

6 June 2024

Anesco Limited  
Unit 9, The Green  
Easter Park, Benyon Road  
Berkshire  
RG7 2PQ

SLR Project No.: 402.065269.00001

Frome Valley Solar Farm, Revision: 6.0

Dear Sirs

**RE: Nutrient Neutrality Statement, Proposed Frome Valley Solar Farm, Stoke Edith, Herefordshire HR1 4NGg**

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## 1.0 Introduction

- 1.1 SLR Consulting have been instructed by Anesco Limited (the Client) to prepare an initial Nutrient Neutrality Statement (NNS) relating to the construction of a proposed solar farm at Stoke Edith, near Hereford, HR1 4HG.
- 1.2 The proposed solar farm has a total area of 29.90 hectares (Ha) and is located immediately south of the River Frome. A railway line is indicated immediately north-east of the site, whilst a minor roadway is indicated immediately east of the site. The site is located approximately 4km east of the city of Hereford. The remainder of the surrounding area is rural, and mainly comprises agricultural fields. Refer to Drawing No. C0002470\_02 Rev F (Site Layout), by Anesco Limited, enclosed within this Technical Note.
- 1.3 The site currently comprises four agricultural fields. These are currently farmed by a tenant farmer, who has advised that the three northern fields are currently used for grazing cattle, and the southern field is used for arable farming.

## River Wye Special Area of Conservation

- 1.4 The River Frome is a tributary of the River Lugg, which is itself a tributary of the River Wye and which joins the River Wye at a point approximately 3km south-west of the site. The River Wye is designated as a Special Area of Conservation (SAC), due to the presence of

Atlantic salmon, brook lamprey, river lamprey, sea lamprey, Twait shad, white-clawed crayfish, bullhead and otters<sup>1</sup>.

- 1.5 The ecological significance of the River Wye is legally underpinned by the River Wye Site of Special Scientific Interest (SSSI), which is currently in 'unfavourable – declining' condition due to phosphate pollution<sup>2</sup>, which is mainly from agriculture and wastewater treatment. This NNS has been prepared according to Natural England (NE) advice for development proposals with the potential to adversely affect nutrient pollution for designated habitats sites<sup>3</sup>.
- 1.6 A Nutrient Management Plan is currently in place for the Wye catchment, which includes an action for '*Strategic assessment of potential Phosphorus interventions in the River Lugg catchment*'.<sup>4</sup> This NNS therefore is required to demonstrate that the proposed development will not result in increased phosphate loading to the Wye and Lugg catchments.

## Proposed Development

- 1.7 The proposed development comprises the installation of solar panels capable of producing up to 21 megawatts (MW) of power, with associated electrical sub-station and access roadways. No residential or commercial accommodation will be constructed within the site.

## Construction Phase

- 1.8 During construction of the proposed solar farm, temporary 'portaloo' style toilets will be provided on site for the use of construction staff. These will be emptied off site as required, in accordance with the relevant legislative requirements. The construction period is temporary (over 35 to 40 weeks), and these arrangements would be for the short term only.

## Operational Phase

- 1.9 The proposed solar farm will not require a permanent site-based staff and no staff offices or toilets will be constructed on site. Therefore, the operational phase of the proposed development will not result in any additional phosphate loading to the Lugg and Wye catchments.
- 1.10 A surface water drainage strategy has been prepared for the proposed solar farm<sup>5</sup>. It is not possible to infiltrate surface water runoff to ground, due to the presence of shallow

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1 <https://sac.jncc.gov.uk/site/UK0012642> accessed April 2024

2 <https://naturalengland.blog.gov.uk/2023/05/30/assessing-the-health-of-the-river-wye-and-its-catchment/> accessed May 2024

3 NE785 Revised Edition Natural England Water Quality and Nutrient Neutrality Advice (Natural England, 16 March 2022) <https://publications.naturalengland.org.uk/publication/4792131352002560> accessed April 2024

4 <https://www.herefordshire.gov.uk/downloads/file/23069/river-wye-sac-nutrient-management-plan-phosphate-action-plan-november-2021> accessed April 2024

5 Report No. 402.065269.00001 Flood Risk Assessment and Surface Water Drainage Strategy (by SLR Consulting), May 2024.



groundwater. Therefore, surface water runoff will be discharged to the River Frome as per the existing situation. Runoff will be discharged via the existing drainage ditch network on the site, and a proposed new conveyance swale. This swale can provide a minimal amount of particulate phosphate removal, due to sedimentation and uptake by plants<sup>6</sup>.

- 1.11 The site will be used for grazing sheep post development, in addition to the proposed solar panels. It is recommended that fences are provided to prevent the sheep grazing within 10m of the River Frome, or within 5m of any existing ditches or proposed swales. This will help to prevent sediment and nutrient runoff from the site to the River Frome.
- 1.12 Sheep excrete a total of 1.8 kg of phosphate per animal, whilst cattle excrete between 5.0 and 19.4 kg of phosphate per animal<sup>7</sup>. Therefore, the proposed change in grazing from cattle to sheep will reduce phosphate loading from the site post development.

## Conclusions

The proposed solar farm will not generate additional phosphate inputs to the River Frome and the wider River Wye catchment, and no mitigation measures will be required. Phosphate loading from the site will reduce post development with the proposed change from cattle to sheep grazing.

I trust that the information contained within this letter report is clear, however should further information be required, please contact me using the details below.

Regards,

**SLR Consulting Limited**

*Helena Preston*

### Helena Preston

Senior Hydrologist – Hydrology and Hydrogeology

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Enclosures: Drawing No. C0002470\_02 Rev F (Site Layout) by Anesco Limited

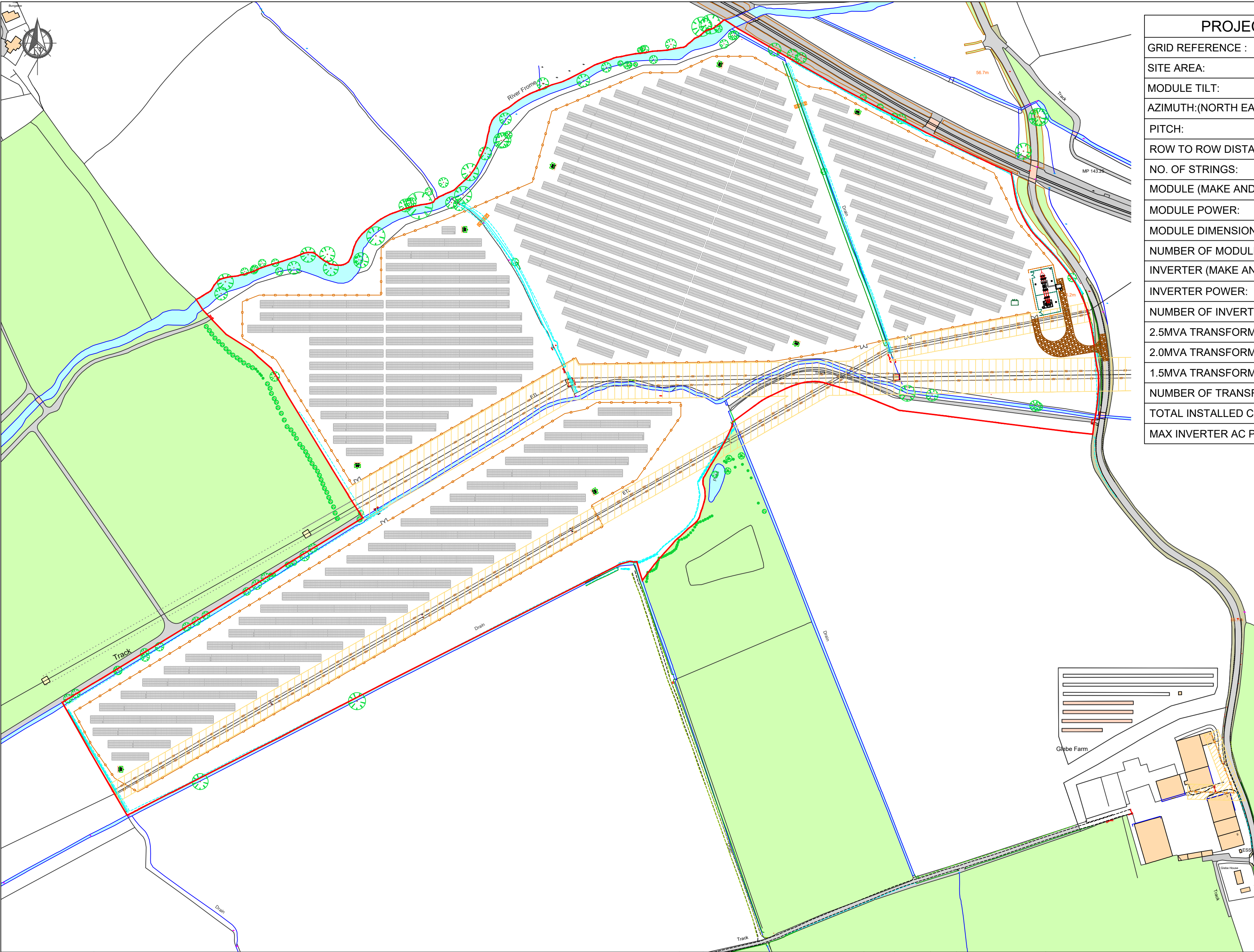
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<sup>6</sup> Bradley, J. Haygarth, P. Stachyra, K. and Williams, P. (2022) Using SuDS to reduce phosphorus in surface water runoff. C808 CIRIA, London, UK

<sup>7</sup> Gooday, R. Gittins, J. Moorhouse, D. Wheeler, K. & Wright, E. (2016) To what extent could water quality be improved by reducing the phosphorus content in animal feed? Final Report CRW2015/03







PROJECT NAME: FROME VALLEY	
GRID REFERENCE :	SO 59494 41469
SITE AREA:	73.89 Acres / 29.90 ha
MODULE TILT:	15°
AZIMUTH:(NORTH EASTERN FIELDS)	20°
PITCH:	11.34m
ROW TO ROW DISTANCE:	4.5m
NO. OF STRINGS:	1174
MODULE (MAKE AND MODEL):	JA SOLAR, JAM66D45 605/LB
MODULE POWER:	605W
MODULE DIMENSIONS:	2384mm X 1134mm
NUMBER OF MODULES:	34046
INVERTER (MAKE AND MODEL):	SUNGROW SG350HX
INVERTER POWER:	352kW
NUMBER OF INVERTERS:	46
2.5MVA TRANSFORMER:	05
2.0MVA TRANSFORMER:	02
1.5MVA TRANSFORMER:	01
NUMBER OF TRANSFORMERS:	08
TOTAL INSTALLED CAPACITY:	20.60MWp
MAX INVERTER AC POWER:	16.192MW

Key	
	Site Boundary
	LV Cable Route
	Security Fence
	Gate within Security Fence
	Access Track
	Overhead Electrical Cables
	Utilities Easement
	Feeder Pillar & Transformer
	Hardstanding area
	Access Crossing (To be maintained)
	66kV Substation & DNO Control Room
	Customer Substation
	PV Array - JA Solar, 605W Modules

Installer Details

Anesco Ltd.  
The Green,  
Easter Park,  
Benyon Road,  
Reading,  
RG7 2PQ  
Tel: 0845 894 4444

Comments

Not for Construction

Revision	Description	Revised By	Date	Drawn By
A	Issued for comment	MS	25/03/2024	MS
B	Site Updated	JH	24/04/2024	
C	DNO Substation relocated	JH	02/05/2024	
D	RLB amended and addition access included	MS	09/05/2024	Scale
E	Two North Eastern Fields amended to have an azimuth of 20°	MS	13/05/2024	
F	DNO and Customer Substation moved	MS	17/05/2024	
				1:2500@ A2
				Sheet Size A2

Installation Address

Land At Stoke  
Edith,  
Herefordshire,  
HR1 4HG

Project

Frome Valley

Title

Site Layout

Drawing No.

C0002470\_02

Rev.

F

AMAZING ENERGY



Making Sustainability Happen