

Cumulative Impact Assessment

Prepared by: Arthian Ltd

For: Renewable Energy Systems Limited

Site: Bonnyknox Solar Farm

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Quality Assurance

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Staff Detail

Initials	Name	Qualifications AND Position
IS	Ian Spindler	Ba (Hons), DipLA, CMLI Technical Director
AC	Adam Collinge	Ba (Hons), DipLA, CMLI Technical Director



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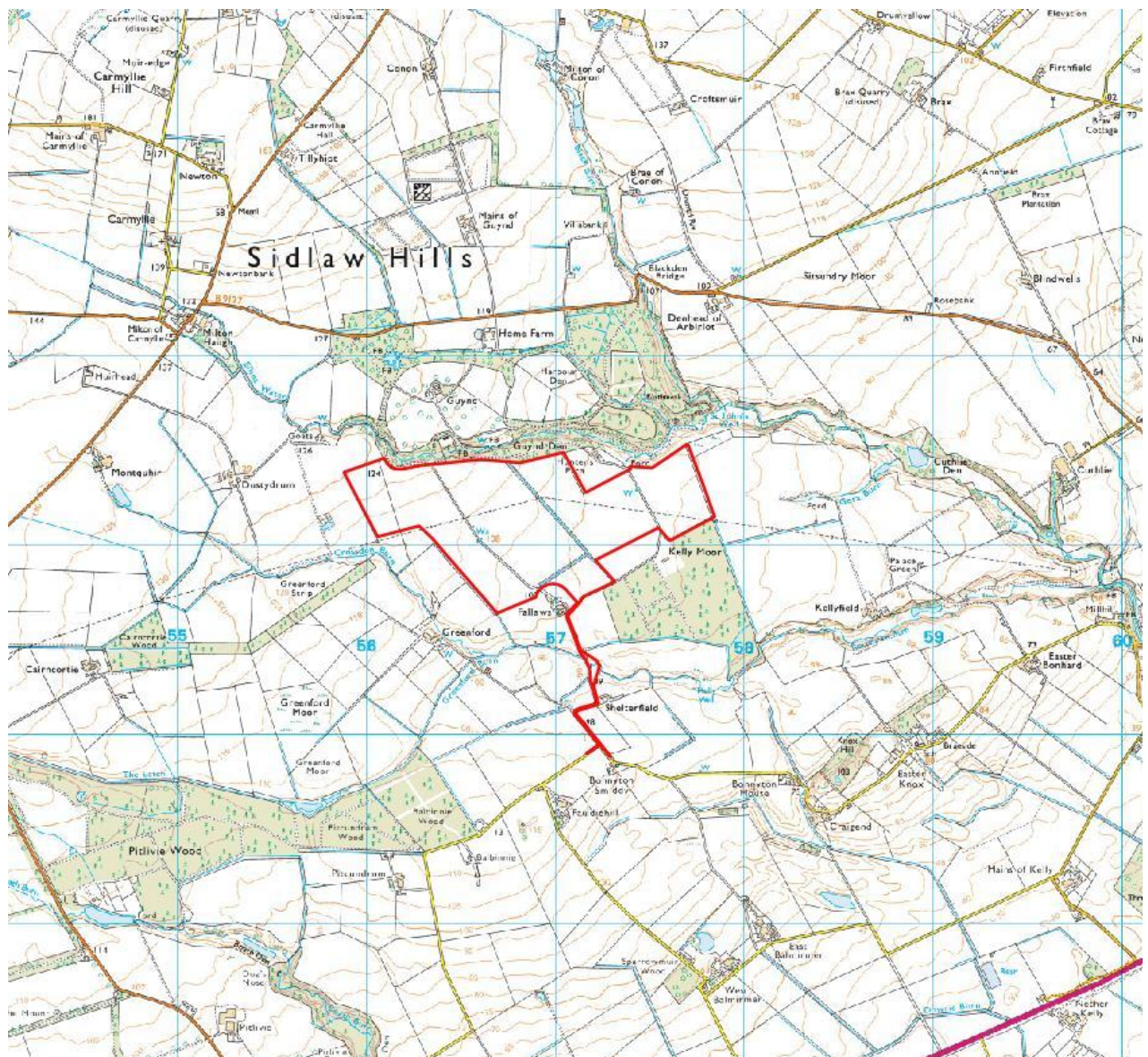
1. Introduction

1.1 Background

- 1.1.1 Arthian Ltd, a Registered Practice of the Landscape Institute, were commissioned by Renewable Energy Systems Limited to undertake a Cumulative Impact Assessment in relation to the proposed 49.9MW solar farm ('the Proposed Development') on land at 'The Fallaws' of Arbirlot, Arbroath ('the Application Site') to accompany the current planning application (ref: 25/00339/FULM).
- 1.1.2 At the request of Angus Council, a Cumulative Assessment is required in support of the current planning application, to determine the potential for cumulative landscape and visual effects relating to other energy developments within the established 5km study area. Included are current and past planning applications, whether consented, awaiting a decision or have approval but were not constructed and their approvals are outdated.
- 1.1.3 Guidance for Landscape Cumulative Impact Assessments is described within GLVIA 3 (Guidelines for Landscape and Visual Impact Assessments) and requires any cumulative impact assessment to focus on a form of development of the same or similar characteristics to the application, i.e. solar or wind, but not both. As specifically requested by the Local Planning Authority, this cumulative assessment covers all forms of renewable energy developments, including solar, wind and BESS (Battery Energy Storage System) in combination.
- 1.1.4 This desk-based cumulative impact assessment is to be read in conjunction with the Landscape & Visual Appraisal (report ref: 313625-RP01-Final) that was submitted in support of the current planning application.
- 1.1.5 A site location plan is shown at Plate 1, below.



Plate 1 **Site Location Plan – Application ref: 25/00339/FULM**

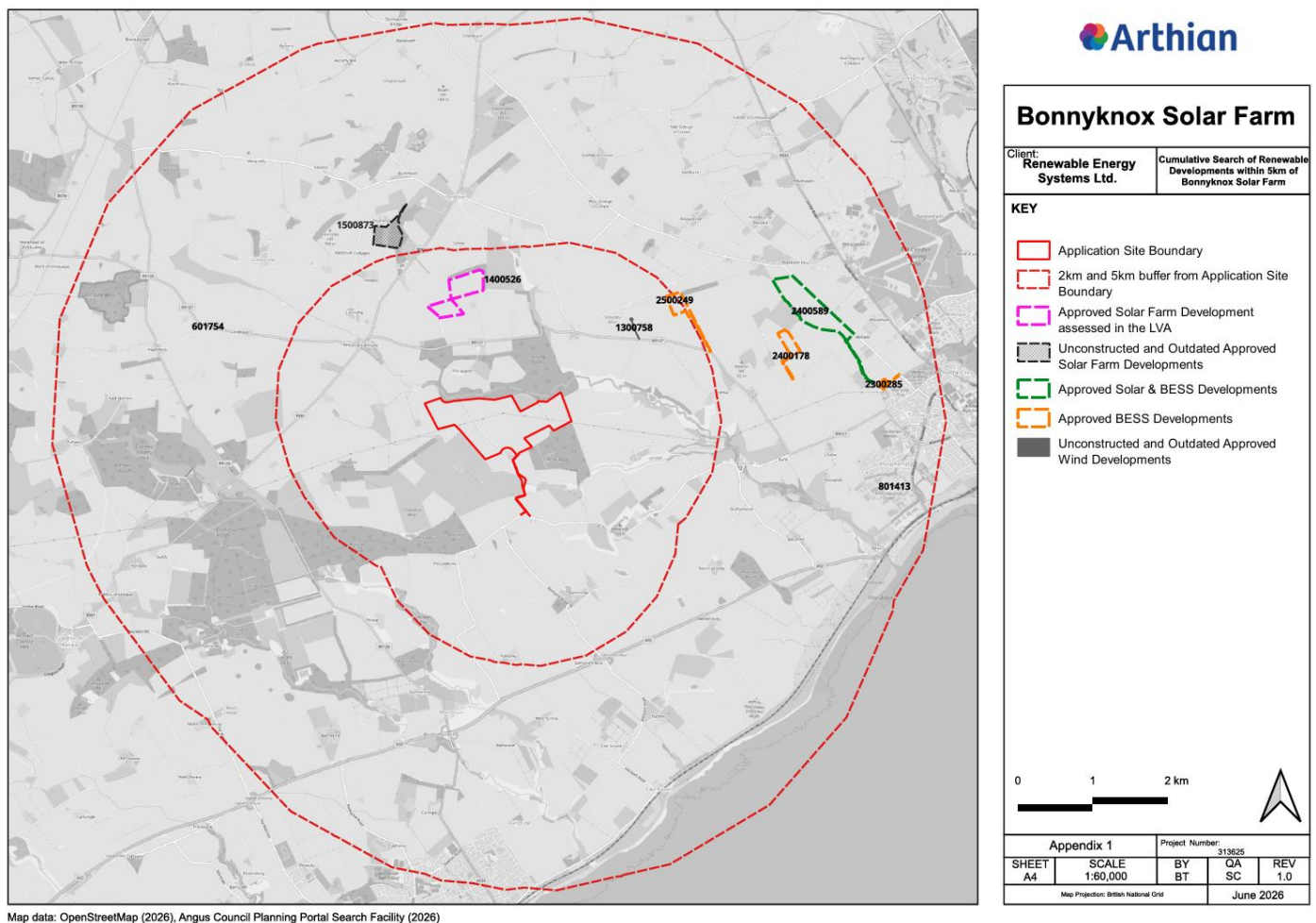


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2. Other Renewable Developments

2.1.1 A plan showing the locations of renewable energy developments within the 5km study area is shown below at Plate 2, and included within Appendix A.

Plate 2 Renewable Developments within 5km



2.1.2 The following renewable energy developments, considered for the potential of adverse cumulative impacts, are as follows:

- **06/01754/FUL - Glester Cottage Carmyllie Arbroath Angus DD11 2QY**

Extension to Dwellinghouse and Erection of a Wind Turbine. This is a small scheme and largely relates to the extension of the dwelling. The turbine is domestic in scale and no evidence available of it being built.

- **15/00873/FULL - Field 275M South Of Drummygar Drummygar Carmyllie**

Installation of a Solar Farm up to 5MW and Associated Development. approved subject to conditions. 2015. Not constructed.



- **14/00526/FUL - Field 325M North Of New Mains Of Guynd Farm Guynd Arbroath**

Proposed Ground Mounted Solar Energy Park with Sub-Station and Associated Works. Approved Subject to Conditions. Built and Operational

- **13/00758/FULL - Field To The Rear Of Rosebank Cuthlie Arbroath**

Erection Of Wind Turbine Of 50 Metres To Hub Height And 77 Metres To Blade Tip And Associated Sub-Station And Transformer Kiosk, Hardstanding Areas And Access Road. Approved Subject to Conditions. Not constructed.

- **25/00249/FULM - Land 150M South Of Annfield Cottage Brax Arbroath**

Development of a battery energy storage system with a capacity of 49.9MW comprising storage containers, control building, transformers, fencing, CCTV, access, landscaping and associated work. Approved Subject to Conditions.

- **24/00178/FULM - Land 400M North Of Bankhead Arbirlot Arbroath**

Development of a battery energy storage system with a capacity of 49.9MW comprising storage containers, control building, transformers, fencing, CCTV, access, landscaping and associated works. Approved Subject to Conditions.

- **24/00589/FULL - Land 200M West Of Denfield Arbroath**

Proposed new solar farm installation including battery storage facility. Approved subject to Conditions.

- **23/00285/FULL - Land To East Of Crudie Acre Cottage Arbroath**

Change of use of land for the formation of a battery electricity storage facility comprising battery storage containers, concrete skids, inverters and transformers, a DNO substation, a client substation, a welfare container, a spare container and ancillary development including underground cabling, vehicular access, vehicular parking and turning area, fencing, CCTV and landscaping. Approved and constructed.

- **08/01413/FUL - Wind Turbine Site Peasiehill Road Elliot Industrial Estate Arbroath DD11 2NJ**

Single wind turbine. Approved Subject to Conditions. Not Constructed.

2.1.3 Following a detailed review of the identified nine renewable energy sites, it was determined that some of the sites despite have planning consent, have not been developed and the timescales for implementing development have passed, therefore all permissions are now outdated. For the purpose of this cumulative assessment, the following have been omitted:

- 15/00873/FULL - Field 275M South Of Drummygar, Drummygar, Carmyllie
- 06/01754/FUL - Glester Cottage, Carmyllie, Arbroath, Angus DD11 2QY
- 13/00758/FULL - Field To The Rear Of Rosebank Cuthlie Arbroath
- 08/01413/FUL - Wind Turbine Site Peasiehill Road Elliot Industrial Estate Arbroath DD11 2NJ.



2.1.4 The following renewable energy sites are considered within this cumulative assessment, listed below in order of orientation and distance from the Application Site:

- 14/00526/FUL - Field 325M North Of New Mains Of Guynd Farm Guynd Arbroath, located to the north of the Application Site at a distance of approx. 1.15km;
- 25/00249/FULM - Land 150M South Of Annfield Cottage Brax Arbroath, located to the northeast of the Application Site at a distance of approx. 1.78km;
- 24/00178/FULM - Land 400M North Of Bankhead Arbirlot Arbroath, located to the east of the Application Site at a distance of approx. 2.93km;
- 24/00589/FULL - Land 200M West Of Denfield Arbroath, located to the northeast of the Application Site at a distance of approx. 3.18km;
- 23/00285/FULL - Land To East Of Crudie Acre Cottage Arbroath, located to the east of the Application Site at a distance of approx. 4.15km.



3. Cumulative Assessment and Conclusion

- 3.1.1 The existing solar farm (ref: 14/00526/FUL) to the north of the Application Site was assessed within the Landscape and Visual Appraisal submitted in support of the planning application, which concluded that *“This solar development is separated from the Application Site by the expansive woodland to Guynd Den that lies immediately adjacent to the northern boundary. The Application Site has limited intervisibility with the wider landscape to the north, including the area where the Mains of Guynd solar development is located, and as a result no cumulative impacts are identified due to no locations where both solar developments will be visible from at the same time.”*
- 3.1.2 The renewable energy sites listed at para 2.1.4, with the exception of the existing solar development to the north, are located to the east/northeast of the Application Site at distances ranging from 1.78km to 4.15km, with a constructed BESS site (ref: 23/00285/FULL) located immediately adjacent or within the existing urban edge of Arbroath. The remaining four renewable developments are generally clustered together within the wider landscape in an area no greater than 2km in width, and at a distance in excess of 1.8km from the Application Site. These renewable sites are, with the exception of the solar farm west of Denfield (ref: 24/00589/FULL), relatively small in scale and have a limited vertical profile.
- 3.1.3 The location of these sites is within a relatively flat landscape on the north-western edge of the town of Arbroath, with a limited number of sensitive receptors present. No major road or rail routes are present, reducing the likelihood of sequential cumulative impacts, and formal footpath routes are similarly limited. From local roads leading away from the urban edge, there are likely cumulative impacts from the consented schemes, notably from the proposed (approved BESS and solar facility (ref: 24/00589/FULL) to the west of Denfield, with schemes immediately to the west on rising ground (ref: 24/00178/FULM and 25/00249/FULM). It should be noted that the discussion in this paragraph is relating to those schemes that are already consented and the proposed Bonnyknox Solar Farm would not be intervisible with any of them, therefore not adding to the cumulative impact.
- 3.1.4 The landscape between the cumulative sites and the Proposed Development is formed by a series of topographical undulations, with the raised and prominent landscape feature of Newton Hill restricting any views of the Proposed Development from roads or other publicly accessible areas in the vicinity of the wider renewables site. Woodland groupings near dwellings and aligning the route of the water course between Arbirlot and The Guynd (Hercules Burn and Elliott Water Valleys) further limit any views. There would be no cumulative impact on the wider landscape as a result of the Proposed Development.



4. Conclusion

- 4.1.1 The sites covered within this desktop based cumulative assessment lie to the east/northeast of the Proposed Development, on the north-western edge of the town of Arbirlot. A single solar farm (14/00526/FUL) lies to the north beyond the woodlands of The Guynd and was previously assessed within the Landscape and Visual Appraisal that was submitted in support of the current planning application. Due to the presence of significant areas of intervening woodland, localised topographical changes and lack of publicly accessible locations where the Proposed Development is visible from in the context of other renewable developments (both existing and built or proposed and have planning consent), no cumulative effects are predicted.
- 4.1.2 No major roads or rail routes are present in the vicinity of the Proposed Development, which limits the potential for sequential effects to receptors using local roads or the limited footpath network within the surrounding landscape. Given the separation distance between the Proposed Development and other renewable energy developments, together with the low-lying form of Bonnyknox Solar Farm, visibility between these developments is limited. As a result, sequential visual effects are expected to be minimal, with a negligible impact on the wider landscape.



Appendices

Appendix A:
Renewable Developments within 5km

Bonnyknox Solar Farm

Client:
**Renewable Energy
Systems Ltd.**

Cumulative Search of Renewable
Developments within 5km of
Bonnyknox Solar Farm

KEY

-  Application Site Boundary
-  2km and 5km buffer from Application Site Boundary
-  Approved Solar Farm Development assessed in the LVA
-  Unconstructed and Outdated Approved Solar Farm Developments
-  Approved Solar & BESS Developments
-  Approved BESS Developments
-  Unconstructed and Outdated Approved Wind Developments



Appendix 1

Project Number:
313625

SHEET	SCALE	BY	QA	REV
A4	1:60,000	BT	SC	1.0

Map Projection: British National Grid

June 2026

