Date: 5 April 2019
Project Reference JAR10639

6-7 Lovers Walk
Brighton, East Sussex
BN1 6AH
T +44 1273 546 800

Document Status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
1	Draft	Kathryn Barker Senior Air Quality Consultant MSc, BSc (Hons), AMIEnvSc	Fiona Prismall Technical Director MSc, BSc (Hons), CEnv, FIAQM, MIEnvSc	Fiona Prismall Technical Director MSc, BSc (Hons), CEnv, FIAQM, MIEnvSc	5/04/19

Date: 5 April 2019
Regarding: JAR10639

AIR QUALITY ASSESSMENT – PROPOSED K1 BOILERS

Introduction

1.1 The 2018 Environmental Statement for the Kemsley Mill K4 Combined Heat and Power (CHP) Generating Station included an air quality chapter which assessed the effects of the proposed K4 CHP on human-health and ecological receptors. As part of that assessment, a number of sources were assessed including the existing K1 (existing CHP), K2 (Fluidised Bed Combustor) and K3 (Sustainable Energy Plant) combustion sources. Backup boilers associated with the K1 and K4 CHPs were also assessed.

1.2 Since the 2018 ES, the applicant has decided to replace some of the existing K1 backup boilers. The K4 backup boilers are the same as in the 2018 ES. The purpose of this assessment is to show how the proposed K1 boilers will compare to the existing K1 boilers assessed in the 2018 ES.

Emissions Data and Stack Parameters

1.3 Detailed dispersion modelling has been undertaken for the proposed K1 boilers and compared to the results of modelling of the existing K1 boilers.

1.4 Table 1 sets out the emissions data and stack parameters for the existing and proposed K1 boilers.

1.5 There are currently two options for the K1 Proposed boilers;

- Option 1 includes 2 stacks, each with 1 x Existing Boiler A and 1x 45t/h boiler.
- Option 2 includes 2 stacks, each with 1 Existing Boiler A, and 2 x 23 t/h boilers.

1.6 For the purposes of this assessment, Option 1 has been modelled as it has a higher mass emission rate and should therefore be more conservative. All other model inputs are the same as the 2018 ES.

Date: 5 April 2019
Regarding: JAR10639

Parameter	Unit	K4 – Proposed Boiler (modelled for ES chapter)	K1 – Existing Boilers (modelled for ES chapter)	Existing Boiler A	45t/h boiler	23t/h boiler	K1 – Proposed Boilers Option 1 (1 x Boiler A, 1 x 45t/h boiler)	K1 – Proposed Boilers Option 2 (1 x Boiler A, 2 x 23t/h boilers)
Grid coordinates	x,y	591950, 166317	591950, 166325 591977, 166282	-	-	-	591950, 166325 591977, 166282	591950, 166325 591977, 166282
Stack height	m	35	72	-	-	-	72	72
Internal diameter	m	0.8	1.7	-	-	-	1.7	1.7
Efflux velocity	$m.s^{-1}$	9	18.1	-	-	-	11.6	11.6
Efflux temperature	^{o}C	145	215	132	116	124	121	126
Actual Volumetric flow	$m^3.s^{-1}$	6	41	7.6	19.7	9.9	27.3	27.4
O_2	%	2	4.5	2.8	1.7	1.7	-	-
Water	%	5.5	5.5	10.8	17.2	17.2	-	-
NOx Emission Concentration Limit	$mg.Nm^{-3}$	100 (3% O_2)	200 (3% O_2)	100	100	100	-	-
CO Emission Concentration Limit	$mg.Nm^{-3}$	N/A	300 (3% O_2)	20	50	50	-	-
Normalised Volumetric Flow (0^0C, dry)	$Nm^3.s^{-1}$	3.91	19.87	4.6	12.3	6.0	16.93	16.74
NOx Mass Emission Rate	$g.s^{-1}$	0.4	4.0	0.46	1.23	0.60	1.69	1.67
CO Mass Emission Rate	$g.s^{-1}$	N/A	6.0	0.09	0.61	0.30	0.71	0.70

Date: 5 April 2019
Regarding: JAR10639

Results – Human Health Receptors

1.7 Table 2 sets out the maximum predicted NO_2 concentrations across the grid for the proposed and existing K1 boilers. The 2018 ES considered the effect of the existing K1 and proposed K4 backup boilers together and the results were discussed in Paragraphs 5.6.25 to 5.6.29 which have been copied below.

"5.6.25 The results set out in Tables 5.18 and 5.19 assume that the CHP operates in every hour of the year. Package boilers will provide back-up power and have been assumed to be operational for no more than 500 hours of operation per year. Additional modelling of the package boilers has been undertaken assuming that these operate at the maximum number of 500 hours per annum.

5.6.26 The maximum predicted annual-mean NO_2 PC for the package boilers alone (K1 and K4 package boilers) is 0.10 µg.m^{-3}. When this is added to the annual-mean PC for the CHP of 0.60 µg.m^{-3} in Table 5.21, the impact would be 'slight adverse'.

5.6.27 The maximum predicted 99.79th percentile of hourly-mean NO_2 PC for the package boilers alone (K1 and K4 package boilers) is 8.99 µg.m^{-3}. When this is added to the 99.79th percentile of hourly-mean NO_2 PC for the CHP of 3.8 µg.m^{-3} in Table 5.18, the impact would be 'slight adverse'.

5.6.28 In reality, emissions from the existing K1 package boilers are already accounted for to a degree in the background concentration assumed for the assessment. Furthermore, the package boilers will not run at the same time as the CHP; therefore the impact descriptors, that assume the CHP operates in every hour of the year and the package boilers operate for 500 hours per year, can be considered conservative.

5.6.29 On that basis and using professional judgement, the effect of the package boilers are not considered to be significant."

Date: 5 April 2019
Regarding: JAR10639

2018 ES Chapter				
Pollutant	**Proposed K1 boilers**	**Proposed K4 boilers**	**Existing K1 boilers**	
NO_2 (annual mean)	0.03 µg.m^{-3}	0.05 µg.m^{-3}	0.05 µg.m^{-3}	Paragraph 5.6.26 of 2018 ES chapter
NO_2 (99.79th percentile hourly mean)	1.45 µg.m^{-3}	3.99 µg.m^{-3}	2.50* µg.m^{-3}	Paragraph 5.6.27 of 2018 ES chapter

Table 2 Maximum Proposed K1 Backup Boilers PCs – Maximum Across Grid for Human Health Receptors

*The predicted concentration for the K1 and K4 package boilers in the ES chapter was quoted as 8.99 µg.m^{-3} which was an error. The contribution from the K4 boilers was 3.99 µg.m^{-3} and the contribution from the K1 boilers would have been 5.00 µg.m^{-3}. Whilst the contribution from K4 was correct, for the K1 boilers it was incorrectly calculated using a conversion of NOx to NO_2 of 70%. As this is a short-term averaging period, the conversion should have been 35% instead. Therefore, the PC from the K1 boilers has been halved to correct this and to allow are direct comparison between the existing and proposed K1 boiler concentrations.

1.8 The proposed K1 PCs are well below the existing K1 PCs presented in the 2018 ES chapter and the conclusions of the ES chapter do not change.

Results – Ecological Receptors

1.9 Appendix 5.4 of the 2018 ES assessed the impact of the proposed K4 CHP on ecological receptors. As the PCs from the backup boilers at human-health receptors were so small, the PCs at ecological receptors were not considered in the ES. Only the PCs from K2, K3 and the K4 CHP were considered.

1.10 For the purposes of this assessment the maximum PC across the grid from the proposed K1 backup boilers has been calculated for NO_x, nutrient nitrogen and acid deposition. The maximum PCs across the gird are presented in Table 3 below.

	NO_x	N Deposition	Acid Deposition
Max across grid	0.0393 µg.m^{-3}	0.0008 kgN.ha^{-1}.yr^{-1}	0.0001 keq.ha^{-1}.yr^{-1}

Date: 5 April 2019
Regarding: JAR10639

Table 3 Maximum Proposed K1 Backup Boilers PCs – Maximum Across Grid for Ecological Receptors

1.11 These maximum PCs have been added to the PCs from K2, K3 and K4 CHP at each of the designated sites assessed. This is a conservative approach as the PCs as the PCs at each designated site will be lower than the maximum PC across the grid.

1.12 The updated results are shown in Appendix A however the PCs from the proposed K1 boilers are so small that the results do not appear to change compared to the results presented in Appendix 5.4 of the 2018 ES. The only noticeable difference in PCs is the NOx PC at Queendown Warren where the PC has increased from <0.05 $\mu g.m^{-3}$ in the 2018 ES to 0.1 $\mu g.m^{-3}$ when the proposed K1 boilers PC is added. The PC as a percentage of the critical level is still 0% and the conclusions of the ES chapter do not change.

Date: 5 April 2019
Regarding: JAR10639

APPENDIX A – AIR QUALITY IMPACT AT ECOLOGICAL RECEPTORS

The following European designated nature conservation sites, within 10 km of the Application Site, have been identified:

entified:

- The Swale Special Protection Area (SPA);
- The Swale Ramsar;
- Medway Estuary and Marshes SPA;
- Medway Estuary and Marshes Ramsar;
- Thames Estuary and Marshes SPA;
- Thames Estuary and Marshes Ramsar;
- Queensdown Warren Special Area of Conservation (SAC); and
- Outer Thames Estuary SPA.

The following nationally designated sites, within 2 km of the Application Site, have also been identified:

- The Swale SSSI;
- Milton Creek LWS; and.
- Elmley NNR.

For information, the Medway Estuary and Marshes SSSI is 2.9 km from the Application Site (i.e. more than 2 km away) and has been excluded from the assessment. The Swale Marine Conservation Zone (MCZ) has also been excluded as there is no requirement to assess air quality impacts at waterbodies/MCZs.

Approach

NOx concentrations have been predicted using the same model as used in the assessment of impacts at human-health receptors. Modelling has been undertaken for a grid of receptor points, with a grid spacing of 200 m, across each identified nature conservation site. The receptor grid points have been modelled at ground level. The maximum PC for K4 at each site and for all the meteorological datasets has been identified and is presented in this Appendix.

Modelling has also been undertaken to determine the total PC with K2, K3 and K4 operating concurrently. The PC for K2, K3 and K4 has been added to the ambient concentration to determine a total cumulative PEC.

Critical Levels

Critical levels are maximum atmospheric concentrations of pollutants for the protection of vegetation and ecosystems and are specified within relevant European air quality directives and corresponding UK air quality regulations. PCs and, if appropriate, PECs of NOx have been calculated for comparison with the 30

µg.m^{-3} critical level. Background NO_x concentrations at each designated site have been derived from the UK Air Pollution Information System (APIS) database [1].

Critical Loads

Critical loads refer to the quantity of pollutant deposited, below which significant harmful effects on sensitive elements of the environment do not occur, according to present knowledge. Nutrient nitrogen deposition and acid deposition are considered in this Appendix.

Critical Loads – Nutrient N Deposition

Percentage contributions to nutrient nitrogen deposition have been derived from the modelled NOx concentrations. Deposition rates have been calculated using empirical methods recommended by the Environment Agency, as follows:

1. The dry deposition flux (µg.m^{-2}.s^{-1}) has been calculated by multiplying the ground level NO_2 concentrations (µg.m^{-3}) by the deposition velocity of 0.003 m.s^{-1} for forests/tall habitats and 0.0015 m.s^{-1} for grassland/short habitats.

2. Units of µg.m^{-2}.s^{-1} have been converted to units of kg.ha^{-1}.year^{-1} by multiplying the dry deposition flux by the standard conversion factor of 96 for NOx.

3. Predicted contributions to nitrogen deposition have been calculated and compared with the relevant critical load range for the habitat types associated with the designated site. These have been derived from the APIS database.

Critical Loads – Acidification

The acid deposition rate, in equivalents keq.ha^{-1}.year^{-1}, has been calculated by multiplying the dry deposition flux (kg.ha^{-1}.year^{-1}) by a conversion factor of 0.071428 for N. This takes into account the degree to which a chemical species is acidifying, calculated as the proportion of N within the molecule.

Wet deposition in the near field is not significant compared with dry deposition for N [2] and therefore for the purposes of this assessment, wet deposition has not been considered.

Predicted contributions to acid deposition have been calculated and compared with the minimum critical load function for the habitat types associated with the designated site as derived from the APIS database.

Significance Criteria

Maximum PC and PEC of NO_x and N/acid deposition have been compared against the relevant EQS for the relevant habitat type/interest feature. The Environment Agency guidelines [3] state that:

> *"To screen out a PC for any substance so that you don't need to do any further assessment of it, the PC must meet both of the following criteria:*
>
> *-the short-term PC is less than 10% of the short-term environmental standard*
>
> *-the long-term PC is less than 1% of the long-term environmental standard*
>
> *If you meet both of these criteria you don't need to do any further assessment of the substance.*
>
> *If you don't meet them you need to carry out a second stage of screening to determine the impact of the PEC."*

It continues by stating that:

> *"If your long-term PC is greater than 1% and your PEC is less than 70% of the long-term environmental standard, the emissions are insignificant – you don't need to assess them any further."*

Where *potentially* significant impacts have been identified, the impacts have been passed to the project's ecologist to allow the significance of the likely effect to be determined.

Results

The ambient NO_x concentrations and existing deposition rates have been obtained from APIS. The highest deposition rates have been obtained taking into account the various habitats across the sites. The lowest critical loads for nitrogen deposition and the nitrogen component for acid deposition have been also obtained from APIS [4].

The maximum predicted annual-mean NO_x concentrations are compared with the critical level in Table A1. The maximum predicted nutrient N deposition rates are compared with the critical load in Table A2. The maximum predicted acid deposition rates are compared with the critical load function in Table A3.

For the Outer Thames Estuary SPA, APIS describes the habitat as *inshore sublittoral sediment*, which provides wintering for the red-throated diver. APIS states that this habitat is not sensitive to increases in NOx concentrations, nitrogen deposition or acid deposition. As such, this site has not been considered further in the assessment.

Date: 5 April 2019
Regarding: JAR10639

Table A1 Predicted Annual-Mean NOx Concentrations at Designated Sites

Designated Site	CL ($\mu g.m^{-3}$)	PC ($\mu g.m^{-3}$)	PC/CL (%)
The Swale SPA/Ramsar/SSSI/Elmley NNR/Milton Creek LWS	30	0.7 (0.8)	2 (3)
Medway Estuary and Marshes SPA/Ramsar		0.1 (0.1)	0 (0)
Thames Estuary and Marshes SPA/Ramsar		0.1 (0.1)	0 (0)
Queendown Warren SAC		0.1 (0.1)	0 (0)

Notes:
The Swale SPA, Medway Estuary and Marshes SPA and Thames Estuary and Marshes SPA all cover the same geographical areas as the corresponding Ramsar and SSSI designations. Therefore, the values set out in Table A1 represent the NOx concentrations at all of these sites. Elmley NNR is within The Swale SPA/Ramsar/SSSI. APIS does not provide data for NNRs so the ambient concentrations and critical levels/loads have been assumed to be the same as The Swale SPA. Milton Creek LWS is an extension of the Swale SPA and the project's ecologist has advised that the same habitats, ambient concentrations and critical levels/loads apply. The Milton Creek LWS is mostly upwind of the Proposed Development; the nearest part of the LWS downwind of the site is to the east and covers a similar geographic area as the Swale SPA/Ramsar/SSSI. Milton Creek is a LWS and so the impact would only be significant if the PC exceeds 100% of the CL. Therefore, considering the LWS to be the same as the Swale SPA/RAMSAR/SSSI is a conservative approach.
PCs shown are for stack location 1. PCs for stack location 2 are shown in brackets.
Consistent with the Institute of Air Quality Management's Position Statement *"Use of a Criterion for the Determination of an Insignificant Effect of Air Quality Impacts on Sensitive Habitats"* [5], the PC as a % of the CL has been rounded to the nearest integer.

Date: 5 April 2019
Regarding: JAR10639

Table A2 Predicted Nutrient N Deposition at Designated Sites

Designated Site	Interest Feature	CL ($kgN.ha^{-1}.yr^{-1}$)	PC ($kgN.ha^{-1}.yr^{-1}$)	PC/CL (%)
The Swale SPA/Elmley NNR/Milton Creek LWS	Breeding Lapwing	20	0.1	1
	Ringed plover	20	0.1	1
	Eurasian reed warbler	15	0.1	1
	Eurasian curlew	20	0.1	1
	Reed bunting	15	0.1	1
	Dark-bellied brent goose	20	0.1	1
	Common shelduck	20	0.1	1
	Eurasian teal	20	0.1	1
	Mallard	Not available	0.1	-
	Common moorhen	Not available	0.1	-
	Gadwall	Not available	0.1	-
	Grey plover	20	0.1	1
	Dunlin	20	0.1	1
	Common coot	Not available	0.1	-
	Common redshank	20	0.1	1
	Eurasian oystercatcher	20	0.1	1
Medway Estuary and Marshes SPA	Common tern	8	0.01	0
	Red-throated diver	Not sensitive	0.01	-
	Eurasian curlew	20	0.01	0
	Common greenshank	20	0.01	0
	Little tern	10	0.01	0
	Hen harrier	15	0.01	0
	Merlin	20	0.01	0
	Ringed plover	20	0.01	0

Date: 5 April 2019
Regarding: JAR10639

Designated Site	Interest Feature	CL ($kgN.ha^{-1}.yr^{-1}$)	PC ($kgN.ha^{-1}.yr^{-1}$)	PC/CL (%)
	Short-eared owl	Not available	0.01	-
	Great crested grebe	20	0.01	0
	Great cormorant	Not available	0.01	-
	Dark-bellied brent goose	20	0.01	0
	Eurasian teal	20	0.01	0
	Mallard	20	0.01	0
	Northern shoveler	Not available	0.01	-
	Common shelduck	20	0.01	0
	Eurasian wigeon	20	0.01	0
	Northern pintail	20	0.01	0
	Common pochard	20	0.01	0
	Eurasian oystercatcher	20	0.01	0
	Pied avocet	20	0.01	0
	Grey plover	20	0.01	0
	Red knot	20	0.01	0
	Dunlin	20	0.01	0
	Black-tailed godwit	20	0.01	0
	Common redshank	20	0.01	0
	Ruddy turnstone	20	0.01	0
	Tundra swan	Not sensitive	0.01	-
	Common kingfisher	Not available	0.01	-
Thames Estuary and Marshes SPA	Ringed plover	10	0.01	0
	Hen harrier	10	0.01	0
	Pied avocet	20	0.01	0
	Grey plover	20	0.01	0

Date: 5 April 2019
Regarding: JAR10639

Designated Site	Interest Feature	CL ($kgN.ha^{-1}.yr^{-1}$)	PC ($kgN.ha^{-1}.yr^{-1}$)	PC/CL (%)
	Red knot	20	0.01	0
	Dunlin	20	0.01	0
	Black-tailed godwit	20	0.01	0
	Common redshank	20	0.01	0
Queendown Warren SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates	15	<0.005	0
The Swale Ramsar/SSSI	Intertidal habitats (coastal saltmarsh)	20	0.1	1
	Saltmarsh (coastal saltmarsh)	20	0.1	1
	Shingle & sea cliff (dunes, shingle & machair)	10	0.1	1
	Arable (horticultural & arable)	Not sensitive	-	-
	Standing water (standing open water)	No CL	-	-
	Waste land, industrial (no corresponding APIS habitat)	Not sensitive	-	-
Medway Estuary and Marshes Ramsar	Intertidal habitats (coastal saltmarsh)	20	0.01	0
	Saltmarsh (coastal saltmarsh)	20	0.01	0
	Shingle & sea cliff (dunes, shingle & machair)	10	0.01	0
	Wet grassland (grazing marsh)	20	0.01	0
	Dry grassland (grazing marsh)	10	0.01	0
	Bogs, marshes, fens (fen, marsh & swamp)	15	0.01	0
	Standing water (standing open water)	No CL	-	-
	Intertidal habitats (coastal saltmarsh)	20	0.01	0
Thames Estuary and Marshes Ramsar	Intertidal habitats (coastal saltmarsh)	20	0.01	0
	Saltmarsh (coastal saltmarsh)	20	0.01	0
	Shingle & sea cliff (dunes, shingle & machair)	10	0.01	0
	Wet grassland (grazing marsh)	20	0.01	0
	Dry grassland (grazing marsh)	20	0.01	0

Date: 5 April 2019
Regarding: JAR10639

Designated Site	Interest Feature	CL ($kgN.ha^{-1}.yr^{-1}$)	PC ($kgN.ha^{-1}.yr^{-1}$)	PC/CL (%)
	Bogs, marshes, fens (fen, marsh & swamp)	15	-	-
	Standing water (standing open water)	No CL	0.1	1

Note: Critical loads (CLs) for nutrient nitrogen deposition are provided as a range. In this case, the lower limit of the CL range has been used in the assessment. PCs are identical for stack location 1 and 2 and are therefore not shown separately.

Consistent with the Institute of Air Quality Management's Position Statement *"Use of a Criterion for the Determination of an Insignificant Effect of Air Quality Impacts on Sensitive Habitats"* [5], the PC as a % of the CL has been rounded to the nearest integer.

Table A3 Predicted Acid Deposition at Designated Sites

Designated Site	Interest Feature	CLF ClmaxN ($keq.ha^{-1}.yr^{-1}$)	PC ($keq.ha^{-1}.yr^{-1}$)	PC/CLF (%)
The Swale SPA/Milton Creek LWS	Breeding Lapwing	4.856	0.01	1
	Eurasian curlew	4.856	0.01	1
	Common redshank	4.856	0.01	1
Medway Estuary and Marshes SPA	Common tern	4.856	0.001	0
	Eurasian curlew	4.856	0.001	0
	Little tern	4.856	0.001	0
Thames Estuary and Marshes SPA	Ringed plover	4.856	0.001	0
Queendown Warren SAC	Semi-natural dry grasslands and scrubland facies on calcareous	4.856	<0.0005	0

	substrates.			
The Swale Ramsar/SSSI	Intertidal habitats (coastal saltmarsh)	Not sensitive	-	-
	Saltmarsh (coastal saltmarsh)	Not sensitive	-	-
	Shingle & sea cliff (dunes, shingle & machair)#	Not sensitive	-	-
	Arable (horticultural & arable)	Not sensitive	-	-
	Standing water (standing open water)	No CL	-	-
	Waste land, industrial (no corresponding APIS habitat)	Not sensitive	-	-
Medway Estuary and Marshes Ramsar	Intertidal habitats (coastal saltmarsh)	Not sensitive	-	-
	Saltmarsh (coastal saltmarsh)	Not sensitive	-	-
	Shingle & sea cliff (dunes, shingle & machair)	Not sensitive	-	-
	Wet grassland (grazing marsh)	Not sensitive	-	-
	Dry grassland (grazing marsh)	Not sensitive	-	-
	Bogs, marshes, fens (fen, marsh & swamp)	Not sensitive	-	-
	Standing water (standing open water)	No CL	-	-
Thames Estuary and Marshes Ramsar	Intertidal habitats (coastal	Not sensitive	-	-

	saltmarsh)			
	Saltmarsh (coastal saltmarsh)	Not sensitive	-	-
	Shingle & sea cliff (dunes, shingle & machair)	Not sensitive	-	-
	Wet grassland (grazing marsh)	Not sensitive	-	-
	Dry grassland (grazing marsh)	Not sensitive	-	-
	Bogs, marshes, fens (fen, marsh & swamp)	Not sensitive	-	-
	Standing water (standing open water)	No CL	-	-

Notes:

* Habitat in parenthesis is the corresponding APIS broad habitat for which critical loads are available

dune/shingle/marsh systems in this location are calcareous and therefore well buffered

CLF = Critical Load Function. PCs are identical for stack location 1 and 2.

Consistent with the Institute of Air Quality Management's Position Statement "Use of a Criterion for the Determination of an Insignificant Effect of Air Quality Impacts on Sensitive Habitats" [5], the PC as a % of the CL has been rounded to the nearest integer.

The maximum NO_X PC is below 1% of the critical level for all designated sites except the Swale SPA/SSSI/Ramsar and the effects can be screened out as insignificant. For The Swale SPA/SSSI/Ramsar, when the PC for K2 and K3 of 1.2 $\mu g.m^{-3}$ is added to the K4 PC of 0.7 $\mu g.m^{-3}$ and the ambient concentration of 12.3 $\mu g.m^{-3}$, the PEC is 14.2 $\mu g.m^{-3}$ which is only 47% of the critical level. On that basis the effects at The Swale can also be screened out as insignificant.

The maximum N deposition PC is below 1% of the critical load for all designated sites and the effects can be screened out as insignificant.

The maximum acid deposition PC is below 1% of the critical load for all designated sites and the effects can be screened out as insignificant.

---

1 Air Pollution Information Systems, www.apis.ac.uk

2 Approaches to modelling local nitrogen deposition and concentrations in the context of Natura 2000 - Topic 4

3 Air emissions risk assessment for your environmental permit

4 Data downloaded from APIS December 2017

5 http://www.iaqm.co.uk/text/position_statements/aq_impacts_sensitive_habitats.pdf

Contact

Kathryn Barker
Senior Air Quality Consultant
RPS Consulting Services Ltd
6-7 Lovers Walk
Brighton
BN1 6AH
T: +44(0) 1237 546 800
E: kathryn.barker@rpsgroup.com