



IN COMBINATION AMMONIA ASSESSMENT

ERECTION OF 3 NO. ADDITIONAL POULTRY BUILDINGS AT
TREESTACKS FARM, OAKLEY ROAD, WIX, CO11 2SF

Client

HAB Poultry Ltd

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Introduction

This report has been commissioned by HAB Poultry Ltd, Dairy House Farm, Frinton on Sea, Great Holland, CO13 0EX.

The purpose of this report is to set out details of any other ammonia emitting plan or project within 10km of the application site at Treestacks Farm, Oakley Road, Wix, which may result in in-combination ammonia impacts to protected sites within the locality.

Methodology

Potential in combination ammonia emitting projects have been identified using the Environment Agency register of environmental permits, and the Tendring Public Access planning application search tool.

The following searches have been undertaken.

- A search for environmental permits within 10km of postcode CO11 2SF.
- Keyword searches of the Tendring District Council Public Access Planning Search tool. Keyword searches undertaken are:
 - Poultry
 - Pig
 - Cattle
 - Livestock
 - Slurry Lagoon
 - Manure Store

The Air Pollution Information System (APIS) current includes data until the end of 2019, and therefore, any ammonia emitting plan or project which not operational on 1st January 2020 is not currently included in the background levels.

Ammonia Emitting Plans and Projects

Environmental Permit Search

A search of the Environment Agencys Environmental Permitting Database within 10km of the application site reveals the following Environmental Permits.

Search Results

Showing 6 result(s) for: Location: within 10km of CO11 2SF ✕

Show permit details ... Download this data as CSV ... For data licence terms see [Environment Agency conditional licence](#)

Show 10 entries Filter results:

Name	Permit Number	Distance (km)	Address
Brown; Brown; Brown; Brown	CP3407PD	0.6	Great Oakley Lodge, Harwich Road, Great Oakley, Harwich, CO12 5AE
EPC United Kingdom PLC	BR7607IP	3.5	Great Oakley Works, Great Oakley, Harwich, Essex, CO12 5JW
Equivalence Energy Limited	UP3536QA	3.9	Equivalence Energy Limited, Cliff Quay, Ipswich, Suffolk, IP3 0BZ
Wix Farms Poultry Ltd	GP3502BS	5.8	Kellys Farm, Clacton Road, Horsley Cross, Essex, CO11 2NZ
Haltermann Carless UK Limited	NP3139LM	6.1	Harwich Manufacturing Centre, Refinery Road, Parkeston, CO12 4PD
Stuart Davis Limited	GP3433RY	8.6	hiskeys farm, sprats lane, little bromley, manningtree, essex, CO11 2PR

Showing 1 to 6 of 6 entries Previous 1 Next

The search reveals that there are 6 Environmental Permits held within 10km of the application site. Of these permits, No. 1 (brown), No 4. (Wix Poultry Farms Ltd), and No. 6 (Stuart Davies Ltd) are intensive livestock installations and require further consideration.

No.1 (Brown) – this is the application site for this project.

No. 2 (Wix Poultry Farms Ltd) – this site has been cross referenced with the Tendring Planning Portal, and the most recent planning application for ammonia emitting development on this site was in 1996 (96/0262/FUL). This site is therefore captured in background levels on APIS and is screened out for in combination effects.

No. 3 (Stuart Davies Ltd) – this site has been crossed referenced with the Tendring Planning Portal, and the most recent planning for ammonia emitting development on this site was in 2016 (16/01143/FUL). This site is therefore captured in background levels on APIS and is screened out for in combination effects.

Planning Searches

- Poultry

The search for poultry development on the Tendring portal reveals that the previous application at Treestacks Farm for the existing two sheds (20/00194/FUL) is the only planning application which has been submitted for poultry development in the entire district of Tendring in the last 5 years. The existing two units at Treestacks Farm are therefore in-combination with this development as they were constructed after 1st January 2020 and are not included in background on APIS.

- Pig

The Tendring Planning portal shows that there has not been an application for a pig farm the district since 2006 (06/01841/FUL).

- Cattle

The Tendring Planning portal shows no cattle building applications since 2014.

- Livestock

A general search of livestock building applications picks up 20/00173/FUL for a cattle shed. This site is 12km from the application site and therefore not in combination.

- Slurry Lagoon

A search for slurry lagoons revealed a single application in 2014 (14/00366/FUL). This site is therefore captured in background levels on APIS and is screened out for in combination effects.

- Manure Store

A search for manure stores revealed a single application in 2006 (06/01841/FUL). This site is therefore captured in background levels on APIS and is screened out for in combination effects.

Summary of Sources

The search of the Environmental Permitting and Planning Application databases reveals that Tendring District as a whole has very low density of ammonia emitting developments. The only in combination scheme identified, which is not captured in background levels on APIS is the previous planning application for the two original poultry sheds on this site (20/00194/FUL).

The ammonia impacts of 20/00194/FUL are shown in the table below.

Table 4b. Process contribution to the annual mean ammonia concentration and nitrogen deposition rates as a percentage of Critical Level/Load (from the fixed deposition run)

Receptor number	X(m)	Y(m)	Designation	Critical Level	Critical Load	Deposition Velocity	Process Contribution (%age of Critical Level)	Process Contribution (%age of Critical Load)
1	616774	227729	Dengewell Wood AW	1.0	10.0	0.03	1.9	1.5
2	620159	228541	Soils Wood LWS	1.0	10.0	0.03	2.3	1.8
3	616983	226501	Broadmeadow Wood AW	1.0	15.0	0.03	1.2	0.6
4	618357	230873	Stour & Copperas Woods, Ramsey SSSI	1.0	15.0	0.03	1.1	0.6
5	618674	230754	Stour & Copperas Woods, Ramsey SSSI	1.0	15.0	0.03	1.2	0.6
6	619485	231039	Stour & Copperas Woods, Ramsey SSSI	1.0	15.0	0.03	0.9	0.5
7	618663	231523	Stour & Copperas Woods, Ramsey SSSI	1.0	15.0	0.03	0.8	0.4
8	620001	231431	Stour & Copperas Woods, Ramsey SSSI	1.0	15.0	0.03	0.7	0.4
9	620781	231646	Stour & Copperas Woods, Ramsey SSSI	1.0	15.0	0.03	0.6	0.3
10	622296	229615	Hamford Water SSSI/SACSPA/Ramsar	3.0	20.0	0.02	0.2	0.2
11	621099	227080	Hamford Water SSSI/SACSPA/Ramsar	3.0	20.0	0.02	0.3	0.2
12	621571	227551	Hamford Water SSSI/SACSPA/Ramsar	3.0	20.0	0.02	0.3	0.2
13	622414	227823	Hamford Water SSSI/SACSPA/Ramsar	3.0	20.0	0.02	0.2	0.2
14	623581	228711	Hamford Water SSSI/SACSPA/Ramsar	3.0	20.0	0.02	0.2	0.1
15	621907	226771	Hamford Water SSSI/SACSPA/Ramsar	3.0	20.0	0.02	0.2	0.2
16	621444	226109	Hamford Water SSSI/SACSPA/Ramsar	3.0	20.0	0.02	0.2	0.2
17	620174	225511	Hamford Water SSSI/SACSPA/Ramsar	3.0	20.0	0.02	0.2	0.1
18	620755	225819	Hamford Water SSSI/SACSPA/Ramsar	3.0	20.0	0.02	0.2	0.2
19	620138	224703	Hamford Water SSSI/SACSPA/Ramsar	3.0	20.0	0.02	0.1	0.1
20	618886	224023	Hamford Water SSSI/SACSPA/Ramsar	3.0	20.0	0.02	0.1	0.1
21	621090	224205	Hamford Water SSSI/SACSPA/Ramsar	3.0	20.0	0.02	0.1	0.1
22	622342	224858	Hamford Water SSSI/SACSPA/Ramsar	3.0	20.0	0.02	0.1	0.1
23	620410	223529	Hamford Water SSSI/SACSPA/Ramsar	3.0	20.0	0.02	0.1	0.1
24	622015	224345	Hamford Water SSSI/SACSPA/Ramsar	3.0	20.0	0.02	0.1	0.1
25	624546	224264	Hamford Water SSSI/SACSPA/Ramsar	3.0	20.0	0.02	0.1	0.1
26	624818	223175	Hamford Water SSSI/SACSPA/Ramsar	3.0	20.0	0.02	0.1	0.1
27	622600	222604	Hamford Water SSSI/SACSPA/Ramsar	3.0	20.0	0.02	0.1	0.0
28	620614	226223	Hamford Water SSSI/SPA/Ramsar	3.0	20.0	0.02	0.3	0.2
29	619716	224128	Hamford Water SSSI/SPA/Ramsar	3.0	20.0	0.02	0.1	0.1
30	621090	225148	Hamford Water SSSI/SPA/Ramsar	3.0	20.0	0.02	0.1	0.1
31	622233	226114	Hamford Water SSSI/SPA/Ramsar	3.0	20.0	0.02	0.2	0.1
32	622832	227161	Hamford Water SSSI/SPA/Ramsar	3.0	20.0	0.02	0.2	0.1
33	619390	231691	Stour Estuary SSSI/SPA/Ramsar	3.0	20.0	0.02	0.2	0.2
34	621390	231691	Stour Estuary SSSI/SPA/Ramsar	3.0	20.0	0.02	0.2	0.1
35	617839	232344	Stour Estuary SSSI/SPA/Ramsar	3.0	20.0	0.02	0.2	0.1
36	616268	231793	Stour Estuary SSSI/SPA/Ramsar	3.0	20.0	0.02	0.2	0.1
37	614207	231671	Stour Estuary SSSI/SPA/Ramsar	3.0	20.0	0.02	0.1	0.1
38	617635	233967	Stour Estuary SSSI/SPA/Ramsar	3.0	20.0	0.02	0.1	0.1
39	620941	232987	Stour Estuary SSSI/SPA/Ramsar	3.0	20.0	0.02	0.1	0.1
40	612462	232650	Stour Estuary SSSI/SPA/Ramsar	3.0	20.0	0.02	0.1	0.1
41	609921	232834	Stour Estuary SSSI/SPA/Ramsar	3.0	20.0	0.02	0.0	0.0
42	624124	233661	Stour Estuary SSSI/SPA/Ramsar	3.0	20.0	0.02	0.1	0.1
43	624706	235038	Orwell Estuary SSSI/SPA/Ramsar	3.0	20.0	0.02	0.1	0.0
44	624430	232589	Stour Estuary SSSI/SPA/Ramsar	3.0	20.0	0.02	0.1	0.1
45	624288	229547	Hamford Water SSSI/SPA/Ramsar	3.0	20.0	0.02	0.1	0.1
46	623634	225978	Hamford Water SSSI/SPA/Ramsar	3.0	20.0	0.02	0.1	0.1
47	623236	223590	Hamford Water SSSI/SPA/Ramsar	3.0	20.0	0.02	0.1	0.1
48	626359	224784	Hamford Water SSSI/SPA/Ramsar	3.0	20.0	0.02	0.1	0.1

The ammonia emissions in relation to the current application for expansion are set out in the table below.

Table 6. Predicted process contribution to annual mean ammonia concentrations and nitrogen deposition rates at the discrete receptors - proposed only

Receptor number	X(m)	Y(m)	Name	Site Parameters			Maximum annual ammonia concentration		Maximum annual nitrogen deposition rate	
				Deposition Velocity	Critical Level (µg/m ³)	Critical Load (kg/ha)	Process Contribution (µg/m ³)	%age of Critical Level	Process Contribution (kg/ha)	%age of Critical Load
1	616774	227729	Dengewell Wood AW	0.030	1.0	10.0	0.024	2.4	0.19	1.9
2	620159	228541	Soils Wood LWS	0.030	1.0	10.0	0.035	3.5	0.27	2.7
3	616983	226501	Broadmeadow Wood AW	0.030	1.0	10.0	0.016	1.6	0.13	1.3
4	618357	230873	Stour & Copperas Woods, Ramsey SSSI	0.030	1.0	15.0	0.013	1.3	0.10	0.7
5	618674	230754	Stour & Copperas Woods, Ramsey SSSI	0.030	1.0	15.0	0.015	1.5	0.11	0.8
6	619485	231039	Stour & Copperas Woods, Ramsey SSSI	0.030	1.0	15.0	0.012	1.2	0.09	0.6
7	618663	231523	Stour & Copperas Woods, Ramsey SSSI	0.030	1.0	15.0	0.009	0.9	0.07	0.5
8	620001	231431	Stour & Copperas Woods, Ramsey SSSI	0.030	1.0	15.0	0.010	1.0	0.07	0.5
9	620781	231646	Stour & Copperas Woods, Ramsey SSSI	0.030	1.0	15.0	0.008	0.8	0.07	0.4
10	622296	229615	Little Oakley Channel Deposit SSSI	0.020	n/a	n/a	0.009	-	0.05	-
11	621099	227080	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.013	0.4	0.07	0.3
12	621571	227551	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.013	0.4	0.07	0.3
13	622414	227823	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.010	0.3	0.05	0.3
14	623581	228711	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.007	0.2	0.04	0.2
15	621907	226771	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.009	0.3	0.05	0.2
16	621444	226109	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.010	0.3	0.05	0.3
17	620174	225511	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.007	0.2	0.04	0.2
18	620755	225819	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.009	0.3	0.05	0.2
19	620138	224703	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.004	0.1	0.02	0.1
20	618886	224023	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.005	0.2	0.0	0.1
21	621090	224205	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.004	0.1	0.0	0.1
22	622342	224858	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.006	0.2	0.0	0.1
23	620410	223529	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.003	0.1	0.0	0.1
24	622015	224345	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.004	0.1	0.0	0.1
25	624546	224264	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.004	0.1	0.0	0.1
26	624818	223175	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.003	0.1	0.0	0.1
27	622600	222604	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.002	0.1	0.0	0.1

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Table 6. (continued)

Receptor number	X(m)	Y(m)	Name	Site Parameters			Maximum annual ammonia concentration		Maximum annual nitrogen deposition rate	
				Deposition Velocity	Critical Level (µg/m ³)	Critical Load (kg/ha)	Process Contribution (µg/m ³)	%age of Critical Level	Process Contribution (kg/ha)	%age of Critical Load
28	620614	226223	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.012	0.4	0.1	0.3
29	619716	224128	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.004	0.1	0.0	0.1
30	621090	225148	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.006	0.2	0.0	0.2
31	622233	226114	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.008	0.3	0.0	0.2
32	622832	227161	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.008	0.3	0.0	0.2
33	619390	231691	Stour Estuary SSSI/SPA/Ramsar	0.020	3.0	20.0	0.009	0.3	0.0	0.2
34	621390	231691	Stour Estuary SSSI/SPA/Ramsar	0.020	3.0	20.0	0.007	0.2	0.0	0.2
35	617839	232344	Stour Estuary SSSI/SPA/Ramsar	0.020	3.0	20.0	0.006	0.2	0.0	0.1
36	616268	231793	Stour Estuary SSSI/SPA/Ramsar	0.020	3.0	20.0	0.006	0.2	0.0	0.2
37	614207	231671	Stour Estuary SSSI/SPA/Ramsar	0.020	3.0	20.0	0.004	0.1	0.0	0.1
38	617635	233967	Stour Estuary SSSI/SPA/Ramsar	0.020	3.0	20.0	0.003	0.1	0.0	0.1
39	620941	232987	Stour Estuary SSSI/SPA/Ramsar	0.020	3.0	20.0	0.005	0.2	0.0	0.1
40	612462	232650	Stour Estuary SSSI/SPA/Ramsar	0.020	3.0	20.0	0.002	0.1	0.0	0.1
41	609921	232834	Stour Estuary SSSI/SPA/Ramsar	0.020	3.0	20.0	0.001	0.0	0.0	0.0
42	624124	233661	Stour Estuary SSSI/SPA/Ramsar	0.020	3.0	20.0	0.003	0.1	0.0	0.1
43	624706	235038	Orwell Estuary SSSI/SPA/Ramsar	0.020	3.0	20.0	0.003	0.1	0.0	0.1
44	624430	232589	Stour Estuary SSSI/SPA/Ramsar	0.020	3.0	20.0	0.004	0.1	0.0	0.1
45	624288	229547	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.005	0.2	0.0	0.1
46	623634	225978	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.005	0.2	0.0	0.1
47	623236	223590	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.003	0.1	0.0	0.1
48	626359	224784	Hamford Water SSSI/SPA/Ramsar	0.020	3.0	20.0	0.003	0.1	0.0	0.1
49	616023	221200	Weeleyhall Wood SSSI	0.030	1.0	15.0	0.002	0.2	0.0	0.1
50	619418	219691	Holland Haven Marshes SSSI	0.020	3.0	n/a	0.002	0.1	0.0	-
51	626452	223225	The Naze SSSI	0.020	n/a	n/a	0.002	-	0.0	-
52	626264	231703	Harwich Foreshore SSSI	0.020	n/a	n/a	0.002	-	0.0	-
53	620608	238001	Orwell Estuary SSSI/SPA/Ramsar	0.020	3.0	20.0	0.001	0.0	0.0	0.0
54	615488	238193	Freston and Cutler's Woods with Holbrook Park SSSI	0.030	1.0	10.0	0.001	0.1	0.0	0.1

In Combination Ammonia Assessment

The in-combination table below shows the results from the ammonia assessment of 20/00194/FUL, added to the results for the current application.

Site	Maximum Ammonia Concentration % of Critical Level	Maximum Nitrogen Deposition Rate % of Critical Load
Stour and Copperas Woods Ramsey SSSI	$(1.5 + 1.2) = 2.7\%$	$(0.8 + 0.6) = 1.4\%$
Hamford Water SSSI, SPA, Ramsar	$(0.3 + 0.4) = 0.7\%$	$(0.2 + 0.3) = 0.5\%$
Stour Estuary SSSI, SPA, Ramsar	$(0.2 + 0.3) = 0.5\%$	$(0.2 + 0.2) = 0.4\%$
Orwell Estuary SSSI, SPA, Ramsar	$(0.1 + 0.1) = 0.2\%$	$(0.0 + 0.1) = 0.1\%$

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May 2022.**