Additional Information

Shotton Mill Permit Variation Application

Shotton Mill Limited

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1	17 February 2026	Paul Wright	S Abram	Paul Wright

Basis of Report

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Background

SLR Consulting Limited (SLR) prepared a substantial variation application for the environmental permit (EP), reference EPR/BT4885IT for Shotton Mill Limited (SML). This was partially submitted to Natural Resources Wales (NRW) on 17 July 2025 with the final application documents being submitted on 22 December 2025.

NRW issued a letter requesting additional information to allow determination to start on 29 January 2026. A response deadline of 13 February 2026 was stipulated in the covering email from NRW.

This report is the response to the letter issued on 29 January 2026, responding to the issues in order and where necessary providing the requested information.

Please note, a clarification call was held between NRW and SLR on 2 February 2026 and NRW provided further advice following this call.

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NRW Issues

1.0 Air Quality Impact Assessment

a) Critical load – Assess the air emission features against the relevant critical loads as outlined on Air pollution inventory system (APIS link here:APIS app | APIS*). Reason – Since the planning advice in 2021, the critical loads for some features (such as Atlantic salt meadows) have been revised. The air quality impact assessment needs to be assessed against the current critical loads.*

b) Habitats receptors – Provide the grid reference for the location of the maximum impact for all habitat sites.

c) In combination assessment – Alongside the sites you have already identified we have identified the following sites that will need to be considered in the in-combination scope;

i. Deeside Power (permit variation PAN-028461) – Variation to add in new gas turbine in place of the original power station.

ii. Deeside SPV PAN-028894 (a permit application for a new bespoke permit for an anaerobic digestion plant located east of Shotton Paper Mill)

A copy of the application documents for these sites can be found on our public register (using the PAN reference).

d) Local wildlife site – There is one local wildlife site (Shotton Steelworks) located adjacent to the papermill (located on the south boarder). The air emissions impacts (atmospheric concentration and deposition) would need to be calculated for this site as this is within the screening distance (Air emissions risk assessment for your environmental permit - GOV.UK).

e) Provide contour map of the impact of emissions (oxides of nitrogen concentration and nitrogen deposition). *Reason - contour maps of the impact pathways will help show where in-combination overlap with other sites could occur.*

f) Provide Assessment for air quality impacts under abnormal operating conditions *Reason – this is a standard requirement for waste incinerator/co-incinerator plants.*

SLR response

a) Reference should be made to Table 1 and Table 2 for clarification of the updated nutrient nitrogen and acid Critical Loads (CLo), respectively, as applied within this request for additional information, based upon an updated information review of the Air Pollution Information System (APIS) website[1]. It is noted the CLo stated below were agreed in writing with NRW[2] prior to updated assessment as part of this response to requests for additional information.

Table 1: Updated Nutrient Nitrogen Critical Loads

Site	Designation	Updated APIS CLo Class / Notes	CLo (kgN/ha/yr)
ER1 (SAC)	Dee Estuary / Aber Dyfrdwy SAC	APIS states: Applies to the saltmarsh component of the feature. It is recommended that this is the relevant critical load for most of saltmarsh but the	10

[1] https://www.apis.ac.uk/.

[2] Email correspondence between William Wallace, on behalf of Natural Resources Wales, and SLR Consulting Ltd, dated 04/02/2026.

Site	Designation	Updated APIS CLo Class / Notes	CLo (kgN/ha/yr)
		lower level of 10kgN/ha/yr should be applied to the more densely vegetated upper marsh (e.g. EUNIS class MA223, MA224) and to areas of marsh subjected to direct run-off from adjacent catchments (NRW recommendation). For pioneer saltmarsh (MA225) use the higher 20-30kgN/ha/yr critical load.	
ER1 (SPA)	The Dee Estuary SPA	APIS states: Applies to the saltmarsh component of the feature. It is recommended that this is the relevant critical load for most of saltmarsh but the lower level of 10kgN/ha/yr should be applied to the more densely vegetated upper marsh (e.g. EUNIS class MA223, MA224) and to areas of marsh subjected to direct run-off from adjacent catchments (NRW recommendation). For pioneer saltmarsh (MA225) use the higher 20-30kgN/ha/yr critical load.	10
ER2 (SAC)	River Dee and Bala Lake SAC	"Riparian habitat" no longer stated on APIS. "Permanent oligotrophic lakes, ponds and pools (including softwater lakes)" not considered to be relevant. Alternatively applying: "Acidophilous Quercus forest" Critical Load class	10
ER3 (SAC)	Dees and Buckley Newts SAC		10
ER4 (SAC)	Halkyn Mountain SAC	Now applying Critical Load class: Semi-dry Perennial calcareous grassland (basic meadow steppe).	10
ER5 (SSSI)	Inner Marsh Farm SSSI	APIS states: Applies to the saltmarsh component of the feature. It is recommended that this is the relevant critical load for most of saltmarsh but the lower level of 10kgN/ha/yr should be applied to the more densely vegetated upper marsh (e.g. EUNIS class MA223, MA224) and to areas of marsh subjected to direct run-off from adjacent catchments (NRW recommendation). For pioneer saltmarsh (MA225) use the higher 20-30kgN/ha/yr critical load.	10
ER6 (SSSI)	Shotton Lagoons and Reedbeds SSSI	"Fen, Marsh or Swamp" no longer stated on APIS. Alternatively applying "Atlantic upper-mid & mid-low salt marshes" Critical Load class.	10
ER7 (SAC)	Alyn Valley Woods Coedwigoerr Dyffryn Alun SAC	"Meso- and eutrophic Quercus woodland" no longer stated on APIS. Alternatively applying "Acidophilous Quercus forest" Critical Load class.	10

Site	Designation	Updated APIS CLo Class / Notes	CLo (kgN/ha/yr)
ER8 (SPA)	Mersey Estuary SPA	"Raised and blanket bogs" no longer stated on APIS. Alternatively applying "Atlantic upper-mid & mid-low salt marshes" Critical Load class. APIS states: Applies to the saltmarsh component of the feature. It is recommended that this is the relevant critical load for most of saltmarsh but the lower level of 10kgN/ha/yr should be applied to the more densely vegetated upper marsh (e.g. EUNIS class MA223, MA224) and to areas of marsh subjected to direct run-off from adjacent catchments (NRW recommendation). For pioneer saltmarsh (MA225) use the higher 20-30kgN/ha/yr critical load.	10
ER9 (LWS)	Shotton Steelworks LWS	Low and medium altitude hay meadows	10

Table 2: Updated Acid Critical Loads

Site	Designation	Updated APIS CLo Class / Notes	CLo (kg N/ha/yr) (CLmaxN)
ER1 (SAC)	Dee Estuary / Aber Dyfrdwy SAC	Habitat remains not acid sensitive	n/a
ER1 (SPA)	The Dee Estuary SPA	"Acid grassland" no longer stated. Now applying "Calcareous grassland (using base cation)" Critical Load class.	4.856
ER2 (SAC)	River Dee and Bala Lake SAC	Now applying "Unmanaged Broadleafed/Coniferous Woodland" Critical Load class.	3.94
ER3 (SAC)	Dees and Buckley Newts SAC	Now applying "Unmanaged Broadleafed/Coniferous Woodland" Critical Load class.	1.59
ER4 (SAC)	Halkyn Mountain SAC	Now applying "Calcareous grassland (using base cation)" Critical Load class.	4.856
ER5 (SSSI)	Inner Marsh Farm SSSI	Habitat remains not acid sensitive. "Unmanaged Broadleafed/Coniferous Woodland" habitat / Critical Load class not considered relevant.	n/a
ER6 (SSSI)	Shotton Lagoons and Reedbeds SSSI	"Fen, Marsh or Swamp" Critical Load class no longer stated. Now applying "Calcareous grassland (using base cation)" Critical Load class as precautionary approach. No other acid Critical Load classes apply to designation.	5.071
ER7 (SAC)	Alyn Valley Woods Coedwigoerr Dyffryn Alun SAC	Now applying "Unmanaged Broadleafed/Coniferous Woodland" Critical Load class.	1.863

Site	Designation	Updated APIS CLo Class / Notes	CLo (kg N/ha/yr) (CLmaxN)
ER8 (SPA)	Mersey Estuary SPA	"Bogs" Critical Load class no longer stated. Only sensitive Critical Load class is "Calcareous grassland (using base cation)" and not considered relevant.	n/a
ER9 (LWS)	Shotton Steelworks LWS	Calcareous grassland	5.071

b) Reference should be made to Table 3 to Table 6 for presentation of the National Grid Reference (NGR) for maximum modelled Process Contributions (PC) at each considered ecological receptor.

Note, consistent with the approach to the Air Emissions Risk Assessment (AERA), NGRs are presented as associated with PCs for the following scenarios:

- Boiler Project Scenario; and
- CHP Project Scenario.

Table 3: Boiler Project Scenario – Annual Mean NOx and SO_2 PCs, NGRs

Site	Designation	NGR (m)	
		X	Y
ER1 (SAC)	Dee Estuary / Aber Dyfrdwy SAC	330260.0	372030.9
ER1 (SPA)	The Dee Estuary SPA	330260.0	372030.9
ER2 (SAC)	River Dee and Bala Lake SAC	330950.2	369557.4
ER3 (SAC)	Dees and Buckley Newts SAC	328008.1	368647
ER4 (SAC)	Halkyn Mountain SAC	321616.5	369786.4
ER5 (SSSI)	Inner Marsh Farm SSSI	330719.4	372978
ER6 (SSSI)	Shotton Lagoons and Reedbeds SSSI	330218.8	371057.4
ER7 (SAC)	Alyn Valley Woods Coedwigoerr Dyffryn Alun SAC	319750.6	366275.7
ER8 (SPA)	Mersey Estuary SPA	338215.6	379428.9
ER9 (LWS)	Shotton Steelworks LWS	330809.2	371171.8

Table 4: CHP Project Scenario – Annual Mean NOx and SO_2 PCs, NGRs

Site	Designation	NGR (m)	
		X	Y
ER1 (SAC)	Dee Estuary / Aber Dyfrdwy SAC	330141.8	372245.5
ER1 (SPA)	The Dee Estuary SPA	330141.8	372245.5
ER2 (SAC)	River Dee and Bala Lake SAC	331451.2	369230.9
ER3 (SAC)	Dees and Buckley Newts SAC	329890.4	368536.9
ER4 (SAC)	Halkyn Mountain SAC	321398.7	368315.2
ER5 (SSSI)	Inner Marsh Farm SSSI	330719.4	372978

Site	Designation	NGR (m)	
		X	Y
ER6 (SSSI)	Shotton Lagoons and Reedbeds SSSI	330150.6	370963.2
ER7 (SAC)	Alyn Valley Woods Coedwigoerr Dyffryn Alun SAC	318850.6	364975.7
ER8 (SPA)	Mersey Estuary SPA	338215.6	379428.9
ER9 (LWS)	Shotton Steelworks LWS	330836.3	371180.8

Table 5: Boiler Project Scenario – 24-hour Mean NOx PC, NGRs

Site	Designation	NGR (m)	
		X	Y
ER1 (SAC)	Dee Estuary / Aber Dyfrdwy SAC	321616.5	369786.4
ER1 (SPA)	The Dee Estuary SPA	329191.4	372408.5
ER2 (SAC)	River Dee and Bala Lake SAC	333763.5	367640.5
ER3 (SAC)	Dees and Buckley Newts SAC	330057.0	372887.5
ER4 (SAC)	Halkyn Mountain SAC	321192.1	369775.1
ER5 (SSSI)	Inner Marsh Farm SSSI	330692.0	373370.4
ER6 (SSSI)	Shotton Lagoons and Reedbeds SSSI	330162.2	372164.7
ER7 (SAC)	Alyn Valley Woods Coedwigoerr Dyffryn Alun SAC	319350.6	365675.7
ER8 (SPA)	Mersey Estuary SPA	338715.6	380678.9
ER9 (LWS)	Shotton Steelworks LWS	330699.5	371076.4

Table 6: CHP Project Scenario – 24-hour Mean NOx PC, NGRs

Site	Designation	NGR (m)	
		X	Y
ER1 (SAC)	Dee Estuary / Aber Dyfrdwy SAC	330041.8	372195.5
ER1 (SPA)	The Dee Estuary SPA	329491.8	372695.5
ER2 (SAC)	River Dee and Bala Lake SAC	335093.6	366829.0
ER3 (SAC)	Dees and Buckley Newts SAC	319946.4	371140.9
ER4 (SAC)	Halkyn Mountain SAC	327360.2	365107.6
ER5 (SSSI)	Inner Marsh Farm SSSI	330692.0	373370.4
ER6 (SSSI)	Shotton Lagoons and Reedbeds SSSI	330737.2	372189.7
ER7 (SAC)	Alyn Valley Woods Coedwigoerr Dyffryn Alun SAC	318950.6	363675.7
ER8 (SPA)	Mersey Estuary SPA	340215.6	378928.9
ER9 (LWS)	Shotton Steelworks LWS	330699.5	371076.4

c) An updated in-combination assessment has been provided in due consideration of Deeside Power (permit variation PAN-028461). Emission parameters and

relevant modelled buildings for the Deeside Power (permit variation PAN-028461) site have been sourced from the submitted AERA[3]. Reference should be made to Table 7 for the applied emission parameters. Modelled PCs have been adjusted to reflect the maximum 2,000hours/annum operation. The in-combination assessment is limited to consideration of NOx.

Table 7: Deeside Power Emission Parameters

Parameter	Deeside Power Generator Sets
NGR (x,y)	1: 329789.2 371579.9 2: 329789.2 371573.9 3: 329789.2 371567.9 4: 329789.2 371561.9 5: 329789.2 371555.9 6: 329789.2 371543.9 7: 329789.2 371537.9 8: 329789.2 371531.9 9: 329789.2 371525.9 10: 329789.2 371519.9 11: 329789.2 371513.9
Stack Height (m) (each stack)	15.0
Stack Internal Diameter (m) (each stack)	0.8
Volume Flow (Nm^3/s) (A)	8.30
Emission Temperature (^oC)	351
Actual Flow Rate (Am^3/s)	11.96
Emission velocity (m/s) per stack	23.79
NOx Concentration (mg/Nm^3)	95
NOx Emission (g/s)	0.79
Note: (A) Normalised to 273K, dry, 101.3kPa, 11% O_2.	

In regard to the Deeside SPV PAN-028894 (a permit application for a new bespoke permit for an anaerobic digestion plant located east of Shotton Paper Mill) referenced as part of NRWs request for additional information, a review of the Permit application document indicates limited submitted air quality information and no AERA. The extent of submitted air quality information is limited to the Air Quality Chapter to the Environmental Statement submitted in support of FCC application reference: 058270[4]. A review of FCC application reference: 058270 indicates planning permission was granted for 1 CHP plant with emissions discharged via a 3m stack. The Deeside SPV PAN-028894 permit application includes 3 CHPs plants each with emissions discharged via a 10m stack: however, no emissions data / exhaust gas flow data is presented.

[3] Deeside Power Station, Air Dispersion Modelling Report, March 2025.

[4] Application details: Construction and operation of a waste management facility for the management of municipal, commercial and industrial waste, comprising: a waste reception hall with ground level pit tipping area, sorting hall with associated equipment for separation and processing, a refused derived fuel (RDF) hall, control room, electrical room and workers facilities, anaerobic digestion tank farm and associated infrastructure.

On this basis, it is not considered appropriate or possible to include the Deeside SPV PAN-028894 facility within the in-combination assessment.

Note, the original AERA submitted in support of the Permit variation application considered emission contributions from the Logik WTE Ltd site[5] as part of the in-combination assessment. However, the Logik WTE Ltd site occupies the same site as the Deeside SPV PAN-028894 anaerobic digestion facility. A review of aerial imagery indicates substantial progress of the Deeside SPV PAN-028894 anaerobic digestion facility and, therefore, it is not considered appropriate to consider emission contributions from the Logik WTE Ltd site as part of the in-combination assessment. Therefore, emission contributions from the Logik WTE Ltd site have been discounted / removed from the in-combination assessment.

Reference should be made to the following sections / tables which present the updated assessment of impacts on air quality as PCs, inclusive of the updated in-combination assessment and revised CLos. PCs are presented as average predicted concentrations across the 5-years' meteorological data. Assessment of impacts is presented for the following scenarios.

- Boiler Project Scenario; and
- CHP Project Scenario.

1.1.1 Critical Levels – Annual Mean NOx

1.1.1.1 'Boiler Project' Scenario

The results of the assessment of impacts on the annual mean NOx CLe, as associated with the 'Boiler Project' scenario, are presented in Table 8.

Table 8 indicates the PC is greater than 1% of the annual mean NOx CLe at ER1 (SAC) and ER1 (SPA). However, at ER1 (SAC) and ER1 (SPA) the PEC is less than 100% of the annual mean NOx CLe and, therefore, following the stated EA Operational Instruction 67_12 it can be assumed there will be 'no adverse effect'.

At considered receptors ER3 – ER8 the PC is less than 1% of the annual mean NOx CLe and, therefore, following the stated EA Operational Instruction 66_12 the PC impacts can be concluded to:

- Result in 'no likely significant effect' at ER2 (SAC), ER3 (SAC), ER4 (SAC), ER7 (SAC) and ER8 (SPA); and
- Cause 'No likely damage' at ER5 (SSSI) and ER6 (SSSI).

At receptor ER9 the PC is less than 100% of the annual mean NOx CLe and, therefore, following the stated EA Operational Instruction 66_12 the PC impacts can be concluded to result in 'no significant pollution'.

[5] Flintshire County Council planning application reference: 063104.

Table 8: Impacts on Annual Mean NOx Critical Level: 'Boiler Project' Scenario

ID	Designation	Applied CLe (µg/m³)	PC (µg/m³)	PC as % of CLe	PEC (µg/m³)	PEC as % of CLe
ER1	Dee Estuary / Aber Dyfrdwy SAC	30	1.25	4.15	22.4	74.7
ER1	The Dee Estuary SPA	30	1.25	4.15	22.4	74.7
ER2	River Dee and Bala Lake SAC	30	0.16	0.53	27.1	90.5
ER3	Dees and Buckley Newts SAC	30	0.05	0.18	16.2	53.9
ER4	Halkyn Mountain SAC	30	0.01	0.02	13.8	46.0
ER5	Inner Marsh Farm SSSI	30	0.37	1.25	15.0	50.0
ER6	Shotton Lagoons and Reedbeds SSSI	30	0.57	1.91	19.0	63.5
ER7	Alyn Valley Woods Coedwigoerr Dyffryn Alun SAC	30	0.01	0.03	7.10	23.7
ER8	Mersey Estuary SPA	30	0.03	0.10	35.8	119.4
ER9	Shotton Steelworks LWS	30	0.60	2.01	23.6	78.6

1.1.1.2 'CHP Project' Scenario

The results of the assessment of impacts on the annual mean NOx CLe, as associated with the 'CHP Project' scenario, are presented in Table 9.

Table 9 indicates the PC is greater than 1% of the annual mean NOx CLe at ER1 (SAC) and ER1 (SPA). However, at ER1 (SAC) and ER1 (SPA) the PEC is less than 100% of the annual mean NOx CLe and, therefore, following the stated EA Operational Instruction 67_12 it can be assumed there will be 'no adverse effect'.

At considered receptors ER2 – ER8, the PC is less than 1% of the annual mean NOx CLe and, therefore, following the stated EA Operational Instruction 66_12 the PC impacts can be concluded to:

- Result in 'no likely significant effect' at ER2 (SAC), ER3 (SAC), ER4 (SAC), ER7 (SAC) and ER8 (SPA); and
- Cause 'No likely damage' at ER5 (SSSI) and ER6 (SSSI).

At receptor ER9 the PC is less than 100% of the annual mean NOx CLe and, therefore, following the stated EA Operational Instruction 66_12 the PC impacts can be concluded to result in 'no significant pollution'.

Table 9: Impacts on Annual Mean NOx Critical Level: 'CHP Project' Scenario

ID	Designation	Applied CLe (µg/m³)	PC (µg/m³)	PC as % of CLe	PEC (µg/m³)	PEC as % of CLe
ER1	Dee Estuary / Aber Dyfrdwy SAC	30	1.54	5.12	22.6	75.4
ER1	The Dee Estuary SPA	30	1.54	5.12	22.6	75.4
ER2	River Dee and Bala Lake SAC	30	0.24	0.79	27.2	90.7

ID	Designation	Applied CLe (µg/m^3)	PC (µg/m^3)	PC as % of CLe	PEC (µg/m^3)	PEC as % of CLe
ER3	Dees and Buckley Newts SAC	30	0.08	0.27	16.2	53.9
ER4	Halkyn Mountain SAC	30	0.02	0.07	13.8	46.0
ER5	Inner Marsh Farm SSSI	30	0.61	2.02	15.2	50.8
ER6	Shotton Lagoons and Reedbeds SSSI	30	0.66	2.21	19.1	63.7
ER7	Alyn Valley Woods Coedwigoerr Dyffryn Alun SAC	30	0.04	0.12	7.12	23.7
ER8	Mersey Estuary SPA	30	0.06	0.20	35.8	119.5
ER9	Shotton Steelworks LWS	30	2.02	6.72	24.9	83.0

1.1.2 Critical Levels – 24-hour Mean NOx

1.1.2.1 'Boiler Project' Scenario

The results of the assessment of impacts on the 24-hour mean NOx CLe, as associated with the 'Boiler Project' scenario, are presented in Table 10.

Table 10 indicates the PC is greater than 10% of the 24-hour mean NOx CLe at ER1 (SAC) and ER1 (SPA).

At considered receptors, ER2 – ER8 the PC is less than 10% of the 24-hour mean NOx CLe and, therefore, following the stated EA Operational Instruction 66_12 the PC impacts can be concluded to:

- Result in 'no likely significant effect' at ER2 (SAC), ER3 (SAC), ER4 (SAC), ER7 (SAC) and ER8 (SPA); and
- Cause 'No likely damage' at ER5 (SSSI) and ER6 (SSSI).

At receptor ER9 the PC is less than 100% of the 24-hour mean NOx CLe and, therefore, following the stated EA Operational Instruction 66_12 the PC impacts can be concluded to result in 'no significant pollution'.

Table 10: Impacts on 24-hour Mean NOx Critical Level: 'Boiler Project' Scenario

ID	Designation	Applied CLe (µg/m^3)	PC (µg/m^3)	PC as % of CLe	PEC (µg/m^3)	PEC as % of CLe
ER1	Dee Estuary / Aber Dyfrdwy SAC	75	18.1	24.1	89.1	118.8
ER1	The Dee Estuary SPA	75	18.1	24.1	89.1	118.8
ER2	River Dee and Bala Lake SAC	75	7.05	9.4	94.4	125.9
ER3	Dees and Buckley Newts SAC	75	3.07	4.09	58.0	77.3
ER4	Halkyn Mountain SAC	75	0.25	0.33	43.6	58.2
ER5	Inner Marsh Farm SSSI	75	6.10	8.13	52.4	69.8
ER6	Shotton Lagoons and Reedbeds SSSI	75	9.86	13.1	83.3	111.1

ID	Designation	Applied CLe (µg/m^3)	PC (µg/m^3)	PC as % of CLe	PEC (µg/m^3)	PEC as % of CLe
ER7	Alyn Valley Woods Coedwigoerr Dyffryn Alun SAC	75	0.78	1.04	26.3	35.0
ER8	Mersey Estuary SPA	75	0.67	0.90	110.1	146.8
ER9	Shotton Steelworks LWS	75	28.37	37.83	64.7	86.2

1.1.2.2 'CHP Project' Scenario

The results of the assessment of impacts on the 24-hour mean NOx CLe, as associated with the 'CHP Project' scenario, are presented in At receptor ER9 the PC is less than 100% of the 24-hour mean NOx CLe and, therefore, following the stated EA Operational Instruction 66_12 the PC impacts can be concluded to result in 'no significant pollution'.

Table 11

At receptor ER9 the PC is less than 100% of the 24-hour mean NOx CLe and, therefore, following the stated EA Operational Instruction 66_12 the PC impacts can be concluded to result in 'no significant pollution'.

Table 11 indicates the PC is greater than 10% of the 24-hour mean NOx CLe at ER1 (SAC) and ER1 (SPA).

At the remaining considered receptors, the PC is less than 10% of the 24-hour mean NOx CLe and, therefore, following the stated EA Operational Instruction 66_12 the PC impacts can be concluded to:

- Result in 'no likely significant effect' at ER2 (SAC), ER3 (SAC), ER4 (SAC), ER7 (SAC) and ER8 (SPA); and
- Cause 'No likely damage' at ER5 (SSSI) and ER6 (SSSI).

At receptor ER9 the PC is less than 100% of the 24-hour mean NOx CLe and, therefore, following the stated EA Operational Instruction 66_12 the PC impacts can be concluded to result in 'no significant pollution'.

Table 11: Impacts on 24-hour Mean NOx Critical Level: 'CHP Project' Scenario

ID	Designation	Applied CLe (µg/m^3)	PC (µg/m^3)	PC as % of CLe	PEC (µg/m^3)	PEC as % of CLe
ER1	Dee Estuary / Aber Dyfrdwy SAC	75	19.0	25.4	89.1	118.8
ER1	The Dee Estuary SPA	75	19.0	25.4	89.1	118.8
ER2	River Dee and Bala Lake SAC	75	7.34	9.79	94.7	126.3
ER3	Dees and Buckley Newts SAC	75	2.97	3.96	58.0	77.3
ER4	Halkyn Mountain SAC	75	0.74	0.99	44.3	59.0
ER5	Inner Marsh Farm SSSI	75	5.67	7.56	53.4	71.2
ER6	Shotton Lagoons and Reedbeds SSSI	75	10.1	13.5	83.3	111.1
ER7	Alyn Valley Woods Coedwigoerr Dyffryn Alun SAC	75	2.03	2.71	27.7	37.0

ID	Designation	Applied CLe (µg/m^3)	PC (µg/m^3)	PC as % of CLe	PEC (µg/m^3)	PEC as % of CLe
ER8	Mersey Estuary SPA	75	0.75	1.00	110.2	146.9
ER9	Shotton Steelworks LWS	75	36.33	48.44	68.1	90.7

1.1.3 Critical Levels – Annual Mean SO_2

The results of the assessment of impacts on the annual mean SO_2 CLe are presented in Table 12. These apply to both 'Boiler Project' and 'CHP Project' Scenarios.

Table 12 indicates the PC is <1% of the annual mean SO_2 CLe at all considered ecological designations. Therefore, following the stated EA Operational Instruction 66_12 the PC impacts can be concluded to:

- Result in 'no likely significant effect' at ER1 (SAC), ER1 (SPA), ER2 (SAC), ER3 (SAC), ER4 (SAC), ER7 (SAC) and ER8 (SPA);
- Cause 'No likely damage' at ER5 (SSSI) and ER6 (SSSI); and
- Result in 'no significant pollution' at ER9 (LWS).

The PEC is less than the annual mean SO_2 CLe at all considered receptors.

Table 12: Impacts on Annual Mean SO_2 Critical Level

ID	Designation	Applied CLe (µg/m^3)	PC (µg/m^3)	PC as % of CLe	PEC (µg/m^3)	PEC as % of CLe
ER1	Dee Estuary / Aber Dyfrdwy SAC	20	0.07	0.37	2.94	14.7
ER1	The Dee Estuary SPA	20	0.07	0.37	2.94	14.7
ER2	River Dee and Bala Lake SAC	20	0.01	0.05	2.67	13.4
ER3	Dees and Buckley Newts SAC	20	<0.01	0.02	2.13	10.6
ER4	Halkyn Mountain SAC	20	<0.01	<0.01	1.31	6.6
ER5	Inner Marsh Farm SSSI	20	0.02	0.12	2.69	13.5
ER6	Shotton Lagoons and Reedbeds SSSI	20	0.04	0.20	2.95	14.7
ER7	Alyn Valley Woods Coedwigoerr Dyffryn Alun SAC	20	<0.01	<0.01	0.92	4.6
ER8	Mersey Estuary SPA	20	<0.01	0.01	3.33	16.6
ER9	Shotton Steelworks LWS	20	0.18	0.92	3.34	16.7

1.1.4 Critical Loads – Nutrient Nitrogen

1.1.4.1 'Boiler Project' Scenario

The results of the assessment of impacts on the nutrient nitrogen CLo, as associated with the 'Boiler Project' scenario, are presented in Table 13.

Table 13 indicates the PC is marginally >1% of the applied nutrient nitrogen CLo at ER1 (SAC) and ER1 (SAC).

At considered ecological receptors ER2 – ER8, the PC is <1% of the applied nutrient nitrogen CLo. At ecological receptor ER9, the PC is <100% of the applied nutrient nitrogen CLo. Therefore, following the stated EA Operational Instruction 66_12 the PC impacts on the nutrient nitrogen CLo can be concluded to:

- Result in 'No likely significant effect' at ER2 (SAC), ER3 (SAC), ER4 (SAC), ER7 (SAC), and ER8 (SPA);
- Cause 'No likely damage' at ER5 (SSSI) and ER6 (SSSI); and
- Result in 'no significant pollution' at ER9 (LWS).

It is noted that this assessment of impact of contributions to the nutrient nitrogen CLo revises the CLo from 20kgN/ha/yr to 10kgN/ha/yr at ER1 (SAC and SPA). Previous AERAs for other installations have been accepted by NRW based upon the application of and assessment against the 20kgN/ha/yr.

Table 13: Impacts on Nutrient Nitrogen Critical Load: 'Boiler Project' Scenario

ID	Designation	Applied CLo (kg N/ha/yr)	PC (kg N/ha/yr)	PC as % of CLo	PEC (kg N/ha/yr)	PEC as % of CLo
ER1	Dee Estuary / Aber Dyfrdwy SAC	10	0.12	1.17	19.5	195.2
ER1	The Dee Estuary SPA	10	0.12	1.17	19.5	195.2
ER2	River Dee and Bala Lake SAC	10	0.02	0.15	26.2	262.3
ER3	Dees and Buckley Newts SAC	10	0.01	0.10	21.3	213.4
ER4	Halkyn Mountain SAC	10	<0.01	0.01	19.0	189.9
ER5	Inner Marsh Farm SSSI	10	0.04	0.36	18.8	187.8
ER6	Shotton Lagoons and Reedbeds SSSI	10	0.06	0.56	19.5	195.2
ER7	Alyn Valley Woods Coedwigoerr Dyffryn Alun SAC	10	<0.01	0.02	32.3	322.7
ER8	Mersey Estuary SPA	10	<0.01	0.03	24.3	243.2
ER9	Shotton Steelworks LWS	10	0.04	0.43	17.4	174.0

1.1.4.2 'CHP Project' Scenario

The results of the assessment of impacts on the nutrient nitrogen CLo, as associated with the 'CHP Project' scenario, are presented in Table 14.

Table 14 indicates the PC is marginally >1% of the applied nutrient nitrogen CLo at ER1 (SAC) and ER1 (SAC).

At considered ecological receptors ER2 – ER8, the PC is <1% of the applied nutrient nitrogen CLo. At ecological receptor ER9, the PC is <100% of the applied nutrient nitrogen CLo. Therefore, following the stated EA Operational Instruction 66_12 the PC impacts on the nutrient nitrogen CLo can be concluded to:

- Result in 'No likely significant effect' at ER2 (SAC), ER3 (SAC), ER4 (SAC), ER7 (SAC), and ER8 (SPA);

- Cause 'No likely damage' at ER5 (SSSI) and ER6 (SSSI); and
- Result in 'no significant pollution' at ER9 (LWS).

It is noted that this assessment of impact of contributions to the nutrient nitrogen CLo revises the CLo from 20kgN/ha/yr to 10kgN/ha/yr at ER1 (SAC and SPA). Previous AERAs for other installations have been accepted by NRW based upon the application of and assessment against the 20kgN/ha/yr.

Table 14: Impacts on Nutrient Nitrogen Critical Load: 'CHP Project' Scenario

ID	Designation	Applied CLo (kg N/ha/yr)	PC (kg N/ha/yr)	PC as % of CLo	PEC (kg N/ha/yr)	PEC as % of CLo
ER1	Dee Estuary / Aber Dyfrdwy SAC	10	0.14	1.38	19.6	195.6
ER1	The Dee Estuary SPA	10	0.14	1.38	19.6	195.6
ER2	River Dee and Bala Lake SAC	10	0.02	0.21	26.2	262.4
ER3	Dees and Buckley Newts SAC	10	0.01	0.14	21.4	213.5
ER4	Halkyn Mountain SAC	10	<0.01	0.02	19.0	189.9
ER5	Inner Marsh Farm SSSI	10	0.05	0.52	18.8	188.1
ER6	Shotton Lagoons and Reedbeds SSSI	10	0.07	0.73	19.5	195.5
ER7	Alyn Valley Woods Coedwigoerr Dyffryn Alun SAC	10	0.01	0.05	32.3	322.7
ER8	Mersey Estuary SPA	10	<0.01	0.05	24.3	243.3
ER9	Shotton Steelworks LWS	10	0.15	1.45	17.6	176.0

1.1.5 Critical Loads – Acidification

1.1.5.1 'Boiler Project' Scenario

The results of the assessment of impacts on the acid CLo, as associated with the 'Boiler Project' scenario, are presented in Table 15.

Table 15 indicates the PC is >1% of the applied acid CLo at ER3 (SAC).

At considered ecological receptors ER1 (SPA), ER2 (SAC), ER4 (SAC), ER6 (SSSI) and ER7 (SAC), the PC is <1% of the applied acid CLo. At ecological receptor ER9, the PC is <100% of the applied acid CLo. Therefore, following the stated EA Operational Instruction 66_12 the PC impacts on the acid CLo can be concluded to:

- Result in 'No likely significant effect' at ER1 (SPA), ER2 (SAC), ER4 (SAC), and ER7 (SAC);
- Cause 'No likely damage' at ER6 (SSSI); and
- Result in 'no significant pollution' at ER9 (LWS).

Table 15: Impacts on Acid Critical Load: 'Boiler Project' Scenario

ID	Applied CLo Function	Applied CLo (kg eq/ha/yr)	PC (kg eq/ha/yr)	PC as % of CLo	PEC (kg eq/ha/yr)	PEC as % of CLo
ER1 (SAC)	No sensitive habitat with Critical Load data					
ER1 (SPA)	CLmaxN	4.856	0.02	0.35	1.68	34.52
ER2 (SAC)	CLmaxN	3.94	<0.01	0.05	1.42	36.04
ER3 (SAC)	CLmaxN	1.59	0.03	1.97	1.66	104.65
ER4 (SAC)	CLmaxN	4.856	<0.01	<0.01	1.45	29.83
ER5 (SSSI)	No sensitive habitat with Critical Load data					
ER6 (SSSI)	CLmaxN	5.071	<0.01	0.09	1.62	31.99
ER7 (SAC)	CLmaxN	1.863	<0.01	0.01	1.64	87.90
ER8 (SPA)	No sensitive habitat with Critical Load data					
ER9 (LWS)	CLmaxN	5.071	0.04	0.73	1.54	30.44

1.1.5.2 'CHP Project' Scenario

The results of the assessment of impacts on the acid CLo, as associated with the 'CHP Project' scenario, are presented in Table 16.

Table 16 indicates the PC is >1% of the applied acid CLo at ER3 (SAC).

At considered ecological receptors ER1 (SPA), ER2 (SAC), ER4 (SAC), ER6 (SSSI) and ER7 (SAC), the PC is <1% of the applied acid CLo. At ecological receptor ER9, the PC is <100% of the applied acid CLo. Therefore, following the stated EA Operational Instruction 66_12 the PC impacts on the acid CLo can be concluded to:

- Result in 'No likely significant effect' at ER1 (SPA), ER2 (SAC), ER4 (SAC), and ER7 (SAC);
- Cause 'No likely damage' at ER6 (SSSI); and

Result in 'no significant pollution' at ER9 (LWS).

Table 16: Impacts on Acid Critical Load: 'CHP Project' Scenario

ID	Applied CLo Function	Applied CLo (kg eq/ha/yr)	PC (kg eq/ha/yr)	PC as % of CLo	PEC (kg eq/ha/yr)	PEC as % of CLo
ER1 (SAC)	No sensitive habitat with Critical Load data					
ER1 (SPA)	CLmaxN	4.856	0.02	0.38	1.68	34.54
ER2 (SAC)	CLmaxN	3.94	<0.01	0.06	1.42	36.04
ER3 (SAC)	CLmaxN	1.59	0.03	1.98	1.66	104.67
ER4 (SAC)	CLmaxN	4.856	<0.01	<0.01	1.45	29.83
ER5 (SSSI)	No sensitive habitat with Critical Load data					
ER6 (SSSI)	CLmaxN	5.071	0.01	0.11	1.62	32.01

ID	Applied CLo Function	Applied CLo (kg eq/ha/yr)	PC (kg eq/ha/yr)	PC as % of CLo	PEC (kg eq/ha/yr)	PEC as % of CLo
ER7 (SAC)	CLmaxN	1.863	<0.01	0.02	1.64	87.92
ER8 (SPA)	No sensitive habitat with Critical Load data					
ER9 (LWS)	CLmaxN	5.071	0.04	0.87	1.55	30.57

d) The assessment of impacts presented in Table 8 to Table 16 includes consideration of the Shotton Steelworks LWS (ER9).

e) Subsequent to the follow up call, NRW have confirmed that this will not be required for the duly making stage.

2.0 Waste

a) Outline the EWC waste codes for the wastes that are to be used for the Containerboard Process *Reason – currently the permit lists EWC codes allowed for waste incineration, recycling facilities and the use in newspaper print but does not include one for containerboard manufacturing process*.

b) Provide an updated version of the waste acceptance procedures and waste acceptance criteria including any changes to these procedures as a result of the changes on site.

SLR Response

a) The list of EWC codes will remain unchanged to those listed in Table S2.4 of the extant EP, for clarity reproduced below.

Waste Code	Description
20 01 01	Paper and Cardboard – Municipal Waste
15 01 01	Paper and Cardboard Packaging
19 12 12	Other wastes (including mixtures of other materials from the mechanical treatment of wastes other than those mentioned in 19 12 11)
19 12 01	Paper and Cardboard

b) Incoming Quality Inspection Procedure (Recovered Paper), document reference QP_001 dated 12 February 2026 is attached.

3.0 Noise Impact Assessment

a) Provide the competency/qualifications of the people who undertook and wrote the noise impact assessment and noise monitoring.

b) The noise impact assessment identified NSR3 as one of the nearest noise sensitive receptors. However there appears to be new housing under construction to the east of that receptor. As outlined in section 8.5 of the method implementation document Method implementation document (MID) for BS 4142 - GOV.UK you should include proposed new noise sensitive receptors including anywhere planning permission has been granted.

c) Provide a brief justification why the median value for LA90 was used as a representative value for background.

d) Provide evidence of weather conditions that is representative of all locations and consider any uncertainties in the impact assessment. *Reason - Section 4.4 of the noise impact assessment includes the detailed weather for one location (location 1), despite being up to 4.7 km away from the other measure location (such as location 3)*.

SLR Response

a) Subsequent to the follow up call, NRW have confirmed that they have now located this information.

b) The Noise Impact Assessment (NIA) identifies two receptors to the south-east of the Site, NSR3 and NSR6, which are located approximately 2.4km and 2.2km respectively. However, a review of the planning portal shows that new dwellings will be located on the Northern Gateway development to the east of NSR3 (at grid ref 332071, 369427), located approximately 2.1km from the Site.

   The NIA and model, indicate that the predicted night-time sound level at NSR3 would be 21.4dB. At the new residential area (located 2.1 km from the Site), the predicted night-time sound level would be 22.9dB, an **increase of 1.5dB**.

   The NIA previously identified the night-time impact at NSR3 to be –12dB below the background level, therefore even with a 1.5dB increase, the impact would remain unchanged.

   Furthermore, the NIA identifies NSR5 as the closest receptor, located at approximately 1.3km from the Site. At this receptor, the predicted worst-case rating level was –9dB below the representative background sound level. NSR5 therefore remains the governing receptor for the assessment, and the inclusion of the new development would not alter the overall findings or conclusions of the NIA.

c) Although median LA90 values are presented in Tables 4-2 to 4-6 of the NIA, these values are included only as part of the summary of measured levels only, and the **median was not used** as the representative background sound level.

   In accordance with BS 4142, the background sound levels selected are representative of the period being assessed and determined in accordance with Section 8 of the standard, following the statistical analysis example shown in NOTE 4**.**

   The representative values used are shown in Table 4-7 of the NIA, and histograms of the background sound levels are shown in Appendix F of the NIA. Furthermore, a detailed justification for each location during each period is then provided within Sections 4.7.1 to 4.7.10 of the NIA, which explains how the most commonly occurring values align with the representative values used.

   Therefore, the background levels were selected based on statistical distribution analysis, and not automatically assumed to just be the minimum, median, or modal value.

d) The weather conditions recorded at Location 1 are considered acceptable and representative of all locations, as the survey was undertaken on the same days and

time periods at all locations during stable, dry weather, with wind speeds below 2m/s and a consistent southerly wind direction.

Although local weather data was collected at a single location, the measured parameters were consistently stable with no rapid fluctuations, or indicators of localised weather effects. However, to reduce uncertainty associated with meteorological variations, the survey was undertaken over a 4-day period, allowing sufficient time for measurements during representative conditions.

Both the site and the receptors lie within a low-level coastal area with flat terrain, and the absence of large variations in topography would reduce the potential for localised weather. Therefore, the weather data measured at Location 1, can reasonably be considered representative of the wider survey area.

Furthermore, the purpose of the survey was to establish representative background sound levels at the receptor locations, rather than operational sound levels for which meteorological variations could materially influence source-to-receptor propagation.

4.0 Biomass Plant

a) In the application form C3 table 1a, you specified the limit of the waste incineration as 85 tph but in the most recent consolidated permit (V013) the limit of specified activity (table S1.1) specifies 85MW and 57 tph. Can you either;

   o Confirm if table 1a was supposed to read 85 MW.

   or

   o If the current waste tonnage has increased to 85 tph from 57 tph, revise all relevant documents (Best available techniques and air quality impact assessment) to reflect the increased throughput.

b) In addition to BAT, we will also require assessment on how the site complies with Chapter IV and Annex VI of Industrial Emissions Directive 2010/75/EU.

SLR Response

a) This is a typo, Table 1a of Form C3 should read 85MW, updated Form C3 attached.

b) The biomass plant (Boiler 7) does not form part of the EP variation application, as nothing is changing with this plant, it will be operated in exactly the same way as it is now, the feedstock remains unchanged and no modifications to the plant have been carried out.

   It is acknowledged that Boiler 7 is complaint with Chapter IV of the IED in the Introductory note of the extant EP.

   Conditions 2.3.4 to 2.3.10 of the extant EP apply to the biomass plant and implement the requirements of Chapter IV of the IED.

   The Emission Limit Values and monitoring requirements stated in Table S3.1 (b) of the extant EP implement the requirements of Annex VI of the IED.

5.0 Management Plans

5.1 Environmental management system

BAT 1 of the Waste treatment BRef - ISO 14001 accredited alone will not meet all requirements of BAT 1 such as following cleaner technologies, whole life plan consideration, regular sectoral benchmarking. Please review BAT 1 and provide additional information on how the EMS will meet these requirements of BAT 1.

SLR Response

Shotton Mill has the following operational procedures that will form part of the EMS, which address the requirements of BAT 1:

- Procedure for the identification of Low Carbon Technological Innovation and Assessment of Risks, document reference EP-001 covers 'following the development of cleaner technologies.'
- The above procedure and the Site Modification Procedure, document reference REF-0437 cover 'consideration of environmental impacts.'
- Shotton Mill are corporate members of various trade associations including the Confederation of Paper Industries and the Sheet Plant Association and is an active member of associated sectoral benchmarking groups and committees. Shotton Mill actively keep abreast of industry and technological developments and maintains a commitment to deliver operational excellence. The redevelopment of the site introduces class leading technologies. This covers 'sectoral benchmarking on a regular basis.'

5.2 Accident management plan

Provide a preliminary accident management plan or a more detailed summary on the changes to the plan.

SLR Response

Accident Management Plan, document reference AMP-01 is attached.

5.3 Fire prevention and mitigation plan (FPMP)

a) Any details on location of hazardous materials stored such as gas cylinders, oil or fuel tanks.

b) Provide alternative measures to monitor baled waste for heat. *Reason: Alternative monitoring and/or other arrangements are needed to justify not monitoring temperature or moisture of baled waste other than the statement provided section 2.4.2 of the FPMP "Bales are stored for less than 6 months therefore probing for temperature and moisture is not deemed necessary".*

SLR Response

The updated FPMP document is attached, document reference, 410.065169.00001_FPMP_Final_v2. Within this document, drawing 298002-00 has been updated to show the location of hazardous materials on site and section 2.4.2 has been amended.

5.4 Effluent treatment plant

Provide more details on how the Supervisory Control and Data Acquisition system (SCADA) will achieve the requirements of BAT 38 of the waste treatment BRef.

SLR Response

BAT 38 of the waste treatment BRef states:

In order to reduce emissions to air and to improve the overall environmental performance, BAT is to monitor and/or control the key waste and process parameters.

Description

Implementation of a manual and/or automatic monitoring system to:

- *ensure a stable digester operation;*
- *minimise operational difficulties, such as foaming, which may lead to odour emissions;*
- *provide sufficient early warning of system failures which may lead to a loss of containment and explosions.*

This includes monitoring and/or control of key waste and process parameters, e.g.:

- *pH and alkalinity of the digester feed;*
- *digester operating temperature;*
- *hydraulic and organic loading rates of the digester feed;*
- *concentration of volatile fatty acids (VFA) and ammonia within the digester and digestate;*
- *biogas quantity, composition (e.g. H2S) and pressure;*
- *liquid and foam levels in the digester.*

The SCADA will assist in achieving the requirements of BAT 38 as detailed below.

Ensure a stable digester operation

Stable operation of an anaerobic reactor will be achieved through the monitoring and control of multiple process parameters. The Valmet DNA SCADA system used in the ETP project is designed to provide extensive monitoring and automation functions to support this operation. Key parameters in the digesters include:

- levels, alarms;
- control logics;
- temperatures;
- pH; and
- flow rates

These parameters are monitored online and automatically adjusted to maintain the optimum setpoints. Process deviations or equipment failures will trigger alarms to alert operators.

Minimise operational difficulties, such as foaming, which may lead to odour emissions

Closed-type anaerobic reactors are used which will prevent odour problems. In addition, hydrogen sulphide (H_2S), which can cause odour in the produced biogas, is removed in the desulphurisation unit.

Level switches connected to the SCADA system monitor the level of foam in the degassing tanks on the top of the reactors and will activate the Antifoam dosing spray system which will suppress foam when detected.

Provide sufficient early warning of system failures which may lead to loss of containment and explosions

Levels within all vessels and tanks are continuously monitored by the SCADA system via level transmitters, with alarm setpoints set accordingly.

Biogas production takes place under anaerobic conditions and therefore the biogas does not contain oxygen, therefore there is no inherent risk of combustion or explosion. However, the biogas composition, including oxygen content, will be continuously monitored online using an analyser connected to the SCADA system.

Monitor and/control key waste and process parameters

pH and alkalinity of the digester feed

The pH values at all critical locations will be continuously measured in real time using online pH meters and monitored through the SCADA system. Setpoints will be established for the digester feed pH, i.e. high and low alarms.

digester operating temperature

Temperature is an extremely critical parameter for anaerobic reactors, and the system temperature will be continuously monitored via the SCADA system. For stable operation, the anaerobic reactor temperatures must be maintained between 36 to 38°C. To achieve this, the SCADA system will automatically control the process. When the water temperature rises, the system will activate the cooling towers and when the temperature drops, it will start the steam system to heat the water. All temperature data and alarms will be displayed on the SCADA screens for operator awareness.

hydraulic and organic loading rates of the digester feed

The infeed flow rate to the reactors will be continuously monitored online through the SCADA system. In addition, to ensure that wastewater is fed to the reactors at the desired flow rate, the SCADA system will automatically regulate the control valves to maintain the required flow to the anaerobic reactors.

Organic loading of the digester feed will be analysed in the on-site laboratory (COD and BOD) regularly and the organic load to be fed to the reactors will be adjusted based on the analysis results.

concentration of volatile fatty acids (VFA) and ammonia within the digester and digestate

VFA and ammonia analysis will be carried out daily in the on-site laboratory.

biogas quantity, composition (e.g. H_2S) and pressure

The Desulphurisation units will reduce the H_2S in the biogas composition. These units are controlled by the SCADA system which monitors process setpoints etc. The operating pressure in the biogas system is very low, during normal operation it will be approximately 30mbar. In the event of a pressure increase, the flare system will automatically operate to

maintain the system pressure below 40mbar. Operating pressure and operation of the flare are controlled by the SCADA system.

liquid and foam levels in the digester

Level transmitters are installed in the anaerobic reactors to monitor liquid levels continuously. Level switches connected to the SCADA system monitor the level of foam in the degassing tanks on the top of the reactors and will activate the Antifoam dosing spray system which will suppress foam when detected.

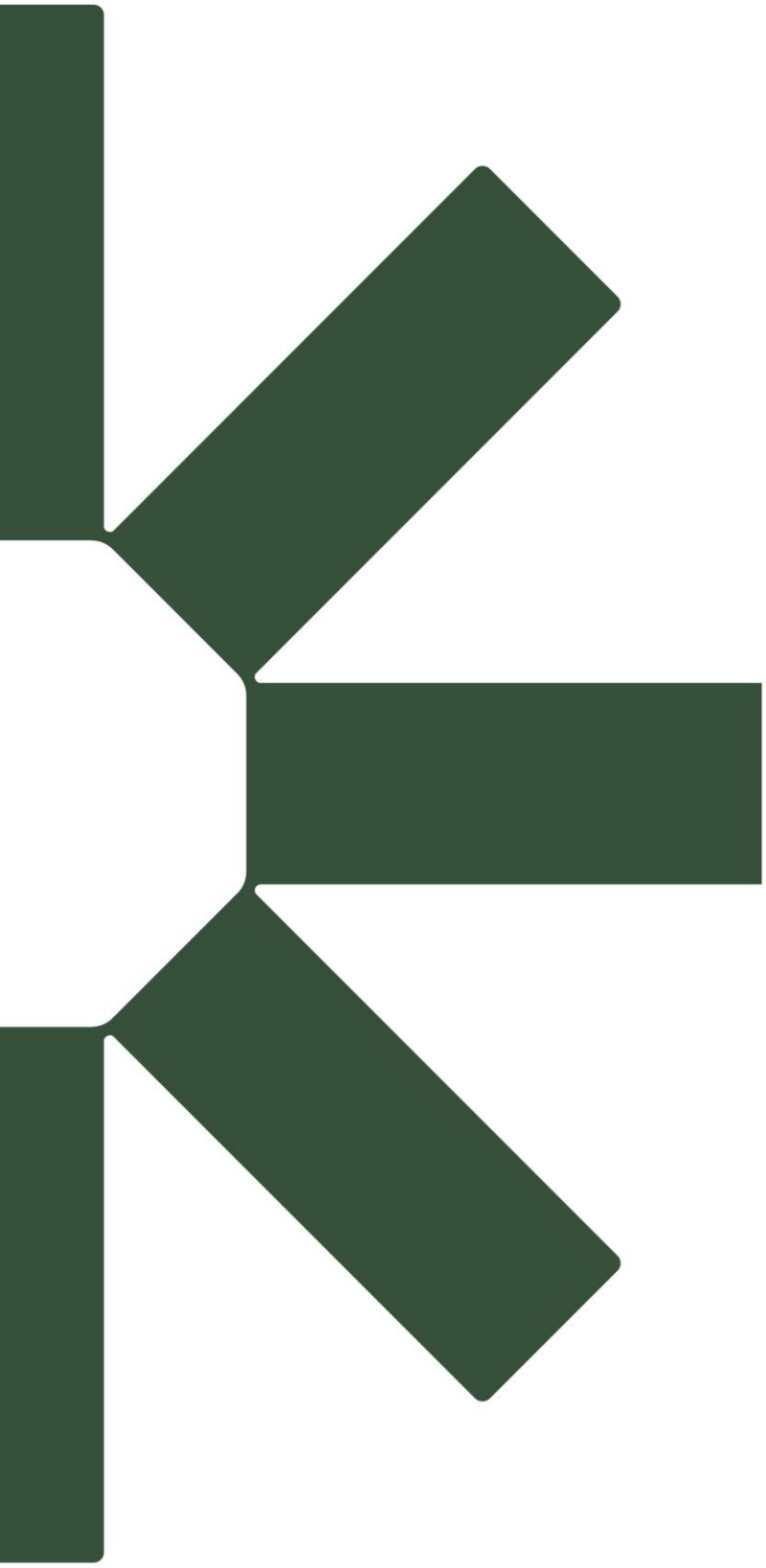
6.0 Closure

We trust the above information addresses the information requirements to allow the EP variation application to be duly made.

Regards,

SLR Consulting Limited

Paul Wright
EU Regional Sector Leader – Industry & Technology



Making Sustainability Happen