OAKLANDS FARM SOLAR PARK

Applicant: Oaklands Farm Solar Ltd

Environmental Statement
Appendix 17.1 – Schedule of Mitigation
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Oaklands Farm Solar Park - Environmental Statement Volume 3

Appendix 17.1: Schedule of Mitigation

Final report
Prepared by LUC
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Appendix 17.1: Schedule of Mitigation

This appendix provides a consolidated list of the following:

- **Table 17.1.1** sets out considerations and mitigation embedded into the design of the Proposed Development which have been informed by early surveys and assessment and fed into design iterations through the EIA process. Further information on design evolution can be found in **Chapter 3: Site Selection and Design Strategy**.
- **Table 17.1.2** outlines measures considered to be standard practice on modern construction sites and operational solar farm sites. As such they have been factored into the assessments as embedded mitigation. The table identifies whether the measures are specific to a particular stage of the Proposed Development. Measures for the construction phase will be secured in the Construction Environmental Management Plan (CEMP); operational measures will be secured in the Operational Environmental Management Plan (OEMP); and decommissioning measures in the Decommissioning Environmental Management Plan (DEMP).
- **Table 17.1.3** outlines additional mitigation measures which have been identified in the ES assessments as required to mitigate adverse effects.
- **Table 17.1.4** outlines requirements for further surveys and monitoring measures.

Table 17.1.1: Mitigation embedded into the design of the Proposed Development

Consideration/Mitigation Embedded into Design	Relevant to which topic
A stand-off distance of at least 100m is proposed between solar plant and residential properties to ensure that the Proposed Development is not dominant or overwhelming in main views. This has been increased to up to 150m for some of the properties that will experience direct views of PV panels. This stand off distance will also ensure that noise from solar plant (inverters and Medium Voltage (MV) transformers) is reduced for properties surrounding the Site. String inverters will be placed on row ends away from receptors where required. The stand off distances also help to reduce glint and glare. The Proposed Development's substation and Battery Energy Storage System (BESS) has been moved from its previously proposed location at the PEIR[1] stage near to the centre of the Oaklands Farm area, in a flatter area that is free of on-site constraints and near existing and proposed tracks. The BESS is also a potentially material noise source and moving it to the centre of the Oaklands Farm increases its distance from residential receptors to avoid adverse noise effects.	Chapter 5: Landscape and Visual Chapter 11: Noise Chapter 14: Glint and Glare
Access tracks have been designed to utilise existing farm tracks where possible and to follow field boundaries. They will be kept away from highly visible slopes where possible, will avoid tree root protection areas and badger setts where possible. Access tracks will be surfaced with locally sourced stone chippings which responds to the local vernacular or will be grass corridors (the adjacent grassland will be allowed to extend across the edges of the permanent operational tracks, reducing the extent of the visibility of tracks in the landscape).	Chapter 5: Landscape and Visual Chapter 10: Transport and Access
Existing ancient and veteran trees, hedgerows and ancient woodland habitat will be retained as far as possible. A 5m buffer will be implemented between the Proposed Development infrastructure and the retained hedgerows. Application of appropriate buffer distances around trees with high and moderate bat roost suitability during works. Buffer of at least 15m from ancient woodland	Chapter 5: Landscape and Visual Chapter 6: Ecology

[1] Preliminary Environmental Information Report

Consideration/Mitigation Embedded into Design	Relevant to which topic
The ground beneath and around the structures will remain as pasture suitable for light sheep grazing with benefits for surface water run off and avoiding erosion of bare, exposed soils. Sheep will be kept out of certain habitats which could be affected by grazing through the use of simple stock fencing.	Chapter 5: Landscape and Visual Chapter 8: Water Resources and Flood Risk Chapter 9: Ground Conditions
The Cross Britain Way / National Forest Way long distance path which crosses the Site will not be changed or diverted. A new Permissive path will link the Cross Britain Way / National Forest Way long distance path with Coton in The Elms FP 1 (SD13/1/1).	Chapter 5: Landscape and Visual Chapter 12: Socio-Economics, Recreation and Access
Deer fencing is designed to integrate into the agricultural landscape character (wooden poles with steel wire mesh and potentially a single line of barbed wire). Where additional security is required along Coton Road, wire mesh fencing with steel posts will be installed. The fencing will include mammal gaps at the base of the fence to allow dispersal of mammals, including badger and hedgehog. These gaps will be 20-30cm in size. Screening in the form of mesh netting will be installed on the fencing on the north side of Coton Road to mitigate glint and glare effects until the proposed planting has matured.	Chapter 5: Landscape and Visual Chapter 6: Ecology
The panels will be installed using methods to reduce the extent of excavation and concreting required, by piling the supporting structures into the ground. Use of concrete pads for panel mounting structure instead of piling into the ground is available where necessary, such as when in close proximity to an existing water pipe.	Chapter 6: Ecology Chapter 8: Water Resources and Flood Risk Chapter 9: Ground Conditions
To help integrate equipment more sympathetically into the landscape, the 2.4m high palisade fencing around the Proposed Development's substation and the BESS will be coloured a mute green or similar, and the BESS and transformers will be coloured a dark and recessive colour such as Merlin grey (RAL 180 40 05/BS 18B25) or similar. The colour will be agreed with the Local Planning Authority.	Chapter 5: Landscape and Visual
No operational lighting is proposed other than alarm lights on transformer stations that are only activated in case of trespass or attempted theft.	Chapter 5: Landscape and Visual
The BESS, inverters, transformers and the Proposed Development's substation will not be sited within the fluvial or surface water flood risk areas.	Chapter 8: Water Resources and Flood Risk
For both construction and operational phases, the Site access points and traffic routes are located away from the nearest villages of Rosliston and Walton-on-Trent, reducing the noise emissions from traffic associated with the Site. Consideration has been given to the design of the construction access points and to the movement of vehicles within the Site to ensure optimal efficiency in the movement of staff and equipment whilst maintaining the safety of users on the local highway network (for example, separate entrance and exit points off Walton Road to provide one-way system for HGVs during construction, and new dedicated Temporary Construction Haul Road	Chapter 11: Noise Chapter 10: Transport and Access

Consideration/Mitigation Embedded into Design	Relevant to which topic
across private land for all HGV traffic, to avoid HGV traffic going through villages of Walton-on-Trent and Rosliston and to limit HGV traffic on the local road network). Visibility has been considered for all construction and operational access points, and where necessary permanent visibility splays based on assessment of traffic, road speeds and vehicle characteristics have been implemented. Multiple existing farm access points for small construction and operational vehicles are utilised around the site to offer flexibility and to disperse small construction vehicle traffic throughout local road network as much as possible. Existing farm access points for operational traffic and small construction vehicles are “in-only” due to visibility concerns when exiting Site onto road network - all operational traffic and small construction vehicles will exit the site at the crossroads on Coton Road (which has permanent visibility splays). Temporary solutions for visibility during construction include temporary traffic lights, banskmen and signage.	
Plant will be selected to provide oversizing and redundancy to ensure equipment is operating below maximum capacity (highest noise levels typically occur when plant is operating at maximum capacity)	Chapter 11: Noise
The Applicant has consulted with utilities operators to identify necessary easement corridors required for the overhead lines and other utility assets that cross the Site. Where necessary construction methods have been discussed where construction activities (e.g. cabling) need to cross assets.	Chapter 16: Other issues
For construction, there is an aim to “do minimum” to the Site. This means soil stripping, trench digging and drainage ditches are minimised. Concreting operations are restricted to the transformer / the Proposed Development’s substation / BESS compounds, and if required pad foundations for solar panels over the water main through the south of the Site.	Chapter 11: Noise Chapter 9: Ground Conditions Chapter 15 : Agriculture and Soils
The proposed drainage strategy is detailed in **Appendix 8.1: Flood Risk Assessment and Outline Drainage Strategy**. As far as possible and in accordance with SuDS best practice, the key principle of the strategy is source control whereby all surface water run-off is discharged to ground as close to the point of interception as possible. This will include: - solar panel arrays will allow incidental run-off to infiltrate to ground below the panels. - all trackways constructed to be permeable (i.e. unsealed), and as such will maintain infiltration capacity similar to the bare soil cover under the current scenario. - where concrete pads are required a gravel-filled drainage trench shall be constructed around the structure, thus providing soakaway capacity equivalent to the infiltration capacity lost beneath the structure. The drainage has been designed to ensure that operational phases do not contribute to polluted run-off or increase surface flows entering watercourses. Control of surface water runoff, including from damping down, to prevent contamination of waterbodies. Any temporary site drainage system to be developed to prevent silt-laden run-off being discharged into sewers or surface watercourses	Chapter 6: Ecology Chapter 8: Water Resources and Flood Risk Chapter 9: Ground Conditions Chapter 10: Transport and Access
The BESS will comprise a 100% impermeable sub-base with drainage infrastructure built into or below the sub-base to divert runoff to a lined contaminant tank/pond in the unlikely event of a battery fire. Once in the tank testing, flow control and pumping will ensure the safe discharge and removal of the water. Control valves will be engaged at the earliest detection of a fire to initiate release of the surface and fire water contaminant.. The	Chapter 8: Water Resources and Flood Risk

Consideration/Mitigation Embedded into Design	Relevant to which topic
BESS units will be surrounded by suitable bunds and the containment tank/pond lined to ensure fire-fighting water and associated contaminants do not leach into the environment. Under normal operations surface water runoff will bypass the containment tank/pond and drain to the northwest towards the existing drainage channel, ultimately discharging into watercourse approximately 300m north-west of the BESS/substation.	
In order to inform the design of the Proposed Development, a programme of intrusive site investigation will be required. This is a pre-commencement requirement in the DCO. During this process, the site investigation will target potential areas of made ground infill to former pits, reservoirs/ponds and in the area of former buildings at New Barn. Soil sampling, laboratory analysis and a suitable assessment shall then be undertaken in accordance with current best practice in order to ascertain the potential risk posed to ground conditions human health and the wider environment.	Chapter 9: Ground Conditions

Table 17.1.2: Best Practice Measures

Best Practice Measures	Relevant to Which Topic	Stage of Proposed Development
Pollution Prevention – contamination, noise, dust, lighting, drainage, soil management		
During construction, the principles presented with BS 522811 section 7.3 Execution of works will be followed: “All available techniques should be used to minimise, as far as is appropriate, the level of noise to which operators and others in the neighbourhood of site operations will be exposed”. These include consideration to the hours of working, quiet working methods where reasonably practicable, control of the construction noise at source, and control of the spread of noise (section 8 of BS 5228).	Chapter 11: Noise	Construction Decommissioning
Best Practical Means as described in the Control of Pollution Act 1974 will be adopted including: - Selection of low noise plant and construction techniques where possible. - Application of noise silencers. - Application of rubber linings in dumpers to reduce noise impact. - Minimise drop height of materials. - All plant to be properly maintained and operated in accordance with manufacturer’s instructions. - Any fixed construction plant items to be located as far from noise sensitive properties as possible and screened if required and practical with temporary hoardings. Control of working hours and liaison with the Local Authority and nearby affected stakeholders where planned works outside of these hours is considered necessary.	Chapter 11: Noise	Construction Decommissioning
Adhere to dust management issues set out in the CEMP. Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken. Make the complaints log available to the local authority when asked. Record any exceptional incidents that cause dust and/or air emissions, either on- or off- site, and the action taken to resolve the situation in the log book.	Chapter 16: Other Issues	Construction Operation Decommissioning

Best Practice Measures	Relevant to Which Topic	Stage of Proposed Development
Carry out regular site inspections to monitor compliance with the Dust Management Plan, record inspection results, and make an inspection log available to the Local Authority when asked. Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust area being carried out and during prolonged dry or windy conditions. Plan the site layout so that machinery and dust-causing activities are located away from receptors, as far as is possible. Erect solid screens or barriers around dusty activities or the site boundary that are as at least as high as any stockpiles on site. Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g., suitable local exhaust ventilation systems. Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate. Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate. No bonfires and burning of waste materials.		
Switching vehicles and plant off when not in use and ensuring construction vehicles conform to current UK emissions standards.	Chapter 16: Other Issues	Construction Decommissioning
Avoid the use of diesel or petrol-powered generators and use mains electricity or battery-powered equipment where practicable.	Chapter 16: Other Issues	Construction Decommissioning
Adhere to silt management plan measures within the CEMP, referencing the protection of overland flow paths and all watercourses within and adjacent to the Site. Soil stockpiles to be located away from overland flow paths and water bodies, and outside of the River Mease Special Area of Conservation (SAC) catchment, and to be seeded as soon as possible, covered with geotextile mats and/or surrounded by a bund.	Chapter 6: Ecology Chapter 8: Water Resources and Flood Risk Chapter 9: Ground Conditions	Construction
Lighting of temporary construction compounds will be restricted to agreed working hours and that which is necessary for security. Lighting will follow the following methods to avoid impacts on bats: - Careful aiming, positioning and selection of luminaires to avoid lighting retained and created habitats. - White light will not be used (preferable colours are 3000°k to 2700°k with peak wavelengths greater than 550nm). - Lighting units will result in zero upward light output.	Chapter 5: Landscape and Visual Chapter 6: Ecology	Construction Decommissioning

Best Practice Measures	Relevant to Which Topic	Stage of Proposed Development
- Column heights will be minimised as far as practicably possible without resulting in an unnecessary increase of the overall number of lighting columns. - As a last resort, the incorporation of shields, baffles and cowls fitted to the luminaires		
Fuel and other potentially polluting chemicals to be stored in a secure impermeable and bunded storage area outside the River Mease SAC catchment. Refuelling and maintenance to be undertaken within the site compound away from all watercourses within or adjacent to the Site and outside the River Mease SAC catchment. Fixed plant to be self-bunded, mobile plant to be kept clean and in good working order, and fitted with drip trays, where appropriate. Spillage kits and oil absorbent material to be carried by mobile plant/vehicles and located at vulnerable locations (e.g. crossings of land drains/ditches). Tidy storage on Site will also minimise impacts on views. Tools and plant to be washed and cleaned in designated areas within the site compound where runoff can be isolated for treatment before discharge to watercourse/ground or sewer under appropriate consent.	Chapter 5: Landscape and Visual Chapter 6: Ecology Chapter 8: Water Resources and Flood Risk Chapter 9: Ground Conditions	Construction Operation Decommissioning
Maintain a stand-off from watercourses, with no works undertaken within an 8m easement with the exception of water crossings. The turf in these stand-off areas shall be maintained intact and undisturbed throughout the construction phase, thus forming a vegetated filter strip, providing protection to the watercourses from silt and run-off. These vegetated filter strips shall be protected during the works by use of silt fencing, barrier fencing, soil berm or similar to clearly demarcate the stand-off areas and to provide a barrier to movement of plant and migration of silt as required.	Chapter 6: Ecology Chapter 8: Water Resources and Flood Risk Chapter 9: Ground Conditions	Construction Decommissioning
Adhere to Soils Management Plan (SMP) to reduce any detrimental impact and degradation to soils on the Site. Measures include sealing of all soils in storage areas (stockpiles) using an excavator bucket at the end of each shift, to minimise the potential for sediment to be washed off during a rainfall event. Formation of all stockpiles outside of the 8m works stand-off zones adjacent to watercourses/ ditches. Where long-term storage of soil is planned, vegetation on stockpiles shall be allowed to naturally regenerate and/ or be seeded to facilitate a cover of vegetation. Restoration of any areas which are disturbed during construction, including those areas used as a construction compound, to be undertaken immediately following completion of the Proposed Development	Chapter 6: Ecology Chapter 8: Water Resources and Flood Risk Chapter 9: Ground Conditions	Construction Decommissioning
Diversion of surface water from areas of bare soil within the construction area in pond/ lagoon areas for it to drain to ground. Where volumes and infiltration rates prevent this, water will be allowed to drain to the watercourses only if it is suitably free of visual evidence of silt or other contamination. Where water is visibly turbid (silt-laden) or impacted by contaminants, it shall be treated prior to discharge using one or a combination of; a proprietary water treatment system (e.g. silt-buster); hay bale and/ or sedimat weirs or mats or similar; temporary grips and/ or; proprietary silt filtration devices (e.g. Naylor's SmartFilter).	Chapter 6: Ecology Chapter 8: Water Resources and Flood Risk Chapter 9: Ground Conditions	Construction Decommissioning

Best Practice Measures	Relevant to Which Topic	Stage of Proposed Development
The weather forecast will be monitored daily throughout in order to predict periods of likely heavy rainfall. Where heavy rainfall is predicted works may need to be suspended. Ahead of a period of forecasted heavy rain, an inspection of the works will be carried out to assess areas susceptible to sediment run-off and additional precautions and measures will be implemented as necessary. Examples of such precautions include additional sediment trap weirs and covering of stockpiles.	Chapter 6: Ecology Chapter 8: Water Resources and Flood Risk Chapter 9: Ground Conditions	Construction Decommissioning
Implement and adhere to Site waste management plan to ensure the control of waste on Site. Minimise the creation of waste and maximise the use of alternative materials with lower embodied carbon, such as locally sourced products and materials with a higher recycled content where feasible. Reusing suitable infrastructure and resources already available in the Site where possible to minimise the use of natural resources and unnecessary materials (e.g. reusing excavated soil for fill requirements). Segregate construction waste to be re-used and recycled.	Chapter 13: Climate Change Chapter 16: Other Issues	Construction Operation Decommissioning
Protection of Habitats and Species		
Existing trees and hedgerows will be protected in accordance with best practice (BS 5837:2012. Trees in Relation to design, demolition and constructions - Recommendations) during the construction period. Where required for root protection construction of track using a cellular confinement system (‘no dig’).	Chapter 5: Landscape and Visual Chapter 6: Ecology	Construction Decommissioning
Trees identified as having low bat roost suitability will be felled using soft felling techniques. This will involve the section felling of trees and then gently lowering each section in a controlled manner to ground. The sections will be left for at least 24 hours with the features in an upright position to enable bats to vacate. This would be completed at a sensitive time of year in spring/autumn to avoid the breeding season.	Chapter 6: Ecology	Construction
A pre-construction badger survey will be undertaken by an ecologist to update the sett locations and status at least three months prior to construction. All badger setts will be demarcated prior to works. No construction works will be undertaken within 30m of an active badger sett during the breeding season between November and June inclusive. Should a sett be discovered on or within 30m of the works, works should be stopped, and a suitably qualified ecologist must be contacted to advise on how best to proceed Any vehicle traffic within close proximity of a badger sett will be subject to a 5mph speed limit. Any works undertaken within 30m of a badger sett will be completed under a Natural England badger disturbance licence as necessary. Mitigation measures required under the licence may include timing of works to avoid the breeding season and adapting working methods to minimise disturbance. A construction method statement/toolbox talk will be provided in relation to badger to ensure that precautionary methods are followed, including safe storage of materials and substances, measures to prevent badgers from entering construction	Chapter 6: Ecology Chapter 10: Transport and Access	Construction

Best Practice Measures	Relevant to Which Topic	Stage of Proposed Development
activities within the Site and becoming trapped in excavations or materials, and control measures including construction traffic speed controls. The storage of topsoil or other 'soft' building materials on site will be given careful consideration. Badgers will readily adopt such mounds as setts. To avoid the adoption of any mounds by badgers, mounds will be kept to a minimum and any essential mounds will be covered and subject to daily inspections to ensure that no setts have been created.		
Pre-inspection checks for otter signs in the vicinity of works and appropriate working practices to avoid disturbance including no night-time working, sensitive construction lighting and appropriate working buffers. All otter holts will be demarcated prior to works. No construction works will be undertaken within 30m of an otter holt. Any vehicle traffic within close proximity of an otter holt will be subject to a 5mph speed limit. Any works undertaken within 30m of an otter holt will be completed under a Natural England Protected Species licence as necessary.	Chapter 6: Ecology	Construction Decommissioning
Any works that have potential to affect habitats suitable for reptiles such as at Drakelow Power Station or field edges, or known populations of reptiles will be required to undertake the following ecological protection measures: - A series of habitat manipulation measures will be implemented to reduce the suitability of the Site for reptiles. These would include strimming any areas of long grass to a height of no more than 15cm during the reptile active season (April to October inclusive). Construction sites can rapidly increase in suitability for reptiles if left unmanaged; therefore, it is important that the habitat manipulation measures are maintained, particularly in the grassland, to prevent reptiles from moving into the Site. - In addition, any soils or earth removed and stockpiled as part of proposed works to implement the solar arrays, should be sealed off to prevent any reptiles from using this as a place of refuge and subsequently being injured or killed as a result of movement of materials. - If suitable habitats for reptiles such as refugia are removed, they should first be subjected to a destructive search by a suitably qualified ecologist immediately prior to removal.	Chapter 6: Ecology	Construction Decommissioning
Suitable bird nesting habitat, including hedgerows and trees for non-ground nesting birds and arable and grassland for ground nesting bird species, that will be removed as part of the Proposed Development will be undertaken outside of the bird nesting season between March and August (inclusive). Where this is not feasible, the removal of these habitats will be completed under a watching brief by an ECoW. Where clearance of suitable habitat is programmed during the bird breeding season, prior to works, a suitably qualified person must undertake a survey to determine whether birds are nesting in the area. If a nest is discovered, clearance or	Chapter 6: Ecology	Construction

Best Practice Measures	Relevant to Which Topic	Stage of Proposed Development
other construction works would need to be delayed within an exclusion zone. Works may only recommence once it is confirmed that chicks have fledged and that no other nests are in use within the exclusion zone		
Pre-construction inspections for invasive non-native species and, if required, the provision of appropriate buffer zones and an eradication programme. Any invasive species within or adjacent to the Site will be demarcated prior to works and will be subject to chemical/manual treatment prior to and during works in accordance with a CEMP, with long-term eradication prescriptions to be detailed and implemented through a LEMP.	Chapter 6: Ecology	Construction
Implementation of appropriate biosecurity measures in accordance with best practice.	Chapter 6: Ecology	Construction Decommissioning
Specific surveys to be undertaken within three months prior to commencement of construction (subject to the habitat features present), or within a suitable timeframe to support NE species licensing, include the following: - Habitat survey to determine whether conditions have changed as a result of changes in land management (and implications for protected species surveys). - Bat Roost Assessment of trees - Badger survey - Nesting bird survey should vegetation removal be required within the bird nesting season Other protected species surveys if deemed necessary following the above habitat survey.	Chapter 6: Ecology	Construction
Capping of any exposed pipe systems when contractors are off site and providing exit ramps from any exposed trenches or holes to prevent animals getting stuck.	Chapter 6: Ecology	Construction Decommissioning
Heritage		
Accidental damage to heritage assets (e.g. arising from vehicle movements in the vicinity of the Park Farm listed building).	Chapter 7: Historic Environment	Construction Decommissioning
Any archaeological works to be undertaken in line with Written Scheme of Investigation (WSI).	Chapter 7: Historic Environment	Construction
Site Management – Communications with neighbours and Site Staff		
Crossing points at PRoW will be manned by a site operative to ensure site vehicles do not come into conflict with users of the PRoW. Gates will be erected to prevent members of the public accessing the Site, and to allow vehicles to cross the PRoW safely. Out of working hours, the PRoW would remain open and accessible.	Chapter 12: Socio-Economics, Tourism and Recreation	Construction Operation Decommissioning

Best Practice Measures	Relevant to Which Topic	Stage of Proposed Development
Enrolling in the Considerate Constructors Scheme (CCS) to assist in reducing pollution, including GHGs, from the Proposed Development by employing good industry practice measures.	Chapter 16: Other Issues Chapter 13: Climate Change	Construction Decommissioning
Development of and adherence to a Safe System of Work under the Health and Safety at Work Act 1974 and CDM (2015	Chapter 9: Ground Conditions	Construction
Display the name and contact details of person(s) accountable for environmental issues on the site boundary. This may be the environmental manager/engineer or the site manager. Display the head or regional office contact information.	Chapter 16: Other Issues Chapter 13: Climate Change	Construction Operation Decommissioning
An emergency response plan will be prepared as part of the CEMP and prior to construction. The emergency response plan will include (but not be limited to) chemical/fuel spillage, flood events, fire, explosions, structural collapse.	Chapter 8: Water Resources and Flood Risk Chapter 9: Ground Conditions Chapter 16: Other Issues Chapter 13: Climate Change	Construction Decommissioning
Toolbox talks or other training to be provided to site staff on relevant site environmental issues to ensure precautionary working methods are adhered to.	Chapter 5: Landscape and Visual Chapter 6: Ecology Chapter 7: Historic Environment Chapter 8: Water Resources and Flood Risk Chapter 9: Ground Conditions Chapter 10: Transport and Access Chapter 11: Noise Chapter 12: Socio-Economics, Tourism and Recreation	Construction Operation Decommissioning

Best Practice Measures	Relevant to Which Topic	Stage of Proposed Development
	Chapter 13: Climate Change Chapter 16: Other Issues	
Community Liaison with local residents to discuss the programme of works and discuss the measures put in place to minimise impacts	All topics	Construction Operation Decommissioning

Table 17.1.3: Additional Mitigation Measures Identified in the Assessments

Additional Mitigation Measures	Relevant to Which Topic	Stage of Proposed Development
Landscaping, planting and ecological enhancement measures as set out in Appendix 5.6 - Outline Landscape and Ecological Management Plan. This will include the provision of the following measures: - Measures to mitigate the impact of habitat loss, damage, disturbance and contamination during construction will be dealt with via a LEMP. - Replacement roost features, such as bat boxes will be installed prior to the loss of trees identified as having low bat roost suitability. - Proposals will include the provision of tree, scrub and hedgerow planting, which will mitigate the loss of the small number of trees and localised sections of hedgerow and scrub that will be lost during construction. - Proposals will include for the replacement of grassland habitat, including species-rich grassland along the edges of the fields and in more open areas of the Site. - Provision of bird boxes, including for barn owl. - Additional planting will be provided - hedgerow and tree planting will mitigate the loss of nesting bird habitats. - Habitat creation and management as outlined by the LEMP. This includes the provision of planting of hedgerows, scrub and woodland within and in the wider area of the Site and the creation of species-rich grassland, particularly along the boundaries of the field and in open areas where solar arrays are not proposed. This will mitigate for impacts to badger arising from habitat fragmentation by providing alternative, more suitable habitat for these species to forage, disperse and to build new setts. - Provision of an interpretation board. Planting will also provide screening and visual improvements of benefit to users of local PRoW network.	Chapter 5: Landscape and Visual Chapter 6: Ecology Chapter 12: Socio-Economics, Tourism and Recreation Chapter 14: Glint and Glare	Construction Operation
A suitable programme of mitigation to address harm to, or loss of, heritage assets would be drawn up in consultation with the archaeological advisor to SDDC. This is likely to comprise a staged programme of archaeological works set out as a Written Scheme of Investigation. This mitigation will not reduce the level of effects to the heritage assets but will provide a record of	Chapter 7: Historic Environment	Construction

Additional Mitigation Measures	Relevant to Which Topic	Stage of Proposed Development
the features lost as a result of development, preserving them by record. This follows industry best-practice to address effects to heritage assets.		
If unexpected contamination encountered on Site, the applicant will adhere to Land Contamination Risk Management best practice implementing a programme of site investigation, assessment and remediation and/ or risk management shall be implemented in the construction phase. Soil sampling, laboratory analysis and contaminated land assessment shall then be undertaken in accordance with LCRM and current best practice to ascertain the potential risk posed to ground conditions human health and wider environment. If this assessment determines that remediation or risk management is required to address any potential risks posed by made ground, a process of remediation options appraisal, remediation strategy, remediation implementation and verification shall be entered into. This work shall improve the ground conditions such that any risks posed are reduced to acceptable levels.	Chapter 6: Ecology Chapter 9: Ground Conditions Chapter 16: Other Issues	Construction
A proposed permissive path has been included in the application, to connect the existing PRoW in the local area. The permissive path will be linked into the wider landscape and ecological management of the Site with hedgerow and wildflower planting adding to the visual and biodiversity value of the path.	Chapter 5: Landscape and Visual Chapter 6: Ecology Chapter 12: Socio-Economics, Tourism and Recreation	Operation
In relation to land drains, if required, the Applicant will replace or repair any land drains found to be damaged during construction	Chapter 8: Water Resources and Flood Risk	
Adhere to Construction Traffic Management Plan including: - Proposed construction vehicle routing that disperses construction traffic across the study area so as to limit the magnitude of impact on sensitive receptors. - Temporary signage and traffic control. - Temporary Construction Haul Road to contain internal trips within the Site. - Limited operational hours, e.g., to avoid traditional highway peak traffic hours during the AM (08:00-09:00) and PM (17:00-18:00), and school pick-up and drop off-periods. - Core working hours between 07:00 and 19:00 on weekdays and between 08:00 and 13:00 on Saturday, arriving up to one hour before and leaving one-hour after to allow for set-up and closedown activities. - Staggered timing of inbound and outbound construction traffic movements. - Designated ‘routing staff’ to enforce construction vehicle routes. - Traffic Management Group to enforce and update all measures as and if necessary - Ensure that construction traffic does not impact the running of local events if they were to operate during the week or set up of events. This includes the potential for days with limited and/or restricted construction vehicle activities.	Chapter 10: Transport and Access	Construction Decommissioning

Additional Mitigation Measures	Relevant to Which Topic	Stage of Proposed Development
- Temporary signage may be erected along construction traffic routes on the local road network to provide access and routing information. These will be placed to ensure that construction vehicles and staff are able to travel directly to Site from the wider SRN and Major Road Network (MRN). Locations of the temporary signage will be agreed with DCC and SCC ahead of installation. - Vehicles will be called forward to the Site using telephone or radio, with qualified personnel and guards positioned at the following locations along the construction delivery routes - Access points directly off the local highway network onto Temporary Construction Haul Routes and Site access. - Presence of security will also stop any non-permitted vehicles into the Site and remove any potential for parked or obstructive vehicles that could impact on vehicle and passenger delay, or vehicle and pedestrian safety. - Management of Abnormal Indivisible Load deliveries. - Implementation of a Travel Plan to reduce the volume of construction staff and employee trips to the Proposed Development. to consider staff minibuses to transport construction personnel to site or using car sharing options where possible. Parking allocation within the site for construction workers to negate the need for any parking on the local highway network.		

Table 17.1.4: Further Surveys/Monitoring Requirements

Further Survey/Monitoring Requirements	Relevant to which topic
The Landscape and Ecological Management Plan will be monitored to ensure that it delivers the desired level of mitigation and the measures address the significant effects as predicted. This will include ensuring that vegetation is planted and managed appropriately, and that vegetation establishes properly and is replaced if required. Vegetation management will also include ensuring visibility splays are kept clear and that screening for glint and glare is effective.	Chapter 5: Landscape and Visual Chapter 6: Ecology Chapter 12: Socio-Economics, Tourism and Recreation Chapter 14: Glint and Glare
Ecological monitoring requirements are associated with the level of potential impacts and the success of mitigation delivery. Monitoring will be undertaken in accordance with best practice guidance and techniques for specific ecological receptors. The aim of monitoring will be to evaluate the effectiveness of habitat creation proposals, in terms of the extent, distribution, and quality of habitats. Further survey and monitoring will include: - Assessing habitat creation and management including areas of species-rich grassland, woodlands, scrub and hedgerow (years 1, 2 and 5) - Use of bat roost features including boxes (years 1, 2 and 5).	Chapter 6: Ecology
Monitoring of CEMP, OEMP and DEMP to ensure an appropriate feedback loop is in place, allowing remedial measures and operational refinements to be identified and implemented if required.	Chapter 6: Ecology Chapter 8: Water Resources and Flood Risk Chapter 9: Ground Conditions

Further Survey/Monitoring Requirements	Relevant to which topic
A targeted site investigation, assessment and (if necessary) remediation of made ground soils within areas of filled ground on Site (pits, reservoir and ponds) and areas of former buildings (New Barn) will be undertaken as part of the construction phase of the Proposed Development.	Chapter 8: Water Resources and Flood Risk Chapter 9: Ground Conditions
There will be continued consultation with DCC and SDDC to understand the evolving programme for delivery of the Walton on Trent Bypass.	Chapter 10: Transport and Access
Arrangements for further consultation, liaison and monitoring are included in the Outline Traffic Management Plan.	Chapter 10: Transport and Access
The Abnormal Indivisible Loads movements will be subject to a separate application and permitting scheme, currently administered by National Highways. This process will be supported by additional route assessment and validation, including additional surveys as required.	Chapter 10: Transport and Access
Pre-construction checks for utilities and other infrastructure.	Chapter 16: Other Issues