard working hours during construction and decommissioning.	Standard Working Hours Working hours on the Solar Farm Site and Bulls Lodge Substation Extension, will run from 07:00 to 19:00 Monday to Saturday. Works to overhead lines will run from 07:00 to 19:00 Monday to Sunday.	Embedded	Construction Decommissioning	Contractor	Requirement 13. Construction Environmental Management Plan Requirement 20. Decommissioning Strategy Requirement 26. Bulls Lodge Substation Works Construction Environmental Management Plan Requirement 27. Bulls Lodge Substation Works Construction Traffic Management Plan
NV-03	Noise and Vibration	-	Chapter 11: Noise and Vibration of the Environmental Statement [EN010118/APP/6.1]	Ensuring levels of noise and vibration do not exceed relevant guidance.	Noise Monitoring A noise monitoring scheme will be developed and agreed with appropriate stakeholders prior to commencement of construction and decommissioning works.	Additional	Construction Decommissioning	Contractor	Requirement 13. Construction Environmental Management Plan Requirement 20. Decommissioning Strategy
NV-04	Noise and Vibration	-	Chapter 11: Noise and Vibration of the Environmental Statement [EN010118/APP/6.1]	Minimising noise and vibration impacts to nearby receptors during operation.	Acoustic Barriers Inverters within 250m of residential dwellings will be treated with acoustic barriers which achieve a minimum 10dB(A) sound reduction, or an inverter selected with sound power levels at least 10dB lower than 96dB, which has been applied to inverters as part of the Scheme.	Embedded	Operation	Applicant	Requirement 7. Detailed design approval Requirement 14. Operational Environmental Management Plan



									Requirement 16. Operational Noise
NV-05	Noise and Vibration	-	Chapter 11: Noise and Vibration of the Environmental Statement [EN010118/APP/6.1]	Minimising noise and vibration impacts to nearby receptors during operation.	Scheme Design Noise levels at Public Rights of Way (PROW 213_19 and PROW 90_36) from the BESS will be reduced to below 50 dB LAr,Tr through implementation of an acoustic barrier up to 4m height and with maximum length as illustrated in the Concept Design and Figure 11-4 Battery Energy Storage System (BESS) Acoustic Barrier Testing of the ES [EN010118/APP/6.3] and/or through selection of plant with quieter sound power levels than what has been assessed in Chapter 11: Noise and Vibration of the Environmental Statement [EN010118/APP/6.1].	Embedded	Operation	Applicant	Requirement 7. Detailed design approval Requirement 14. Operational Environmental Management Plan Requirement 16. Operational Noise
SE-01	Socio-Economics and Land Use	-	Chapter 12: Socio- Economics and Land Use of the Environmental Statement [EN010118/APP/6.1]	Enhancing employment opportunities for local residents.	Employment Opportunities The Applicant will likely hold careers fairs and encourage the contractor to employ apprentices. The Applicant will also establish a support system to enable local people to be trained in the sustainable development sector during the operation of the Scheme as detailed in the Skills and Employment Plan.	Embedded	Operation	Applicant	Section 106 Agreement
SE-02	Socio-Economics and Land Use	-	Chapter 12: Socio- Economics and Land Use of the Environmental Statement [EN010118/APP/6.1]	Enhancing community engagement with the project.	Community Liaison Group (CLG) A CLG will be established to provide the local community a forum for discussion, information exchange and feedback relating to Longfield Solar Farm during its construction and beyond.	Additional / Other	Construction Operation	Contractor Applicant	Requirement 6. Community Liaison Group
SE-03	Socio-Economics and Land Use	-	Chapter 12: Socio- Economics and Land Use of the Environmental Statement [EN010118/APP/6.1]	Protecting soil resources	Soils Resource Management Plan (SRMP) The SRMP [EN010118/APP/7.10 Appendix] sets out measures to ensure the protection and conservation of soil resources during operation and identifies the best practice to maintain the physical properties of the soils on site, including management of trafficking on site to reduce the risk of compaction	-	Construction Operation Decommissioning	Contractor Applicant	Requirement 19. Soils Management
TA-01	Transport and Access	-	Chapter 13: Transport and Access of the Environmental Statement [EN010118/APP/6.1]	Minimising the impact of construction traffic on surrounding roads.	Suitable Routing and Timing of Construction Traffic The movement of heavy goods vehicles (HGVs) will be restricted to certain routes and times of day. A monitoring system and Delivery Management System will be implemented to record the route of HGVs to and from the Order limits and regulate their arrival times to ensure compliance. Protected Lanes will be avoided, unless required for emergency access. Regular meetings with contractors will be arranged to address any issues associated with travel and update on restrictions / requirements to be followed.	Embedded	Construction	Contractor	Requirement 15. Construction Traffic Management Plan
TA-02	Transport and Access	Socio-Economics, Human Health	Chapter 13: Transport and Access of the Environmental Statement [EN010118/APP/6.1]	Minimising disruption and risk of traffic accidents along Public Rights of Way (PRoW) and local access roads.	Maintaining PRoW and Local Access Roads Access along PRoW and local access roads will be maintained during construction. Where necessary, sufficient protection / separation will be provided between PRoW and the construction site or appropriate diversions within clear signage provided. Areas where construction routes cross PRoW or local access roads will be managed with the provision of maximum visibility between construction traffic and users and appropriate traffic management measures.	Embedded	Construction	Contractor	Requirement 13. Construction Environmental Management Plan Requirement 18. Public Rights of Way Diversions
TA-03	Transport and Access	-	Chapter 13: Transport and Access of the Environmental Statement [EN010118/APP/6.1]	Minimising disruption of construction traffic and risk of traffic accidents on surrounding roads.	Site Access from Waltham Road A suitable point of access will be provided from Waltham Road with supporting improvements, including vegetation clearance and road signs / markings. A north-south construction route through the Solar Farm Site will be provided to allow access from a single point. (Refer to Figure 2-5: Illustrative Concept Design of the Environmental Statement [EN010118/APP/6.3]).	Embedded	Construction	Contractor	Requirement 7. Detailed design approval Requirement 15. Construction Traffic Management Plan Requirement 21. Highway Improvements
TA-04	Transport and Access	-	Chapter 13: Transport and Access of the Environmental Statement [EN010118/APP/6.1]	Minimising the risk of traffic accidents along on-site and surrounding roads.	Banksmen and Vegetation Clearance A suitably qualified banksman will be positioned at all proposed accesses for the Solar Farm Site and Bulls Lodge Substation, as well as internal crossing points. Appropriate vegetation clearance will be undertaken at the proposed access on Waltham Road (visibility splays of 125m),	Embedded	Construction	Contractor	Requirement 15. Construction Traffic Management Plan Requirement 21. Highway Improvements



					crossing points on Noakes Lane (visibility splays of 90m) and the accesses to Bulls Lodge Substation (visibility splays of 90m).				Requirement 27. Bulls Lodge Substation Works Construction Traffic Management Plan
TA-05	Transport and Access	-	Chapter 13: Transport and Access of the Environmental Statement [EN010118/APP/6.1]	Minimising traffic disruption during the installation of cables across Waltham Road.	Temporary Traffic Management (TTM) for Cable Crossings TTM measures will be implemented during the period when the Grid Connection Cables are installed across Waltham Road, connecting Bulls Lodge Substation with the Order Limits. Further details regarding arrangements and timeframes for the installation of the cables will be set out in the Framework Construction Traffic Management Plan.	Embedded	Construction	Contractor	Requirement 15. Construction Traffic Management Plan Requirement 27. Bulls Lodge Substation Works Construction Traffic Management Plan
TA-06	Transport and Access	Climate Change	Chapter 13: Transport and Access of the Environmental Statement [EN010118/APP/6.1]	Minimising the impact of increased vehicle trips to the site.	Encouraging Alternative Travel Arrangements Alternative travel arrangements for site personnel will be encouraged, including car sharing and shuttle bus services, to reduce the volume of vehicle trips required. A limited but sufficient number of car parking spaces will be provided within the Order limits. Sufficient cycle parking will be provided to allow site personnel to travel via bike, where viable.	Embedded	Construction	Contractor	Requirement 15. Construction Traffic Management Plan
TA-07	Transport and Access	-	Chapter 13: Transport and Access of the Environmental Statement [EN010118/APP/6.1]	Enhancing transport routes and minimising disruption from increased traffic and risk of traffic accidents on surrounding roads.	Maintaining and Improving Operational Access The site access from Waltham Road will be continued through operation. Access to all PRoW will be maintained, with no diversions or closures, and additional permissive paths within the Solar Farm site will be provided to improve connections to existing PRoW / cycle routes.	Embedded	Operation	Applicant	Requirement 7. Detailed Design Approval Requirement 17. Permissive Paths Requirement 21. Highway Improvements
TA-08	Transport and Access	Human Health, Glint and Glare	Chapter 13: Transport and Access of the Environmental Statement [EN010118/APP/6.1]	Minimising the impact of glint and glare on road users.	Screening Solar Glare Hedgerows and other vegetation will be planted and will then need to be maintained at a height of at least 3m to conceal solar reflections and minimise impacts on road users.	Embedded	Construction Operation	Applicant Contractor	Requirement 9. Landscape and Ecological Management Plan
TA-09	Transport and Access	-	Chapter 13: Transport and Access of the Environmental Statement [EN010118/APP/6.1]	Minimising disruption from on-street parking on surrounding roads.	Operational Parking and Protected Lanes Sufficient on-site parking will be provided to accommodate the low expected demand during operation. Protected Lanes will be avoided, unless required for emergency access.	Embedded	Operation	Applicant / Contractor	Requirement 14. Operational Environmental Management Plan
TA-10	Transport and Access	-	Chapter 13: Transport and Access of the Environmental Statement [EN010118/APP/6.1]	Minimising the risk of traffic accidents along on surrounding roads.	Local Highway Improvements Improvements to local off-site highways, including verge clearance, hedge cutting and carriageway widening, will be undertaken where required to support HGV movements. Vegetation at the junction between Waltham Road and Cranham Road will be cut back to maximise visibility (Refer to Figure 13-5: Carriageway Improvements of the Environmental Statement [EN010118/APP/6.3].	Additional	Construction	Contractor	Requirement 7. Detailed design approval Requirement 15. Construction Traffic Management Plan Requirement 21. Highway Improvements
TA-11	Transport and Access	-	Chapter 13: Transport and Access of the Environmental Statement [EN010118/APP/6.1]	Minimising the impact of increased vehicle trips to the site.	Use of Chelmer Valley Park and Ride (P&R) The use of Chelmer Valley P&R will be encouraged for construction personnel during peak construction and decommissioning periods to reduce the volume of vehicle trips required.	Additional	Construction Decommissioning	Contractor	Requirement 15. Construction Traffic Management Plan Requirement 20. Decommissioning Strategy
TA-12	Transport and Access	-	Chapter 13: Transport and Access of the Environmental Statement [EN010118/APP/6.1]	Minimising disruption and the risk of traffic accidents on surrounding roads.	Monitoring Collisions on surrounding roads, routes used by HGVs, road safety within the Order limits and TTM on Waltham Road will be monitored during construction and decommissioning.	Additional	Construction Decommissioning	Contractor	Requirement 15. Construction Traffic Management Plan Requirement 20. Decommissioning Strategy
AQ-01	Air Quality	-	Chapter 14: Air Quality of the Environmental Statement [EN010118/APP/6.1]	Minimising dust emissions from activities and vehicles during construction and decommissioning.	Good Practice Measures for Dust Standards of good practice for air quality, as set out in the Institute of Air Quality Management (IAQM) 'Guidance on the Assessment of Dust from Demolition and Construction', will be followed during construction, operation and decommissioning to minimise for dust from activities and vehicles.	Embedded	Construction Operation Decommissioning	Contractor Applicant	Requirement 13. Construction Environmental Management Plan Requirement 20. Decommissioning Strategy
AQ-02	Air Quality	-	Chapter 14: Air Quality of the Environmental Statement [EN010118/APP/6.1]	Minimising dust emissions from activities and vehicles during construction and decommissioning.	Monitoring and Managing Dust A Dust Management Plan (DMP) detailing any dust monitoring required prior to and during construction and decommissioning activities, will be implemented. Relevant baseline dust monitoring will be undertaken	Additional	Construction Decommissioning	Contractor	Requirement 13. Construction Environmental Management Plan Requirement 20. Decommissioning Strategy



					before activities commence and continuous dust monitoring locations will be agreed with the Local Planning Authority.				
GG-01	Glint and Glare	Human Health / Ecology / Landscape and Visual / Cultural Heritage / Transport	Chapter 16: Other Environmental Topics of the Environmental Statement [EN010118/APP/6.1]	Minimising glint and glare impacts on existing sensitive receptors.	Screening Solar Glare The Scheme will be positioned to minimise glint and glare impacts on existing sensitive receptors. Existing screening will be maintained and new screening provided within the Order limits. To include hedgerows to be grown, infilled, gapped up and maintained to a height of at least 3m for sensitive receptors as identified in <i>Appendix 10G: Glint and Glare Assessment</i> [EN010118/APP/6.2]; or fencing until hedgerows are established.	Embedded	Construction Operation	Contractor Applicant	Requirement 9. Landscape and Ecological Management Plan
LV-01	Landscape and Visual Amenity	Ecology Human Health	Chapter 10: Landscape and Visual Amenity of the Environmental Statement [EN010118/APP/6.1]	Conserve landscape and biodiversity features and enhance the green infrastructure	Design Principles and Site Layout Modifications have been made to the design of the Scheme to avoid effects including limiting the extent of land-take within the Order limits, integrating the Scheme into the existing landscape pattern by retaining and following existing features, replacing vegetation lost due to construction by new planting, and filtering and screening prominent components of the Scheme in views from visual receptors.	Embedded	Construction	Contractor	Requirement 7. Detailed Design Approval Requirement 9. Landscape and Ecological Management Plan
LV-02	Landscape and Visual Amenity	Ecology Climate Change	Chapter 10: Landscape and Visual Amenity of the Environmental Statement [EN010118/APP/6.1]	Conserve landscape and biodiversity features and enhance the green infrastructure	Tree Protection Measures All works affecting trees will be undertaken in accordance with best practice tree protection measures.	Embedded	Construction Decommissioning	Contractor	Requirement 9. Landscape and Ecological Management Plan Requirement 13. Construction Environmental Management Plan Requirement 20. Decommissioning Strategy
LV-03	Landscape and Visual Amenity	Glint and Glare Ecology Human Health	Chapter 10: Landscape and Visual Amenity of the Environmental Statement [EN010118/APP/6.1]	Minimise the visual impacts of the Scheme	Lighting Standard good practice measures will be followed with regards to safe site lighting during construction, operation and decommissioning. For example, motion detection security lighting will be used to avoid the use of permanent lighting therefore reducing light spill to boundary features.	Embedded	Construction Operation Decommissioning	Contractor Applicant	Requirement 13. Construction Environmental Management Plan Requirement 14. Operational Environmental Management Plan Requirement 20. Decommissioning Strategy
LV-04	Landscape and Visual Amenity	Human Health Ecology	Chapter 10: Landscape and Visual Amenity of the Environmental Statement [EN010118/APP/6.1]	Minimise the visual impacts of the Scheme	Retained/enhanced Vegetation and Additional Planting Existing trees and vegetation will be protected and retained within and along the boundary of the Order limits to ensure its continued presence and to aid the screening of low-level views into to the Order limits and new planting will be delivered.	Embedded	Construction Operation	Contractor Applicant	Requirement 7. Detailed Design Approval Requirement 9. Landscape and Ecological Management Plan Requirement 13. Construction Environmental Management Plan
LV-05	Landscape and Visual Amenity	Human Health Ecology	Chapter 10: Landscape and Visual Amenity of the Environmental Statement [EN010118/APP/6.1]	To minimise the visual impacts of the scheme on White House Farm	White House Farm, Residential Receptor The historic field boundary that divides the western end of PDA 4 will be reinstated with a new native hedgerow. No PVs are proposed in the western parcel of the field, thereby retaining a clear view north from White House Farm. A native tree belt is proposed on the northern boundary of PDA 5 to strengthen the screening provided by existing vegetation in views to the south east.	Embedded	Construction Operation	Contractor Applicant	Requirement 7. Detailed Design Approval Requirement 9. Landscape and Ecological Management Plan
LV-06	Landscape and Visual Amenity	Human Health	Chapter 10: Landscape and Visual Amenity of the Environmental Statement [EN010118/APP/6.1]	To minimise the visual impacts of the scheme on 1 Whitehouse Cottages	Whitehouse Cottages, Residential Receptor An offset of approximately 70m has been incorporated into PDA 5, protecting gable end views from 1 Whitehouse Cottages.	Embedded	Construction Operation	Contractor Applicant	Requirement 7. Detailed Design Approval Requirement 9. Landscape and Ecological Management Plan



LV-07	Landscape and Visual Amenity	Human Health Ecology	Chapter 10: Landscape and Visual Amenity of the Environmental Statement [EN010118/APP/6.1]	To minimise the visual impacts of the scheme on 2 Whitehouse Cottages	2 Whitehouse Cottages, Residential Receptor A 50m offset has been incorporated into PDA 6. A hedgerow is proposed along the boundary of Works Area 1, to minimise impacts to 2 Whitehouse Cottages.	Embedded	Construction Operation	Contractor Applicant	Requirement 7. Detailed Design Approval Requirement 9. Landscape and Ecological Management Plan
LV-08	Landscape and Visual Amenity	Human Health Ecology Heritage	Chapter 10: Landscape and Visual Amenity of the Environmental Statement [EN010118/APP/6.1]	To minimise the visual impacts of the scheme on Scarlett's Farm	Scarlett's Farm, Residential Receptor Field parcels to the north and south have been excluded from Works Area 1 to minimise visual impacts on Scarlett's farm.	Embedded	Construction	Contractor Applicant	Requirement 7. Detailed Design Approval Requirement 9. Landscape and Ecological Management Plan
LV-09	Landscape and Visual Amenity	Human Health	Chapter 10: Landscape and Visual Amenity of the Environmental Statement [EN010118/APP/6.1]	To minimise the visual impacts of the scheme on Hedgerow Cottage	Hedgerow Cottage, Residential Receptor Field south of PDA 6 have been excluded from Works Area 1, to minimise visual impacts on Hedgerow Cottage.	Embedded	Construction Operation	Contractor Applicant	Requirement 7. Detailed Design Approval Requirement 9. Landscape and Ecological Management Plan
LV-10	Landscape and Visual Amenity	Human Health Ecology Heritage	Chapter 10: Landscape and Visual Amenity of the Environmental Statement [EN010118/APP/6.1]	To minimise the visual impacts of the scheme on Noakes Barn	Noakes Barn, Residential Receptor Field south of PDA 6 has been excluded from Works Area 1 and an offset from the north eastern curtilage boundary has been incorporated, with a native hedgerow proposed along the boundary of PDA 8, to minimise the visual impacts on Noakes Barn.	Embedded	Construction Operation	Contractor Applicant	Requirement 7. Detailed Design Approval Requirement 9. Landscape and Ecological Management Plan
LV-11	Landscape and Visual Amenity	Human Health Ecology	Chapter 10: Landscape and Visual Amenity of the Environmental Statement [EN010118/APP/6.1]	To minimise the visual impacts of the scheme on 1 Boreham Road	Boreham Road, Residential Receptor Offset incorporated to PDA 21 in response to gaps in vegetation around the curtilage of 1 Boreham Road. An offset has been included along Boreham Road to provide space for enhancing existing hedgerows in response to landscape planning policy and character objectives and to strengthen visual screening.	Embedded	Construction Operation	Contractor Applicant	Requirement 7. Detailed Design Approval Requirement 9. Landscape and Ecological Management Plan
LV-12	Landscape and Visual Amenity	Human Health	Chapter 10: Landscape and Visual Amenity of the Environmental Statement [EN010118/APP/6.1]	To minimise the impacts of the scheme on Stocks Farm	Stocks Farm, Residential Receptor Offset of Work Area 1 incorporated into PDA 26 and PDA 28.	Embedded	Construction Operation	Contractor Applicant	Requirement 7. Detailed Design Approval Requirement 9. Landscape and Ecological Management Plan
LV-13	Landscape and Visual Amenity	Human Health Ecology	Chapter 10: Landscape and Visual Amenity of the Environmental Statement [EN010118/APP/6.1]	To minimise the impacts of the scheme on Stocks Cottages	Residential Receptor Mitigation Offset of Work Area 1 incorporated into PDA 28. Areas of scrub are proposed in Works Area 10 to break up the foreground of the view, reducing visual impacts to Stocks Cottages.	Embedded	Construction Operation	Contractor Applicant	Requirement 7. Detailed Design Approval Requirement 9. Landscape and Ecological Management Plan
LV-14	Landscape and Visual Amenity	Human Health Ecology	Chapter 10: Landscape and Visual Amenity of the Environmental Statement [EN010118/APP/6.1]	To minimise the visual impacts of the scheme on Thatched Cottage	Residential Receptor Mitigation Offset of Work Area 1 incorporated into PDA 28. Ecologically enhanced grassland to occupy an offset within Works area 10, to reduce visual impacts on Thatched Cottage.	Embedded	Construction Operation	Contractor Applicant	Requirement 7. Detailed Design Approval Requirement 9. Landscape and Ecological Management Plan
LV-15	Landscape and Visual Amenity	Human Health	Chapter 10: Landscape and Visual Amenity of the Environmental Statement [EN010118/APP/6.1]	To minimise the visual impacts of the scheme on Buftons	Residential Receptor Mitigation 200m viewing corridor within Works Area 1 between PDA 28 and 31 to retain visual connection to Porters Wood, reducing visual impacts on Buftons.	Embedded	Construction Operation	Contractor Applicant	Requirement 7. Detailed Design Approval Requirement 9. Landscape and Ecological Management Plan



LV-16	Landscape and Visual	-	Chapter 10: Landscape and Visual Amenity of the Environmental Statement [EN010118/APP/6.1]	Minimise the footprint of the previous infrastructure	Restoration of the Land Excavations will be backfilled, using appropriate imported soil if required, otherwise with soil sourced on site, using appropriate soil management techniques. If necessary the soil will be tilled to mitigate for any compaction. Areas where grass does not exist because of the footprint of the previous infrastructure (e.g. the BESS and Longfield Substation) shall be reseeded with suitable native species, in liaison with the land owner, in order to integrate the newly restored soil into the future land-use. Some soil profiling may be required and the land will be contoured in agreement with the landowner and Local Planning Authority, approximately similar to the current topography.	Embedded	Decommissioning	Applicant	Requirement 19. Soils Management Requirement 20. Decommissioning Strategy
HH-01	Human Health	-	Chapter 15: Human Health of the Environmental Statement [EN010118/APP/6.1]	To minimise the effects of the Scheme on Human Health	Topic Specific Mitigation Measures for Human Health Mitigation measures are embedded within the Scheme, as set out in the respective chapters, to reduce other construction and operational effects (such as noise, air quality and landscape) which in turn will mitigate the effects on the local community and existing facilities from a human health perspective	Embedded	Construction Operation Decommissioning	Contractor Applicant	Requirement 7. Detailed Design Approval Requirement 13. Construction Environmental Management Plan Requirement 14. Operational Environmental Management Plan Requirement 20. Decommissioning Strategy
НН-02	Human Health	-	Chapter 15: Human Health of the Environmental Statement [EN010118/APP/6.1]	Protecting the health of construction personnel.	Personal Protective Equipment (PPE) All construction personnel will be required to wear PPE during construction, such as dust masks.	Additional	Construction and Decommissioning	Contractor	Requirement 13. Construction Environmental Management Plan Requirement 20. Decommissioning Strategy
TTU-01	Telecommunicati ons, Television Reception, and Utilities	-	Chapter 16: Other Environmental Topics of the Environmental Statement [EN010118/APP/6.1]	Minimising the risk of damage to existing utilities.	Precautionary Measures Precautionary measures of working will be followed. These include locating works outside of utilities protected zones and confirming the location of known and unknown existing utilities through mapping and ground penetrating radar prior to construction and communicated to construction personnel. Methods of construction and demobilisation of utilities will be agreed prior to construction.	Embedded	Construction	Contractor	Requirement 7. Detailed Design Approval Requirement 13. Construction Environmental Management Plan
W-01	Waste	-	Chapter 16: Other Environmental Topics of the Environmental Statement [EN010118/APP/6.1]	Minimising unnecessary use of resources and waste production during construction and decommissioning.	Sustainable Natural Resource Use and Waste Production Suitable measures for the sustainable use of resources and waste management will be implemented during construction and decommissioning. The contractor will seek to use material resources efficiently, reduce waste at source, reduce waste that requires final disposal to landfill and apply the principles of the waste hierarchy. The contactor will prepare and implement a Construction Resource Management Plan (CRMP).	Embedded	Construction Decommissioning	Contractor	Requirement 7. Detailed Design Approval Requirement 13. Construction Environmental Management Plan Requirement 20. Decommissioning Strategy
W-02	Waste	-	Chapter 16: Other Environmental Topics of the Environmental Statement [EN010118/APP/6.1]	Minimising the impact of waste on the surrounding environment during construction and decommissioning.	Prevention and Management of Waste Suitable measures for preventing the production of waste on site will be implemented during construction and decommissioning. All waste transported off site will be delivered to appropriately licenced receives of such materials. The Contractor will segregate construction waste to be re-used and recycled where reasonably practicable. The contactor will prepare and implement a Construction Resource Management Plan (CRMP).	Embedded	Construction Decommissioning	Contractor	Requirement 13. Construction Environmental Management Plan Requirement 20. Decommissioning Strategy
W-03	Waste	-	Chapter 16: Other Environmental Topics of the Environmental Statement [EN010118/APP/6.1]	Minimising the impact of waste on the surrounding environment during operation.	Management of Operational Waste The amount and type of operational waste will be recorded and transported offsite using licensed carriers, in accordance with the relevant regulations.	Embedded	Operation	Applicant	Requirement 14. Operational Environmental Management Plan



W-04	Waste	-	Chapter 16: Other Environmental Topics of the Environmental Statement	Minimising the impact of waste on the surrounding environment during decommissioning.	Reuse/Recycling of Scheme Infrastructure The infrastructure such as PV panels and battery storage units will be recycled as far as practical and in accordance with legislation and guidance applicable at the time, or if more suitable at the time, sold for	Embedded	Decommissioning	Applicant	Requirement 20. Decommissioning Strategy
			[EN010118/APP/6.1]	decommissioning.	refurbishment and reuse. It is expected that a Decommissioning Resource Management Plan (DRMP) will be required and is committed to in the DCO to manage the disposal of waste from the Order limits, but the approach to and content of this will be driven by the relevant legislative and policy requirements at the time of decommissioning.				
GC-01	Ground Conditions	-	Chapter 16: Other Environmental Topics of the Environmental Statement [EN010118/APP/6.1]	Minimising the risk of contamination during construction and decommissioning.	Good Practice Measures for Ground Conditions Standards of good practice for ground conditions, will be followed during construction and decommissioning to prevent, contain and remediate contamination.	Embedded	Construction Decommissioning	Contractor	Requirement 13. Construction Environmental Management Plan Requirement 20. Decommissioning Strategy
GC-02	Ground Conditions	-	Chapter 16: Other Environmental Topics of the Environmental Statement [EN010118/APP/6.1]	Ensuring appropriate measures are in place prior to construction.	Ground Investigation Ground investigations will be undertaken and reviewed prior to construction works commencing.	Additional	Construction	Contractor	Requirement 13. Construction Environmental Management Plan
GC-03	Ground Conditions	-	Chapter 16: Other Environmental Topics of the Environmental Statement [EN010118/APP/6.1]	Minimising the risk of contamination during operation.	Operational Maintenance Regular, planned maintenance of equipment and appropriate storage of plant.	Additional	Operation	Applicant	Requirement 14. Operational Environmental Management Plan Requirement 11. Surface and Foul Water Drainage
MAD-01	Major Accidents or Disasters	Human Health	Chapter 16: Other Environmental Topics of the Environmental Statement [EN010118/APP/6.1]	Minimising the risk of major accidents and disasters.	Risk Assessment and Management Plans The risk of major accidents and disasters during construction, operation and decommissioning will be addressed through relevant risk assessments and management plans.	Embedded	Construction Operation Decommissioning	Applicant Contractor	Requiremen13. Construction Environmental Management Plan Requirement 14. Operational Environmental Management Plan Requirement 20. Decommissioning Strategy
MAD-02	Major Accidents or Disasters	Human Health	Chapter 16: Other Environmental Topics of the Environmental Statement [EN010118/APP/6.1]	Minimising the risk of major accidents and disasters.	Adherence to Guidance All works will be undertaken in accordance with relevant Health and Safety legislation and guidance with relevant emergency details publicised and communicated to all site personnel.	Embedded	Construction Operation Decommissioning	Applicant Contractor	Requirement 13. Construction Environmental Management Plan Requirement 14. Operational Environmental Management Plan Requirement 20. Decommissioning Strategy
MAD-03	Major Accidents or Disasters	Human Health	Chapter 16: Other Environmental Topics of the Environmental Statement [EN010118/APP/6.1]	Minimising the impact from smoke and the release of toxic gases	Emergency Response Plan An Emergency Response Plan will be produced detailing the procedures for managing the release of smoke and toxic gases for the operation of the Scheme.	Additional	Operation	Applicant	Requirement 14. Operational Environmental Management Plan
MAD-04	Major Accidents or Disasters	Human Health	Chapter 16: Other Environmental Topics of the Environmental Statement [EN010118/APP/6.1]	Minimising the risk of fire.	Outline Battery Safety Management Plan An Outline Battery Safety Management Plan has been produced for the Scheme and will be referred to during operation.	Additional	Operation	Applicant	Requirement 8. Battery Safety Management