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Springfield Solar Farm and BESS

Cumulative Assessment

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1. INTRODUCTION

1.1 OVERVIEW

This report provides additional environmental information for the proposed Springfield Solar Farm and Battery Energy Storage System (the "Proposed Development"). It provides a cumulative assessment of the Proposed Development with the proposed Springfield Collector Station and associated grid connection from the Springfield Collector Station to the Branxton Substation (the onward Grid Connection).

1.2 BACKGROUND

The Applicant has submitted an application for consent pursuant to Section 36 of the Electricity Act 1989¹ (ECU0004815) and deemed planning permission under s.57² of the Town and Country Planning (Scotland) Act 1997 (as amended)² ("the Application") to install and operate the proposed solar farm and co-located battery energy storage system (BESS) ("the Proposed Development"). The Application was made in July 2025.

An Environmental Impact Assessment ("EIA") has been undertaken in accordance with the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017, as amended ("the EIA Regulations")³.

1.3 PURPOSE OF THIS REPORT

On 30 June 2026 the Reporters appointed by Scottish Ministers to consider the Application requested a high-level cumulative assessment of the Proposed Development with the proposed Springfield Collector Station and associated grid connection from the Collector Station to the Branxton Substation.

The Springfield Collector Substation and onward Grid Connection are strategic infrastructure being progressed by the transmission operator, Scottish Power Energy Networks.

This report updates the cumulative assessment in the EIA based on the information available to the applicant at the time of writing and professional judgement.

¹ UK Government, 1989, Electricity Act 1989 [Online] Available at: <http://www.legislation.gov.uk/ukpga/1989/29/contents> (Accessed 02/06/2023)

² UK Government (1997) Town and Country Planning (Scotland) Act 1997 [Online] Available at: <http://www.legislation.gov.uk/ukpga/1997/8/section/57> (Accessed 02/06/2023)

³ The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017

2. ASSESSMENT SCOPE

The cumulative assessment set out in this report follows the same approach as undertaken in the original EIA (see Chapter 4 of the EIA Report).

2.1 INFRASTRUCTURE ASSESSED

The infrastructure considered for EIA purposes are the Springfield Collector Substation and associated grid connection to Branxton. The Branxton Substation itself is included in the cumulative assessment undertaken in the original EIA.

The assessment is based on the information received to date from SP Energy Networks, acting on behalf of the transmission operator SP Transmission plc ("SPEN"), which includes information on the nature of the grid connection from their proposed Collector Station to Branxton.

The Springfield Collector Station and onward Grid Connection will be designed and operated by SPEN. SPEN is the holder of a transmission licence under the Electricity Act 1989, and the Springfield Collector Substation and onward Grid Connection are relevant proposals for the purposes of Schedule 9 to the 1989 Act. As such, in formulating its proposals for the Springfield Collector Substation and onward Grid Connection, SPEN will be under a statutory duty to have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest, and must do what it reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects.

SPEN's approach to proposed grid infrastructure is set out in its Approach to Routeing and Environmental Impact Assessment document (2020)⁴. This makes clear that SPEN will fulfil its legal duties to develop and maintain a technically feasible and economically viable transmission system in a manner that has due regard to environmental interests including natural and cultural assets and people. Additionally, in bringing forward detailed proposals for the Springfield Collector Substation, the transmission operator would have regard to the Horlock Rules for the siting and design of new substations, which set out guidelines for how environmental impacts are to be assessed and mitigated as part of the design process.

2.1.1 SPRINGFIELD COLLECTOR SUBSTATION

2.1.1.1 OVERVIEW

SPEN have indicated that the Springfield Collector Substation will be constructed on land within the Application Site. This information was included within the original EIA for the Proposed Development, with the Springfield Collector Substation identified on provided mapping as the "TSO Substation" (e.g. EIA **Figure 1.2**).

⁴ SPEN (2020), "Approach to Routing and Environmental Impact Assessment", Available online: [https://www.spenergynetworks.co.uk/userfiles/file/SPEN Approach to Routeing Document 2nd version .pdf](https://www.spenergynetworks.co.uk/userfiles/file/SPEN%20Approach%20to%20Routeing%20Document%202nd%20version.pdf)

The design, ownership and operation of the Springfield Collector Station will be the responsibility of SPEN. From the indicative information provided by SPEN, the footprint assumed in the Springfield Solar Farm EIA measures 125 m x 75 m. It is understood that the maximum height above ground level (AGL) of any components of the Springfield Collector Substation would be a maximum of 12.5m AGL.

In line with other similar substation developments, it is anticipated that both 132 kV and 400 kV infrastructure will be required, as well as staff welfare and equipment storage facilities.

2.1.1.2 CONSTRUCTION

Construction of the Collector Station and grid connection is assumed to take place over a period of up to 18 months and may occur concurrently with, or slightly ahead of the construction of the Proposed Development.

2.1.1.3 OPERATION

The operational lifespan of the Springfield Collector substation is not known. For the purposes of this assessment, it is assumed the infrastructure will be permanent.

2.1.1.4 DECOMMISSIONING

It is assumed that the potential environmental impact of decommissioning is similar in nature to that of the construction phase. In the event the Springfield Collector Substation and Grid Connection are decommissioned, a decommissioning plan would be required from the transmission operator. For this reason, decommissioning is not assessed separately and is scoped out of further assessment.

2.1.2 THE ONWARD GRID CONNECTION

From the Springfield Collector Substation, the transmission operator will install a connection to link to the national grid at Branxton Substation. The information provided by SPEN identifies that this connection will be a 400 kV underground cable (UGC).

The final alignment and design of the onward Grid Connection will be determined by SPEN as transmission operator. For the purpose of this appraisal an indicative onward Grid Connection route has been defined, running from the Springfield Collector Substation, along the existing road network to Branxton Substation (**see Figure 2.1**).

The onward Grid Connection will run from the Springfield Collector Substation compound alongside the proposed access tracks for the Proposed Development west to the junction with the U218 public road. The connection will then follow the U218 north to the junction with the U215, where it will follow the U215 west until it meets the C121. It will then follow the C121 for 60m until the junction with the Branxton Substation, where it will follow the substation access tracks for the final section of the onward Grid Connection route.

A summary of the distances and ground conditions for each section of the indicative onward Grid Connection route is shown in **Table 2.1**.

Whilst the route assessed within this report is indicative and will be subject to further design development, route refinement and engineering assessment by SPEN, it provides a sufficiently robust basis upon which to undertake the cumulative assessment.

TABLE 2.1 SUMMARY OF THE INDICATIVE ONWARD GRID CONNECTION ROUTE

Route section	Approx. distance (m)	Ground conditions
Springfield Collector Substation to U218	123	Unmade track and verges
U218 to U215	136	Single carriageway restricted width and verges.
U215 to C121	1127	Single carriageway restricted width and verges.
C121 to Branxton Substation entrance	60	Single carriageway restricted width and verges.
Branxton Substation entrance to Point of Connection	120	Unmade track and verges

A grid connection route predominantly within the track and road corridors is considered to inherently reduce the potential effects of the proposed onward Grid Connection on the receiving environment. This is because the tracks and roads and their verges are made-ground which are not typically within areas designated for their ecological value. In addition, the indicative route provides easy access for construction vehicles, typically has limited ecological value due to disturbance from traffic and verge management practices, and already has drainage channels incorporated at least along the sections of public road.

2.1.2.1 CONSTRUCTION

It is anticipated that UGC installation will follow standard cut-and-fill trenching methods, progressing in short sections of up to ~25 metres. Each section would be fully installed and reinstated before the next begins, ensuring works at any single location remain temporary and short-term. Daily installation rates will vary based on ground conditions and complexities, such as existing infrastructure or tree roots. The appointed contractor will determine the final construction sequence in consultation with the roads authority and in line with known constraints.

Trenches will be backfilled and reinstated using the original materials to maintain existing ground conditions, ensuring permeable surfaces remain permeable. In hard-surfaced areas like roads, the top surface will be opened using a disc cutter or hydraulic breaker, with sub-surface materials removed mechanically to the required depth.

Taking account of the efficient pace of construction, localised traffic impacts will be minimal. Vehicle movements at any single point would be limited to three or four visits per day over the construction period. As with other grid infrastructure works, it is anticipated a localised traffic management would be deployed at the active work zone throughout the construction period.

Where the proposed onward Grid Connection route follows existing track or road alignments, the cable will be installed along the edges or verges where possible. A typical cross section of an installed cable is provided in **Appendix B**.

2.2 METHODOLOGY

2.2.1 OVERVIEW

This report identifies potentially significant cumulative effects on the receiving environment resulting from the Proposed Development with the Collector Station and associated onward Grid Connection to Branxton Substation.

The original EIA contained a cumulative assessment per relevant environmental topic of the Proposed Development with the projects identified in Table 4.5 of Chapter 4 of the EIA report and the same approach has been applied in this assessment.

2.2.2 STUDY AREA

Generally, the study area for the proposed onward Grid Connection is limited to the area along the indicative route as shown in **Figure 2.1**. Topic-specific study areas are stated in the topic-specific appraisals as required.

2.2.3 DATA SOURCES

The availability of public data and information previously gathered on the Proposed Development site and surrounding area is considered appropriate for the level of required appraisal. No specific baseline surveys have been conducted at this stage to inform this appraisal, however, data recorded during the preparation of the EIA has been utilised where appropriate. Where data gaps exist, these are identified. It is likely that baseline surveys will be undertaken by SPEN to support the onward Grid Connection consent application.

2.2.4 CUMULATIVE ASSESSMENT METHODOLOGY

The methodology adopted for the cumulative assessment of the Springfield Collector Substation is the same as that adopted in the original Springfield Solar Farm EIA. However, it is noted that unlike the cumulative sites assessed within the EIA Report neither the Springfield Collector Substation nor the onward Grid Connection are within the planning system.

Each topic assessment cross-refers to the relevant topic-specific methodology in the EIA Report. The assessment uses information provided by the transmission operator and professional judgement based on experience of other transmission projects. Currently there is no application in the planning system (screening, scoping or planning application) for the Springfield Collector Station or the onward Grid Connection.

3. LANDSCAPE AND VISUAL AMENITY

A summary of the landscape and visual impacts arising from the Proposed Development is provided at Section 6.7 of the EIA Report. This section provides, an appraisal of the cumulative effects with the Springfield Collector Substation and associated onward Grid Connection.

3.1.1 BASELINE CONDITIONS

A review of relevant baseline policy and guidance indicates no changes since the EIA Report that would require consideration in this appraisal.

At the time of writing, construction of the Branxton 400 kV Substation is ongoing which includes a temporary haul road connecting that site to the local road northeast of Birnieknowes, close to the junction with the A1 (where there is also some localised road widening). The haul road passes through farmland just north of the Proposed Development site and crosses the onward Grid Connection route, with the closest section of the route located within the fields immediately north of viewpoints 1 and 12 (but unlikely to be visible from either given the presence of roadside hedgerows). The temporary haul road also includes several crossings of local roads within 0.4 km of the Proposed Development site.

Condition 17 of the planning permission for that development (ELC Ref: 23/00616/PM) requires that temporary works (including the haul road) *"shall all be removed in their entirety from the application site and any removed hedgerows and other field boundaries and the land upon which the temporary works are formed shall all be reinstated to their former condition within one year of the completion of the development"*. Details of the reinstatement works have yet to be published on the ELC planning website but it is understood that construction of the Branxton 400kV Substation and associated reinstatement works would be completed prior to construction of the Proposed Development, Springfield Collector Substation and the onward Grid Connection.

No other changes to the landscape and visual baseline have been identified which would require further consideration.

3.1.2 CONSTRUCTION

Potential landscape and visual impacts during construction would arise from:

- The presence of construction activity and equipment at the Springfield Collector Substation, which is contained entirely within the Springfield Solar Farm site;
- the presence of roadworks along the local roads between the Springfield Collector Substation and Branxton Substation to install the onward Grid Connection; and
- limited removal and reinstatement of vegetation in roadside verges.

Although the timing of the Springfield Collector Substation construction is unknown, it would necessarily be built either shortly before or at the same time as the Proposed Development. In a scenario where it was built before, this would give rise to construction activities within the Proposed Development site for a longer duration than for Proposed Development alone. In respect of construction activities along the onward Grid Connection route, the occasional presence of roadworks along local roads is not uncommon or atypical of their character. The short-term presence of the works in each place and the limited area in which they would be perceptible would also limit the impact. The combined construction activities with the Proposed

Development would remain of short-term duration and this would not change the assessment as set out at Section 6.6.1.3 of the EIA Report:

"effects during construction and decommissioning would be short-term and temporary and would include a noticeable presence of vehicles and plant on site during groundworks, and the installation/removal of the solar panels, substation and BESS infrastructure. The most notable effects during these stages would occur due to the presence of the infrastructure and these effects are assessed to be the same as during operation except where otherwise specifically noted in the assessment"

The only difference in terms of effects on landscape fabric is that an additional area of grassed agricultural field within the Proposed Development site would be converted to hardstanding and some limited vegetation removal along the onward Grid Connection route. This would not change the findings of the EIA Report that:

"These changes would affect commonplace landscape elements and features of medium sensitivity and would be very limited in their extent. Effects on landscape fabric would be positive and not significant."

Visual receptors likely to see views of the work would include local road users in the immediate vicinity of the Springfield Collector Substation and along the onward Grid Connection route, although given the roads along the onward Grid Connection route are single track it is likely that temporary diversions would be put in place during construction and the degree to which the works would be visible would be limited. Local residents at Branxton would see very short-term construction works near their homes while the section of onward Grid Connection passing these homes is laid. Impacts arising on visual receptors during the construction of the UGC would not alter the findings of the EIA Report in relation to effects on visual receptors.

The Springfield Collector Substation and associated onward Grid Connection would not be within a designated landscape and would be sufficiently distant from designated landscapes that the construction of the onward Grid Connection would not alter the findings of the EIA Report in relation to effects on designated landscapes.

3.1.3 OPERATION

During operation, the onward Grid Connection would be underground and the only cumulative landscape and visual effects to potentially arise would be with the Springfield Collector Substation.

The Springfield Collector Substation would be contained entirely within the Proposed Development Site boundary and located adjacent to the Proposed Development substation and BESS compound. In turn, these elements are largely encircled by the proposed solar arrays as illustrated by Figure 1.2 of the EIA Report.

As the Springfield Collector Substation would be encompassed within the Proposed Development, cumulative effects on character would be the same as those described in Section 6.6 of the EIA Report for the Proposed Development alone.

It is likely that the equipment contained within the Springfield Collector Substation would appear very similar in form and nature to that contained within the Springfield Solar Farm substation, albeit the maximum design parameter assumes electrical equipment could be up to

12.5 m tall. As illustrated by Figures 3.1 and 3.2, the Springfield Collector Substation would be more widely visible than the substation and BESS elements of the Proposed Development, on account of the increased height, but would not be visible from any areas where parts of the proposed solar arrays would not also be visible. In reality, the Springfield Collector Substation would not be as widely visible as indicated by the Zone of Theoretical Visibility (ZTV) on Figures 3.1 and 3.2 as the tallest equipment would be confined to limited areas within the compound area, rather than spread across its entire area as has been modelled for the ZTV.

During the operational phase, an average person would not perceive the Springfield Collector Substation as something which is either visually or functionally distinct from the Proposed Development. Even for an informed observer it is only likely to be readily discernible at close proximity from the small number of local roads that pass close to the substation compounds, affecting the Rural Area within 0.4km visual receptor group described in the EIA Report.

At viewpoint 1, the Springfield Collector Substation would be visible in the gap amongst the solar panels seen directly behind the BESS compound and left of the Proposed Development substation which sit beneath the existing line of electricity pylons. There would be an increased extent of substation equipment, some of which would be taller than illustrated for the Proposed Development but it would be read as part of the same development and the overall composition of the view would not be fundamentally different.

At viewpoint 12, the field entrance provides a brief glimpse for passing road users where the Springfield Collector Substation would be seen in the gap amongst solar panels to the leftmost side of the visible arrays. It would be more openly visible than the Proposed Development substation, the taller elements of which are only just visible over the nearby landform, and would be seen between the existing pylons and below the two wind turbines seen just beyond the transmission lines.

Travelling along the roads between these viewpoints and those nearby which pass through and close to the Proposed Development, the Springfield Collector Substation would be visible to varying degrees but would always be seen beneath the existing transmission lines and amongst the proposed solar farm infrastructure. It would appear as part of the same development and cumulative visual effects would be the same as those described for the Proposed Development alone, as described in Section 6.6 of the EIA Report.

During the operational phase, the Springfield Collector Substation would not be readily discernible from the Proposed Development when viewed from any designated landscapes and cumulative effects on designated areas would be as described in Section 6.6 of the EIA Report for the Proposed Development alone.

4. ARCHAEOLOGY AND CULTURAL HERITAGE

4.1 BASELINE CONDITIONS

The archaeological and historical background and baseline condition are detailed in Chapter 7 and Appendix Vol.3 of the EIA Report.

4.2 CUMULATIVE ASSESSMENT

Section 7.7 of the EIA Report describes the methodology for the assessment of cumulative effects, and the following assessment utilises this methodology. The potential for cumulative effects is limited to setting effects only.

4.2.1 ONWARD GRID CONNECTION

There is the potential for the indicative route of the onward Grid Connection to have an impact on the setting of the nearby Scheduled Monument of Branxton Cottage, enclosure 300m E of, SM5890 during construction. This impact will be temporary and limited to the construction phase and is not considered significant under EIA regulations. The onward Grid Connection comprises an underground cable which, once in situ, has no potential to impact the setting of cultural heritage receptors during operation.

There are therefore no cumulative effects between the Proposed Development and the onward Grid Connection as any potential impacts to SM5890 will be limited to the construction phase and will be temporary.

4.2.2 SPRINGFIELD COLLECTOR SUBSTATION

The proposed Springfield Collector Substation is located within the Springfield Solar Farm boundary, adjacent to the proposed Springfield Solar Farm substation and BESS compound, and will be encircled by the proposed solar arrays. As such it will appear as part of the proposed Springfield Solar Farm development. No potential for significant cumulative impacts are identified resulting from the proposed Springfield Solar Farm and the Springfield Collector Substation.

4.3 SUMMARY

No significant cumulative effects are identified resulting from the proposed Springfield Solar Farm, onward grid connection and the Springfield Collector Substation. The conclusions presented in the EIA Report remain unchanged and no additional significant effects are identified.

5. ECOLOGY AND NATURE CONSERVATION

5.1 BASELINE CONDITIONS

Baseline conditions for the Proposed Development Site are outlined within Section 8.5 of Chapter 8: Ecology and Nature conservation of the EIA Report.

Within the Proposed Development red line boundary, habitats are predominately grassland habitat. Outside of this red line boundary, habitats within and adjacent to the proposed onward Grid Connection route include ancient woodland, which is likely to raise issues of national interest. No new watercourses are proposed to be crossed by the cable route.

The baseline surveys for protected species presented in the EIA Report identified habitats suitable to support otter and water vole; however, no evidence of either species was found within the route followed by the proposed onward Grid Connection. Habitats were also suitable to support bats, and badger; evidence of these species was found. In addition, habitats were suitable for red squirrel, and though no evidence was recorded, the presence of red squirrel could not be ruled out. Outwith the previously surveyed areas the onward Grid Connection crosses habitats with the potential to support badger, red squirrel, and bats.

5.2 CUMULATIVE ASSESSMENT

In Chapter 8 of the 2025 EIA Report, projects within a 5 km radius were considered for their cumulative effects with the Springfield Solar Farm and BESS.

5.3 ONWARD GRID CONNECTION

The onward Grid Connection Route lies predominantly within the road corridors and is considered to inherently reduce the potential effects of the proposed onward Grid Connection on the receiving environment. This is because the existing roads are classified as bare ground or built-up areas which are typically considered to have negligible ecological value. However, temporary construction traffic and / or compounds have the potential to impact habitats adjacent to the proposed onward Grid Connection route.

For the portion of the onward Grid Connection within the Proposed Development Site boundary there are no anticipated effects to protected species or habitats, subject to the works being carried out according to similar best practice mitigation measures as those presented in Chapter 8 of the EIA Report.

For the onward Grid Connection outside the Proposed Development Site Boundary in the absence of specific protected species survey data it is assumed that, through design, licensing and best practice construction techniques, including mitigation such as Species Protection Plans where appropriate; any risk to protected species is predicted to be negligible and therefore there would be no likely significant effects on protected species. For habitats it is anticipated that preconstruction habitat surveys would be required and would be conducted in line with all relevant guidance^{5,6,7}. It is anticipated that any potential significant effects

⁵ UKHab Ltd (2023). UK Habitat Classification Version 2.0 (at <https://www.ukhab.org>)

⁶ Rodwell, J. S. (2006) National Vegetation Classification: Users' Handbook. Joint Nature Conservation Committee.

⁷ Scottish Environment Protection Agency (SEPA). (2024). Guidance on assessing the impacts of developments on groundwater dependent terrestrial ecosystems.

resulting from the onward Grid Connection would be identified and controlled through embedded mitigation or additional mitigation as required, with specific construction stage mitigation detailed in a Construction Management Plan.

Once installed, there will be no potential effects from the proposed onward Grid Connection to ecological receptors during operation

Construction effects on ornithological receptors are not considered likely. Should construction occur during the breeding season it is anticipated that SPEN would follow best practice mitigation measures such as pre-construction walk-over surveys by a suitably qualified ECoW. In the event that a breeding attempt is found located along the line of the UGC and 100 m buffer, the nest site is to be marked off and all works suspended within 20 m of the nest site until the breeding attempt has been determined to have been completed. With this mitigation measure in place, the impacts of habitat loss and disturbance / displacement are assessed to be of negligible impact and not significant.

Operational effects arising from the onward Grid Connection on Ornithological receptors is considered to be negligible, however should maintenance works be required during the breeding bird season, it is anticipated that similar mitigation measures as detailed for construction would be applied.

As the anticipated potential impacts to Important Ecological Features (IEFs) or Important Ornithological Features (IoFs) as a result of the onward Grid Connection are not anticipated to be significant provided application good practice mitigation, no significant cumulative effects resulting from the construction and operation of the Proposed Development together with the onward Grid Connection are anticipated.

5.4 SPRINGFIELD COLLECTOR SUBSTATION

The footprint of the Springfield Collector Substation is located within the Habitat Study Area (HSA) and Ecology Study Area (ESA) considered in the 2025 EIA Report.

Springfield Collector Substation would result in the loss of grassland habitat. The construction of the substation has the potential to disturb and displace badgers from their setts and during commuting and foraging; as well as cause harm or fatality to badgers. However, as the proposed location of the Springfield Collector Substation is more than 30 m from known badger setts and alternative habitats are available locally for foraging, any disturbance from noise, traffic, vibration, and the presence of people will be temporary, reversible, and unlikely to displace badgers. In addition, should construction occur using best practice construction methods (e.g. pre-construction badger surveys, and application of a 30 m buffer of any sets identified through that survey effort), the risk of harm or fatality to badger is low. Therefore, effects from construction and operation from the Springfield Collector Substation on badger are not significant.

Breeding bird data for the location and surrounding area suggests that no territories are anticipated to be lost, with the closest breeding territories linked to areas of scrub and woodland. As there remains potential for ground nesting species to establish a territory within the area of the proposed substation, however, pre-construction walk-over surveys of the location and surrounding 100 m buffer are required to be carried out by a competent ECoW. In the event that a breeding attempt is located, the nest site is to be marked off and all works

suspended within 20 m of the nest site until the breeding attempt has been determined to have been completed.

As the anticipated potential impacts to IEFs or IoFs as a result of the Springfield Collector Substation are not anticipated to be significant provided application of good practice mitigation, no significant cumulative effects resulting from the construction and operation of the Proposed Development together with the Springfield Collector Substation are identified.

5.5 SUMMARY

Cumulative effects from the Proposed Development, onward Grid Connection, and Springfield Collector Substation are considered temporary, reversible, of low magnitude, and not significant.

The conclusions of the Cumulative assessment presented in Section 8.10.11 of the EIA Report remain unchanged that, no significant adverse cumulative effects between the Proposed Development and other developments within 5 km have been identified. It can therefore be concluded that cumulative effects to IEFs or IOFs are considered unlikely, of negligible magnitude, and not significant.

6. WATER RESOURCES

6.1 BASELINE CONDITIONS

The proposed onward Grid Connection and Springfield Collector Substation are located within the study area of the Proposed Development, please refer to Section 9.4 of the EIA report.

6.2 CUMULATIVE ASSESSMENT

The Proposed Development is located within the SEPA defined “main” East Lothian Coastal catchment, sitting between the smaller Dunglass Burn and Thornton Burn “nested” catchments. There is the potential for cumulative hydrological effects on the Bilsdean Burn and East Lothian Coastal catchment if construction of other developments were to take place at the same time as the Proposed Development within this catchment. This in turn has potential to impact the downstream coastal SPA and bathing water area.

It is assumed that there is potential for construction of the Springfield Collector Substation and UGC to occur concurrently with construction of the Proposed Development, and the assessment is made on this precautionary basis.

6.2.1 ONWARD GRID CONNECTION

The onward Grid Connection is anticipated to follow the route of the existing road network and is only intersected by one watercourse as shown on Ordnance Survey (OS) 1:25,000 scale mapping: the Bilsdean Burn. The onward Grid Connection route crosses the Bilsdean Burn at the location of the existing road crossing. Subject to detailed design, it is anticipated that the cable would utilise the existing bridge at this location and avoid the need for a new watercourse crossing.

It is anticipated that a Construction Environmental Management Plan (CEMP) will be in place for the duration of the construction works. The CEMP will detail the pollution prevention, sediment management, and dewatering controls to be in place to prevent a deterioration in surface water and groundwater quality and quantity. The CEMP will also set out the runoff control measures which will prevent an increase in runoff and thus flood risk during construction. A flood risk protocol will be set out within the CEMP to prevent mobilisation of construction materials and increase pollution risks.

Any mitigation needed to prevent impacts to Scottish Water and private water supply pipelines will be detailed in the CEMP. For the Scottish Water assets, the mitigation will be developed in consultation with Scottish Water and align with their relevant guidelines.

Following application of the measures above no significant effects on hydrological or hydrogeological receptors during construction as a result of the onward Grid Connection would be anticipated. Consequently, no significant cumulative construction effects are anticipated between the Proposed Development and the Onward Grid Connection

Based on the implementation of an operational management plan, there will not be any significant effects on hydrological or hydrogeological receptors during operation. This operational management plan would set out the mitigation needed in the event of excavation being required during maintenance activities, and would be very similar to that detailed in the CEMP, but at a more localised scale focussed on the area of repair.

No significant cumulative operational effects are anticipated between the Proposed Development and the Onward Grid Connection

6.2.2 SPRINGFIELD COLLECTOR SUBSTATION

If as is expected the Springfield Collector Substation were to be brought forward with standard construction-phase environmental controls, including a CEMP and appropriate measures to manage surface water quality, quantity and flood risk, significant impacts on hydrology and hydrogeology would be unlikely and no significant cumulative construction effects are identified.

During operation, it is anticipated that the development would include appropriate surface water management and pollution prevention measures, including a sustainable drainage management system (SuDS) to control runoff such that there is no increase in flood risk elsewhere. On this basis, significant impacts on hydrology and hydrogeology during operation are not anticipated. No significant cumulative operational effects are identified between the Proposed Development and the Springfield Collector Substation

6.3 SUMMARY

The cumulative assessment the Proposed Development with the onward Grid Connection and Springfield Collector Substation treated as additional cumulative developments is presented above. The level of design information available for the Springfield Collector Substation is limited and final design, drainage arrangements, construction programme and environmental management measures are to be defined. Subject to the application of best practice measures, secured through a separate consenting process, no new likely significant cumulative effects on hydrological or hydrogeological receptors are identified.

Therefore, the inclusion of the Springfield Collector Substation and onward Grid Connection in the cumulative assessment does not alter the conclusions of the cumulative assessment presented Chapter 9 of the EIA Report that no likely significant effects are identified.

7. GEOLOGY AND SOIL

7.1 BASELINE CONDITIONS

Baseline conditions are presented in Section 10.3 of Chapter 10 of the EIA Report: Geology and Soil.

7.2 CUMULATIVE ASSESSMENT

In the original EIA submission for the Proposed Development, cumulative developments were assessed in the context of geology and soils in Section 10.5 of Chapter 10: Geology and Soil.

7.2.1 ONWARD GRID CONNECTION

The majority of the proposed onward Grid Connection route follows existing unnamed roads. Therefore, made ground is anticipated along the proposed onward Grid Connection route due to the previous construction works.

The baseline presented for the Proposed Development identified potential sources of contamination across the Site and the immediate surrounding area. The main potential sources of contamination identified are herbicides and pesticides associated with agricultural activities, potential presence of historic coal mines in the north of the Site and the potential for radon gas. During a site walkover of the Proposed Development and a visual inspection of the ground conditions, no evidence of contaminated land was identified. If any evidence of potential contamination were encountered during the construction phase of the onward Grid Connection, appropriate action would be taken in accordance with the Construction Environmental Management Plan.

With the implementation of mitigation measures, no significant effects are identified during the construction phase and no significant construction cumulative effects are identified with the Proposed Development.

During the operational phase, it is anticipated that maintenance activities would be limited to very infrequent re-disturbance of the soils and geology environment along the proposed onward Grid Connection route. The operational phase would not present any additional risks to geology and soils compared to the construction phase and no significant cumulative effects are identified.

7.2.2 SPRINGFIELD COLLECTOR SUBSTATION

The Springfield Collector Substation has been identified as an additional cumulative development that is proposed to be situated approximately 10 m southeast from the Springfield Solar Farm Substation. It is assumed that the construction of the Springfield Collector Substation may coincide with the construction of Springfield Solar Farm.

Further disturbance of soils will occur as a result of the Springfield Collector Substation. However, it is assumed that this development will be constructed in accordance with best practice measures, mitigation, relevant legislation, planning policy and guidance. In addition, there would be a CEMP in place during the construction of the Springfield Collector Substation to prevent significant impacts to geology and soils. As a result, the impacts on geology and soils will be minimised and no significant cumulative effects are identified.

During the operational phase, it is assumed that the Springfield Collector Substation will have an operational management plan in place to prevent any significant impacts on geology and soils.

No significant cumulative effects are identified in relation to the Springfield Collector Substation during the construction and operational phases.

7.3 SUMMARY

No significant cumulative effects are identified resulting from the Proposed Development, onward Grid Connection and the Springfield Collector Substation. The conclusions presented in the EIA Report remain unchanged and no additional significant cumulative effects are identified.

8. TRAFFIC AND TRANSPORTATION

8.1 BASELINE CONDITIONS

Full details of the indicative route for the onward Grid Connection are set out in Section 0 of this report. Broadly, the onward Grid Connection extends from the south to the north, from Springfield Solar Farm to Branxton substation. The route follows the U218 and U215 before crossing the C121 to connect to Branxton substation. It is noted that the onward Grid Connection does not pass through any settlements or built-up areas.

8.1.1 ROAD NETWORK

The U218, U215, and C121 are all single carriageway roads with a rural aspect, have no centre line markings (or passing places) and are subject to the national speed limit. The geometric standard of these roads varies between roads, and along the roads themselves. The roads provide access to residential properties and small settlements including Oldhamstocks and are not wide enough for HGVs to pass each other safely, therefore it would require mitigation measures to minimise the impact of construction traffic. The roads are unlit, have no footway provision and are bound by mainly grass verges, hedgerows, or trees.

8.1.2 NON-MOTORISED USER NETWORK

As noted above, there is generally no footway provision along the key road links except in built up areas, and the impacted sections of road are generally unlit. A review of Walk Wheel Cycle Trust's National Cycle Network (NCN) map indicates that there are no national cycle routes in the vicinity of the alignment of the UGC route.

A review of the East Lothian Core Path Plan Maps has also identified that there are no core paths in the vicinity of the alignment of the UGC route whose amenity value may be temporarily impacted during the construction of the onward Grid Connection.

8.2 CUMULATIVE ASSESSMENT

Cumulative traffic impacts can occur where the peak construction period of a nearby development, which shares a common access route to the Site for construction traffic, overlaps with that of the Proposed Development.

8.2.1 ONWARD GRID CONNECTION

At the time of writing, no CTMP or Transport Assessment is available and the construction programme is currently unknown. As such, assumptions have been made and a high-level cumulative assessment is undertaken based on the limited information currently available. It is anticipated that a detailed assessment would be undertaken by the Transmission Operator and submitted alongside any application for consent.

Any overlap in construction activity is expected to be limited in duration and is unlikely to result in both developments generating peak construction traffic simultaneously. The potential for meaningful interaction between construction traffic associated with the two schemes is considered to be low and any interaction would be appropriately managed through the implementation of the respective project-specific CTMPs, in consultation with East Lothian Council. This would consider measures such as delivery scheduling, route management,

temporary traffic controls and liaison between contractors. With appropriate mitigation, significant cumulative construction traffic effects on the shared road links are not considered likely.

8.2.2 SPRINGFIELD COLLECTOR SUBSTATION

At the time of writing, no CTMP or Transport Assessment is available and the construction programme is currently unknown. As such, assumptions have been made and a high-level cumulative assessment is undertaken based on the limited information currently available. It is anticipated that a detailed assessment would be undertaken by the transmission operator and submitted alongside any application for consent.

Any overlap in construction activity is unlikely to result in both developments generating peak construction traffic simultaneously. Although there is potential for interaction between construction traffic on the local road network, the potential for significant cumulative construction traffic effects is low given that any interaction would be appropriately mitigated through implementation of project-specific CTMPs, in consultation with East Lothian Council. This would consider measures such as delivery scheduling, route management, temporary traffic controls and liaison between contractors. With appropriate mitigation, significant cumulative construction traffic effects on the shared road links are not considered likely.

8.3 SUMMARY

There is potential for overlap in traffic movements between the Proposed Development, the onward Grid Connection and the Springfield Collector Substation. It is assumed that overlap of peak movements can be avoided and that the respective CTMPs can be developed, in consultation with ELC, to avoid significant effects on the local road network. The conclusions presented in the EIA Report remain unchanged and no additional significant effects are identified.

9. NOISE AND VIBRATION

9.1 BASELINE CONDITIONS

The Baseline noise environment in the vicinity of the Proposed Development was detailed in Section 12.3.1 of Chapter 12: Noise and Vibration. The range for day and night background noise level measurements, $L_{A90,15min}$, were 28-35 dB and 25-34 dB respectively. The proposed onward Grid Connection will run from the Springfield Collector Substation alongside the proposed access tracks, follow the U218, then the U215, to the C121, until the junction Branxton Substation, where it will follow the substation access tracks for the final section of the onward Grid Connection route, as shown in Figure 2.1. The indicative noise and vibration study area comprises 300 m from the onward Grid Connection corridor edge, however receptors outside of this may be considered where appropriate. The onward Grid Connection route passes through a rural environment characterised by a relatively quiet ambient noise environment that is assumed to be represented by the surveyed noise levels presented in the EIA Report.

9.2 CUMULATIVE ASSESSMENT

A cumulative effects assessment was presented as part of the original EIA Report in Section 12.5.4.

9.2.1 ONWARD GRID CONNECTION

There is not expected to be significant construction noise and vibration effects from the onward Grid Connection route. Two receptors were identified along the route in Branxton, situated approximately 100 m and 200 m from the edge of the ± 50 m onward Grid Connection corridor. At these distances construction noise would be unlikely to have significant adverse effect, and vibration would likely not be perceptible. Ultimately the level of noise and vibration impact will be dependent on the methods and equipment selected for route construction. Any potential disturbance would be minimised through good practice measures.

There is not expected to be noise and vibration impact from construction traffic as there would not likely be a significant increase in traffic associated with cabling works.

There is not expected to be cumulative construction noise and vibration effects from concurrent construction of the Proposed Development and the onward Grid Connection. The assessment of construction noise and vibration at the two Branxton receptors in the EIA Report concluded Negligible significance of noise impact and no vibration impact. Thus, cumulative construction noise and vibration effects would not be expected.

Underground lines would not be expected to have operational noise or vibration impacts as they do not generate perceptible noise or vibration.

There is not expected to be noise and vibration impact from operational traffic as there would not likely be a significant increase in traffic associated with operation.

Therefore no cumulative operational noise and vibration effects of the onward Grid Connection route are anticipated as there are currently no proposed operational noise and vibration sources.

9.2.2 SPRINGFIELD COLLECTOR SUBSTATION

9.2.2.1 BASELINE CONDITIONS

The indicative noise and vibration study area comprises 2 km from the proposed Springfield Collector Substation, however receptors outside of this may be considered where appropriate. Due to the location the Springfield Collector Substation these receptors are the same as those identified for the Proposed Development. The Springfield Collector Substation will be situated in a rural environment characterised by a relatively quiet ambient noise environment. This is reflected in the background noise levels measured for the EIA Report of the Springfield Solar Farm and BESS (2025). The range for day and night background noise level measurements, $L_{A90,15min}$, were 28-35 dB and 25-34 dB respectively.

9.2.2.2 CONSTRUCTION

The construction noise assessment for the Proposed Development already includes construction plant of a similar type to that likely to be used in the construction of the Springfield Collector Substation. Noise levels have been calculated based on minimum offset distances between the main Springfield construction area and the receptor. As Springfield Collector Substation is not closer to any receptor than the main construction area, the inputs for noise prediction would be unchanged. Accordingly, impacts are likely to be the same and no worse than those in the original assessment.

9.2.2.3 OPERATION

The concurrent operation of Springfield Collector Substation and the Proposed Development have the potential to give rise to significant cumulative operational noise effects at nearby receptors. The detail of the plant and mitigation measures for the Collector Station is not known at this time. A high level cumulative noise assessment has been undertaken using the assessment methodology and significance criteria applied to the Proposed Development in isolation, and incorporating the mitigation measures associated with the Proposed Development.

There is no extant and publicly available planning application for the Springfield Collector Substation, and accordingly a noise impact assessment is not available at this stage. Therefore, for the purposes of this cumulative assessment, reasonable worst-case assumptions in terms of the location of noise generating plant and sound power levels have been used. The assessment employs the same assessment methodology presented in the Springfield Solar Farm and BESS EIA Report, by considering an initial assessment comparing the predicted Rating Level against the Background, and a final assessment through consideration of the context. The Springfield Collector Substation has been assessed based on the following composition:

- A primary transformer, with a sound power level during normal operation of 92 dB LwA
- An auxiliary transformer, with a sound power level during normal operation of 84 dB LwA
- A diesel generator, with a sound power level during normal operation of 89 dB LwA

The preliminary assessment considers a worst-case approximation of the Springfield Collector layout, which does not reflect the final detailed design and does not include mitigation for Springfield Collector Substation.

Springfield Solar Farm and BESS EIA Report Table 12.16 shows the assessment of Springfield Solar Farm and BESS operational noise at noise sensitive receptors, including for each receptor the predicted specific level, predicted rating level, background sound level, rating level exceedance of background sound level and significance in context of the EIA.

Table 9.1 shows the initial assessment of Springfield Collector Substation operational noise at noise sensitive receptors, including for each receptor the predicted specific level, predicted rating level, background sound level and rating level exceedance of background sound level.

Table 9.2 shows the initial cumulative assessment of Springfield Collector Substation, Solar Farm and BESS operational noise at noise sensitive receptors, including for each receptor the predicted cumulative specific level, predicted cumulative rating level, background sound level and cumulative rating level exceedance of background sound level.

TABLE 9.1 INITIAL ASSESSMENT OF SPRINGFIELD COLLECTOR SUBSTATION OPERATIONAL NOISE AT NOISE SENSITIVE RECEPTORS

Noise Sensitive Receptor ID	Noise Sensitive Receptor Location	Springfield Collector Substation Predicted Specific Level [dB]	Springfield Collector Substation Predicted Rating Level [dB]	Background Sound Level [dB]		Springfield Collector Substation Rating Level Exceedance of Background [dB]	
				Day	Night	Day	Night
NSR01	Old Branxton Cottages	22	25	28	29	-3	-4
NSR02	Branxton Farmhouse	27	30	28	29	+2	+1
NSR03	Birnieknowes Cottages	25	28	35	34	-7	-6
NSR04	Springfield Farm	25	28	33	33	-5	-5
NSR05	October Cottages	12	15	33	25	-18	-10
NSR06	St. Michael's View	12	15	33	25	-18	-10
NSR07	Cocklaw Cottages	19	22	28	29	-6	-7

Noise Sensitive Receptor ID	Noise Sensitive Receptor Location	Springfield Collector Substation Predicted Specific Level [dB]	Springfield Collector Substation Predicted Rating Level [dB]	Background Sound Level [dB]		Springfield Collector Substation Rating Level Exceedance of Background [dB]	
				Day	Night	Day	Night
NSR08	Oldhamstocks Mains Cottages	26	29	28	29	+1	0
NSR09	Oldhamstocks Mains Farmhouse	31	34	28	29	+6	+5
NSR10	Lawfield Cottage	23	26	28	29	-2	-3

TABLE 9.2 PRELIMINARY INITIAL CUMULATIVE ASSESSMENT OF SPRINGFIELD COLLECTOR SUBSTATION, SOLAR FARM AND BESS OPERATIONAL NOISE AT NOISE SENSITIVE RECEPTORS

Noise Sensitive Receptor ID	Noise Sensitive Receptor Location	Cumulative Predicted Specific Level [dB]	Cumulative Predicted Rating Level [dB]	Background Sound Level [dB]		Cumulative Rating Level Exceedance of Background [dB]	
				Day	Night	Day	Night
NSR01	Old Branxton Cottages	28	31	28	29	+3	+2
NSR02	Branxton Farmhouse	31	34	28	29	+6	+5
NSR03	Birnieknowes Cottages	28	31	35	34	-4	-3
NSR04	Springfield Farm	30	33	33	33	0	0
NSR05	October Cottages	19	22	33	25	-11	-3
NSR06	St. Michael's View	20	23	33	25	-10	-2
NSR07	Cocklaw Cottages	29	32	28	29	+4	+3

Noise Sensitive Receptor ID	Noise Sensitive Receptor Location	Cumulative Predicted Specific Level [dB]	Cumulative Predicted Rating Level [dB]	Background Sound Level [dB]		Cumulative Rating Level Exceedance of Background [dB]	
				Day	Night	Day	Night
NSR08	Oldhamstocks Mains Cottages	32	35	28	29	+7	+6
NSR09	Oldhamstocks Mains Farmhouse	34	37	28	29	+9	+8
NSR10	Lawfield Cottage	28	31	28	29	+3	+2

The initial cumulative assessment indicates operational noise from Springfield Collector Substation in combination with the Proposed Development could give result in Rating Levels exceeding of background noise levels by more than 5 dB at Branxton Farmhouse (NSR02), Oldhamstocks Mains Cottages (NSR08), and Oldhamstocks Mains Farmhouse (NSR09). In the absence of mitigation, this has the potential to give rise to significant cumulative operational noise effects when assessed against the significance criteria presented in Chapter 13 of the EIA Report. This is based on the worst case scenario without having any regard to mitigation measures (including mitigation through design) that may be incorporated into the Springfield Collector Substation development.

The Springfield Collector Substation application will also need to consider noise, including cumulative noise. It is anticipated that through this process, and once the detailed design of the Springfield Collector Substation is confirmed, any additional mitigation measures will be applied to the Collector Station development to avoid significant impacts. In addition, once further detail on the Collector Station is available the Applicant would expect to work with SPEN to develop a cumulative mitigation strategy to ensure that cumulative operational noise emissions from the Proposed Development and Springfield Collector Substation are controlled such that Rating Levels at noise sensitive receptors do not exceed background noise levels by more than 5 dB. Mitigation will be secured through the detailed design process and may include, where necessary, noise barriers, screening measures, plant specification controls, and other best practicable means.

While the precise mitigation measures can only be defined once the detailed designs of both developments have been finalised, the assessment demonstrates that there is a clear and achievable pathway to mitigation. Compliance with the cumulative operational noise criteria will be verified as part of the detailed design. On this basis, significant cumulative operational noise effects are not anticipated, and the residual cumulative effect is assessed as Not Significant.

9.2.2.4 OTHER CUMULATIVE EFFECTS

The previous cumulative effects assessment for the Proposed Development identified Branxton BESS and Branxton Substation projects as the only significant cumulative developments in the vicinity and concluded Negligible/Minor significance of cumulative operational noise effects at the two receptors identified in Branxton, and two receptors further east of the developments. However, the concurrent operation of Springfield Collector Substation, Springfield Solar Farm and BESS and Branxton BESS and Substation could potentially give rise to significant cumulative operational noise effects at receptors.

As such, the developments have been assessed cumulatively, following the assessment and methodology set out in the EIA Report, and including worst-case preliminary assumptions of the Springfield Collector Substation layout described in Section 9.2.2.3.

Table 9.3 shows the preliminary cumulative assessment of Branxton Substation, and Springfield Collector Substation, Solar Farm and BESS operational noise at noise sensitive receptors, including for each receptor the predicted Branxton Substation rating level, predicted cumulative rating level and cumulative rating level exceedance of Branxton Substation rating level.

TABLE 9.3 PRELIMINARY CUMULATIVE ASSESSMENT OF BRANXTON SUBSTATION, AND SPRINGFIELD COLLECTOR SUBSTATION, SOLAR FARM AND BESS OPERATIONAL NOISE AT NOISE SENSITIVE RECEPTORS

Noise Sensitive Receptor ID	Noise Sensitive Receptor Location	Branxton Substation Predicted Rating Level [dB]	Cumulative Predicted Rating Level [dB]	Cumulative Rating Level Exceedance of Branxton Rating Level [dB]
NSR01	Old Branxton Cottages	36	37	+1
NSR02	Branxton Farmhouse	36	38	+2
NSR03	Birnieknowes Cottages	36	37	+1

As described in EIA Report, the Branxton Substation EIAR designates Minor significance where the rating level is between 30dB and 40dB. Thus, the preliminary cumulative assessment indicates operational noise from Branxton Substation, and Springfield Collector Substation, and Springfield Solar Farm and BESS would not likely give rise to significant effects.

Table 9.4 shows the preliminary cumulative assessment of Branxton BESS, and Springfield Collector Substation, and Springfield Solar Farm and BESS operational noise at the noise sensitive receptor, including for the receptor the predicted Branxton BESS rating level, predicted cumulative rating level and cumulative rating level exceedance of Branxton Substation rating level.

TABLE 9.4 PRELIMINARY CUMULATIVE ASSESSMENT OF BRANXTON BESS, AND SPRINGFIELD COLLECTOR SUBSTATION, SOLAR FARM AND BESS OPERATIONAL NOISE AT NOISE SENSITIVE RECEPTORS

Noise Sensitive Receptor ID	Noise Sensitive Receptor Location	Branxton BESS Predicted Rating Level [dB]	Cumulative Predicted Rating Level [dB]	Cumulative Rating Level Exceedance of Branxton Rating Level [dB]
NSR10	Lawfield Cottage	39	40	+1

Considering the Branxton Substation EIAR assessment criteria highlighted above, the high level cumulative assessment indicates operational noise from Branxton BESS, and Springfield Collector Substation, Solar Farm and BESS would not likely give rise to significant effects.

10. SOCIO-ECONOMICS, LAND USE, TOURISM AND RECREATION

10.1 BASELINE CONDITIONS

Chapter 13 of the EIA Report presented a full assessment of the potential socioeconomic, land use, tourism and recreation impacts arising from the Proposed Development. This assessment reported no significant effects under EIA Regulations for either construction, operation, or decommissioning of the Proposed Development.

The baseline conditions provided in Section 13.5 cover the area of the Springfield Collector Substation and the onward Grid Connection.

10.2 ONWARD GRID CONNECTION

The conclusions of the Cumulative Assessment presented in Section 13.6.4 of the EIA Report are not predicted to be altered when considering the onward Grid Connection.

While detailed construction sequencing information is currently unavailable for the onward Grid Connection, it is expected that employment and gross value added (GVA) arising from the construction of the onward Grid Connection would be small and would not result in significant socio-economic, wider socio-economic, or socio-cultural effects. Therefore, the conclusion that no significant cumulative effects on Socio-economics, Wider Socio-economic Effects and Socio-Cultural Effects as presented in Section 13.6.4.2 – 13.6.4.3 of the EIA Report remain valid.

The assessment of cumulative effects on Land Use presented in Section 13.6.4.2 – 13.6.4.3 of the EIA Report is considered to be unchanged, as the land required for the onward Grid Connection is either within the boundary of the Proposed Development, Branxton Substation, or within the boundaries of the existing road network and verges. As such no new land take is anticipated to be required, and considered not significant under EIA regulations.

Similarly, the cumulative assessment of Tourism and Recreation receptors presented in Section 13.6.4.6 of the EIA Report is likewise considered to be unchanged, as it is not anticipated that the works for the onward Grid Connection would require temporary or permanent closures of core paths. It is not anticipated that construction of the proposed onward Grid Connection would generate new significant noise or visual effects. Additionally, as works are expected to be confined to the carriageway and governed by a CTMP, impacts on access to tourism and recreation receptors are will be limited and temporary, and not likely to be significant under EIA regulations.

For these reasons the conclusion of no significant cumulative effects on Tourism and Recreation receptors as presented in the EIA Report remains unchanged.

10.2.1 SPRINGFIELD COLLECTOR SUBSTATION

The conclusions of the Cumulative Assessment presented in Section 13.6.4 of the EIA Report are not predicted to be altered when considering the Springfield Collector Substation.

While detailed construction sequencing information is currently unavailable for the Springfield Collector Substation, any potential overlap in construction periods of the Springfield Collector Substation and the Proposed Development is considered to be of limited duration. Any potential for adverse effects such as displacement of economic activity that could arise due to

additional demand on the local labour market, or knock-on socio-cultural effects as a result of demographic change and additional demand for services from incoming construction workers are considered to be limited and temporary. Therefore, the conclusions on cumulative effects on Socio-economics, Wider Socio-economic Effects and Socio-Cultural Effects presented in Section 13.6.4.2 – 13.6.4.3 of the EIA Report remain valid.

The assessment of cumulative effects on Land Use presented in Section 13.6.4.2 – 13.6.4.3 of the EIA Report is considered to be unchanged, as the entirety of the land required for the Springfield Collector Substation is within the boundary of the Proposed Development, and therefore no significant cumulative effects on Land Use are expected.

Similarly, the cumulative assessment of Tourism and Recreation receptors presented in Section 13.6.4.6 of the EIA Report is likewise considered to be unchanged, not significant under EIA Regulations due to the location of the Springfield Collector Substation within the redline boundary of the Proposed Development, and limited overlap in construction periods.

10.3 SUMMARY

The conclusions of the cumulative assessment of the Proposed Development presented in Section 13.6.4 of Chapter 13 of the EIA Report are unchanged by the inclusion of the onward Grid Connection and Springfield Collector Substation individually. Similarly, there are no significant cumulative effects when considering the Proposed Development, onward Grid Connection and Springfield Collector Substation together. The conclusions presented in the EIA Report remain unchanged and no additional significant cumulative effects are identified.

11. GREENHOUSE GAS

The assessment of Greenhouse Gas emission for the Proposed Development is presented in Chapter 14 of the EIA report. This assessment was undertaken following the recognised good practice assessment guidance document 'Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating the Significance' (ISEP, 2022).

Regarding cumulative assessment of greenhouse gas emission for a development this guidance states the following:

"As GHG emission impacts and resulting effects are global rather than affecting one localised area, the approach to cumulative effects assessment for GHGs differs from that for many EIA topics...

Effects of GHG emissions from specific cumulative projects therefore in general should not be individually assessed, as there is no basis for selecting any particular (or more than one) cumulative project that has GHG emissions for assessment over any other. The contextualisation of GHG emissions...should incorporate by its nature the cumulative contributions of other GHG sources which make up that context. Where the contextualisation is geographically - or sector-bound (e.g. involves contextualising emissions within a local authority scale carbon budget, or a sector level net zero carbon roadmap), then the consideration of cumulative contributions to that context will be within that boundary."

Per this guidance it is not meaningful nor appropriate to undertake an individual cumulative assessment of the Proposed Development alongside a specific development, in this case the Springfield Collector Substation and onward Grid Connection.

The assessment of lifetime GHG emissions for the Proposed Development presented in Chapter 14 of the EIA found that compared to UK Carbon Budgets there would be a negligible and therefore not significant effect. Given the likely scale of the Springfield Collector Substation, and onward Grid Connection at a worst-case lifetime GHG emissions from these developments would be anticipated to be similar to those of the Proposed Development e.g. not significant under EIA Regulations.

12. OTHER ISSUES

Chapter 15: Other Issues of the EIA Report provides an assessment of the following topics:

- Glint and Glare;
- Human health involving Electromagnetic Fields (EMF); and
- Major Accidents and Disasters.

This section considers each of these topics in turn.

12.1 GLINT AND GLARE

The potential effects resulting from glint and glare arising from the Solar PV elements of the Proposed Development are assessed in Section 15.3 of the EIA Report, supported by Technical Appendix 15.1. This assessment concluded that no significant effects would arise from the Proposed Development.

The potential for significant glint and glare arises from the Solar PV panels within a Solar Farm. The Springfield Collector Substation and onward Grid Connection would not introduce a material additional source of glint and glare. No significant cumulative glint-and-glare effects are therefore identified

12.2 HUMAN HEALTH INVOLVING ELECTROMAGNETIC FIELDS (EMF)

The potential effects on Human Health arising from EMF induced by the electrical components of the Proposed Development were assessed in Section 15.4 of the EIA Report, supported by Technical Appendix 15.2. TA 15.2 provides detailed background and assessment methodology that underpinned the assessment. This assessment concluded that no significant effects would arise from the Proposed Development.

Embedded mitigation was recommended, being a 15m buffer of any overhead lines, and the installation of electrical substation equipment with appropriate CE (Conformité Européene, or European Conformity marking and/or UK Conformity Assessed (UKCA) markings, meeting UK exposure standards.

As the Onward Grid connection would be an UGC exposure to EMFs from these cables will be less than the 400 kV overhead line assessed in the original EIA Technical Appendix 15.2, and as such be well below the reference level of public exposure limits present in UK policy⁸. All cables will be designed to comply with relevant EMF standards set out in UK policy and guidance.

While details regarding the specific equipment to be installed within the Springfield Collector Substation are not yet available, it is assumed that all installed electrical equipment will be CE or UKCA marked. These standards ensure that electrical and electronic equipment does not generate, or is not unintentionally affected by electromagnetic disturbance.

⁸ UK Policy on public exposure limits to EMF radiation is designed to comply with the 1998 ICNIRP (International Commission on the Non-Ionizing Radiation Protection) guidelines in terms of the 1999 EU Recommendation.

No new individual or cumulative significant effects from the onward Grid Connection and Springfield Collector Substation are identified. The conclusions presented in the EIA Report remain unchanged and no additional significant cumulative effects are identified.

12.3 MAJOR ACCIDENTS AND DISASTERS

The potential effects on Human Health arising from Major Accidents and Disasters are assessed in Section 15.5 of the EIA Report. This Chapter specifically assessed:

- Potential for Major Industrial Accidents;
- Potential for battery fire in BESS;
- Potential for accidental Unexploded Ordnance (UXO) Detonation; and
- Potential for damage to existing utilities.

No significant effects, including cumulative effects, were predicted after application of embedded and best practice mitigation.

It is assumed that similar measures will be implemented for the Onward Grid Connection and Collector Station, as these measures will be necessary to secure consent. It is highly unlikely that these developments either individually or cumulatively will exacerbate or trigger a major incident or disaster and no additional significant cumulative effects are identified.

13. SUMMARY

At the request of the Reporters (received 30 June 2026), this Report presents a high-level assessment of the potential cumulative effects of the Proposed Development, onward Grid Connection, and Springfield Collector Substation. This cumulative assessment concludes that following the implementation by the transmission operator of good practice guidance and mitigation measure during construction and operation, no additional significant cumulative effects are identified and the conclusions of the assessments of inter-project cumulative effects presented in the EIA Report remain unchanged.

APPENDIX A FIGURES

APPENDIX B TECHNICAL DRAWINGS

