Appendix 12.1

Schedule of Proposed Mitigation and Monitoring Measures

Appendix 12.1: Schedule of Proposed Mitigation and Monitoring Measures

The table below provides a consolidated list of all mitigation and monitoring measures which have been identified in the EIA Report, and which will be implemented during construction and operation of the proposed development. Measures are presented on a topic-by-topic basis, reflecting the chapters of the EIA Report.

Appendix 4.3 of the EIA Report provides details of the good practice measures which will be implemented as standard during construction of the proposed extension to Glenlee substation.

Mitigation and Monitoring Measures	
Landscape and Visual Assessment (Chapter 6)	**Mitigation during Operation** Proposed mitigation planting of Native broadleaf trees and shrubs agreed in consultation with Dumfries and Galloway Council's Landscape Architect in August 2017 will compensate for the loss of mature broadleaf deciduous trees, and will provide screening in close proximity views looking into the site from the north, east, west and in part the south, south-east. Survey and monitoring of the proposed landscape mitigation planting will be required in relation to the residual landscape and visual effects identified. The mitigation will be closely monitored by a landscape architect periodically over a 5 year period to ensure the implemented planting successfully establishes and the predicted mitigation of landscape and visual effects is delivered. The extent and form of the proposed landscape mitigation planting is described in **Chapter 4: Development Description, Construction, and Operation and Maintenance** and shown on **Figure 4.3** (see also detailed Planning drawing Landscape Mitigation Plan).
Hydrology and Water Resources (Chapter 7)	**Mitigation during Construction** During initial design, a buffer of at least 10m from all watercourses was recommended for infrastructure and construction activities. With the exception of Burn 1 (which forms part of the proposed works) there will be no construction activity or infrastructure within 10m of any watercourse. A CAR licence for the culvert realignment of Burn 1 will be required from SEPA in advance of the works. The contractor will be required to adhere to the licence during the works to ensure there is minimal impact on the water environment and the realignment/culverting works will be carried out following best practice guidelines and industry standards. This will include isolating the reach of the channel during the works and incorporating silt fences and SuDS measures during construction. A detailed drainage assessment has been undertaken to identify the surface runoff rates and volumes anticipated during construction and the required SuDS to control quantity and quality of site discharges. The SuDS measures to manage the construction site run-off have been designed to attenuate and treat flows up to the 1 in 30 year rainfall event and are presented as **Appendix 7.2**. The construction drainage design includes a number of settlement ponds, cut-off drains, silt barriers, and anti-scour surface discharge points. The final requirement for, and design of, the SuDS will be undertaken on receipt of planning permission and once a contractor has been appointed. If an event exceeds the design capacity of the system (which is unlikely but remains a risk with all drainage systems) an emergency area for water treatment has been reserved on site in the area north of the local road. During construction, the discharge from site will be monitored and additional pollution prevention measures will be installed in this area as required (see Drainage Drawing in **Appendix 7.2**). **Mitigation during Operation** Bank protection, either using geotextiles or harder protection (e.g. 'rip-rap'), will be put in place on the banks of the watercourse at the location of the new culvert outlet to mitigate any potential erosion of the outer bank at the discharged location. **Monitoring** Ground water monitoring will be carried out as part of standard ground investigations prior to the construction works. If raised ground water levels are found suitable mitigation will be employed and SuDS ponds will not be located on areas with raised ground water levels. Monitoring of the discharge from the site during construction will be undertaken. A monitoring plan and programme will be prepared as part of the CEMP and PPP.
Ecology (Chapter 8)	**Mitigation during Construction** Presence of an Environmental Clerk of Works (ECoW) will be required during all operations to provide ongoing support and monitoring. The ECoW role should be developed in accordance with current good practice guidelines. Species Protection Plans for the felling and construction phases will be prepared as part of the project's wider CEMP. The Species Protection Plans will set out measures to protect all species covered by legislation in the UK, including nesting birds. Toobox talks will be required for all site contractors for red squirrel and bats. Pre-construction surveys, no more than 6 months prior to felling, will be undertaken to identify changes in the baseline for red squirrel and bats. This will include trees within proposed passing places and for bats may include climb-and-inspect approach or activity surveys of individual trees (part of ECoW role). The protected species licensing route will be required where surveys suggest presence of red squirrel or bat resting sites. Felling works will be timed to avoid breeding season where pre-construction surveys identify presence of red squirrel dreys or bat roosts. Where possible, trees with Bat Roost Potential will be retained and bat boxes will be installed. Up to 9 boxes, similar to the Schwegler 1FF box, should erected as advised by the project ECoW. **Monitoring** Monitoring requirements are limited to pre-construction surveys. These will form part of the ECoW role, which will be appointed and developed at an early stage and in consultation with relevant stakeholders.
Cultural Heritage (Chapter 9)	**Mitigation** Mitigation measures have been considered taking into account Planning Advice Note (PAN) 2/2011: Planning and Archaeology (PAN). All mitigation will take place prior to, or, where appropriate, during, the construction of the proposed development conducted by a professional archaeological organisation. The scope of works will be detailed in one or more Written Scheme(s) of Investigation (WSI) developed in consultation with (and subject to the agreement of) DGC. Formal arrangements will be put in place in the CEMP to appoint a retained professional archaeological organisation to whom any unforeseen archaeological discoveries made by the construction contractors would be reported. The CEMP will make clear the legal responsibilities placed upon those who make unexpected discoveries of archaeological significance. Any requirements for archaeological mitigation through construction phase monitoring of works through watching briefs would be agreed in consultation with DGC in advance of development works commencing and will be set out in the WSI.

Mitigation and Monitoring Measures	
	Specific mitigation will be put in place to investigate the nature and extent of the possible bloomery site (4) and find-spots (8): • A grid of hand-dug test-pits will be excavated across the site of the possible bloomery (4) to establish if any remains survive and the possible extent of the site. Its presence should be detectable through spreads of iron slag and / or charcoal within the topsoil and any buried soil deposits. If metal slag or any other archaeological material is recovered during test pitting, rapid analysis of the material will be carried out to confirm the type of activities that have taken place and the potential (broad) date of the site. Provision will then be made, through consultation with the DGC Archaeologist, for further excavation, sampling and analysis of any significant deposits encountered. • Hand-dug test pits will be excavated across the sites of proposed passing places that are located within or close to the find-spot areas (8) to identify and record any surviving remains. Provision will then be made, through consultation with the DGC Archaeologist for further excavation, sampling and analysis of any significant deposits encountered.
Construction Noise (Chapter 10)	**Mitigation** Substantial reduction of noise at source is not considered feasible as a mitigation measure due to the construction methods and type of plant/machinery required to construct the proposed development. Therefore, the proposed form of noise mitigation for the construction works is the inclusion of a noise barrier which is proposed to be put in place for the duration of construction. It is anticipated that this will be formally documented with DGC either by way of planning conditions or as part of an agreement under Section 61 of the Control of Pollution Act 1974 for prior consent of works. **Monitoring** The need for monitoring of noise during key periods of the construction programme would be discussed in consultation with DGC. At the discretion of the contractor, noise measurements could also be instigated should there be a dispute arising over the working practises that cannot be resolved by other means.
Access, Traffic and Transport (Chapter 11)	**Mitigation** Temporary impacts relating to an increase in construction traffic will be minimised through the implementation of the locally focused Construction Traffic Management Plan (CTMP). The CTMP will promote interventions that will assist the safe and efficient transportation of components and materials to site in order to reduce the likelihood of driver delay and adverse impacts upon the communities identified within the study area. The Police and relevant roads authorities will be consulted on the CTMP. A Framework CTMP can be seen in **Appendix 11.1**. As far as reasonably practicable, deliveries will be scheduled outwith school opening and closing times. In partnership with SPEN, the appointed contractors will be required to maintain close liaison with local community representatives, landowners and statutory consultees throughout the construction period. This is likely to include circulation of information about ongoing activities, particularly those that could potentially cause disturbance, including due to traffic. A telephone number will be provided and persons with appropriate authority to respond to calls and resolve any problems made available. **Monitoring** The requirement for construction monitoring will be agreed with SPEN, Roads Authority representatives and other relevant stakeholders prior to commencement of works.