

SCAIL

Simple Calculation of Atmospheric Impact Limits



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NOTICES

November 6th 2025 Since 15th May 2023, SCAIL was wrongfully using combustion meteorological output files, Instead of agriculture meteorological output files, for **Welsh met sites only**. Whilst wind parameters and met station location are unaffected some land use parameters have been updated which lead to higher modelled concentrations. This has been corrected today. We apologize for the issue, and advise to rerun affected cases.

September 9th 2025: SCAIL background pollution maps for **Ireland** have been updated to the the **year 2021** in line with current APIS ([see announcement](#)).

Notice Archive

Simple Calculation of Atmospheric Impact Limits from Agricultural Sources (SCAIL-Agriculture) is a screening tool for assessing the impact from pig and poultry farms on human health and on semi-natural areas like SSSIs and SACs. The model provides an estimate of the amount of acidity and nitrogen deposited from a farm as well as predictions of air concentrations of odour and PM10. These values can then be used to assess whether impact limits for human health or habitats are exceeded or not.

Information regarding the use of SCAIL-Agriculture as a screening tool and instructions for completing the assessment form are provided in the SCAIL-Agriculture User Guide. The User Guide also contains background information on regulatory requirements for the use of SCAIL-Agriculture, including instances where further detailed modelling of emissions will be required. **The relevant regulatory authority should be consulted for guidance regarding assessment requirements for planning and permitting purposes.**

[LOAD INPUT DATA](#)

Project Details

Project Notes Greensykes

Project Run Mode ☒ Hybrid Met ☐ Conservative Met ☐ Realistic Met

Location Details

Select Country England

Installation Details

Installation 1

Installation Name Slurry Tank

Installation Location 307458,520657 ☐ Landranger ☒ x,y
[CHOOSE/VERIFY LOCATION](#)

Source Details

Source 1

Source ☐ Pig ☐ Poultry ☒ Cattle ☐ User defined emissions

New or Existing Source New

Source Name Slurry Store

Source Location Provides a link to GoogleMaps to check the location.

307458,520657 ☐ Landranger ☒ x,y
[VERIFY LOCATION](#)

Source Type Litter / Manure storage

Type Slurry storage

Details Tank - rigid (tent-like) cover

Tonnes Fresh Manure (t) 521

Area of Storage (m2) 667

Number of storage
days/year

Total emissions

Pollutant	Source Emissions	Running total of all emission sources	Units
NH ₃ :	30	30	(kg)
PM ₁₀ :	0	0	(kg)
Odour:	0	0	(kOu)

GET EMISSIONS VALUES ?

Designated Site details:

Search Radius ? 10 km

RUN RECEPTOR SEARCH ?

No. of Designated Sites ? 18

VERIFY RECEPTOR LOCATIONS ?

Site No.	Name	Distance(km)	Designation	Country	Easting	Northing
1	River Derwent & Bassenthwaite Lake	0.824	SAC	ENGLAND	306696	520345
2	River Derwent and Tributaries	0.824	SSSI	ENGLAND	306696	520345
3	High Leys	2.62	SSSI	ENGLAND	306305	518304
4	River Ehen (Ennerdale Water to Keekle Confluence)	4.66	SSSI	ENGLAND	306674	516063
5	River Ehen	4.66	SAC	ENGLAND	306674	516063
6	Yeathouse Quarry	4.884	SSSI	ENGLAND	304231	516991
7	Ennerdale	4.96	SSSI	ENGLAND	309532	516152
8	Pillar and Ennerdale Fells	5.775	SSSI	ENGLAND	309031	515100
9	Lake District High Fells	5.775	SAC	ENGLAND	309031	515100
10	Bowness Knott	5.935	SSSI	ENGLAND	310998	515893
11	Buttermere Fells	8.38	SSSI	ENGLAND	315826	521106
12	North Pennine Dales Meadows	8.536	SAC	ENGLAND	313407	526779
13	Sandybeck Meadow	8.536	SSSI	ENGLAND	313407	526779
14	River Calder Section	8.874	SSSI	ENGLAND	306882	511802
15	Borrowdale Woodland Complex	9.439	SAC	ENGLAND	315989	516618
16	Scales Wood	9.439	SSSI	ENGLAND	315989	516618
17	Solway Firth	9.73	SPA	ENGLAND	298352	524086
18	Solway Firth	9.73	SPA	SCOTLAND	298352	524086

User specified site

Select ▼ Add site

Site Name

Site Location Landranger x,y
VERIFY LOCATION ?

Habitat within site please select... ▼

CHECK BACKGROUND LEVELS ?

Human Health Receptor Details

Receptor Select ▼ Add Receptor

PM₁₀ percentile Annual mean ▼
?

Receptor Name

Receptor Location Landranger x,y
VERIFY LOCATION ?

CHECK BACKGROUND PM10 LEVELS ?

SAVE INPUT DATA

CLEAR FORM

CALCULATE



Results

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Content Specific Help Text

Site Information River Derwent & Bassenthwaite Lake (SAC)

Country:	ENGLAND
Site Name:	River Derwent & Bassenthwaite Lake
Site Code: 	UK0030032
Designation Status: 	SAC
Distance from Installation (m): 	824
Receptor Type:	Habitat
Grid Reference:	306696,520345
Met Site: 	STBE
Run Mode: 	Hybrid
PM ₁₀ Percentile: 	Average

Installation Information

No.	Name	No. of sources	No. of new sources	PM ₁₀ (t/a)	NH ₃ (t/a)	Odour (kOu/a)	Conc NH ₃ (µg/m ³)	Dep N (kg/ha/yr)	Dep Acid (kEq H ⁺ /ha/yr)	Conc PM ₁₀ (µg/m ³)	Conc Odour (Ou/m ³)
1	Slurry Tank	1	1	-	0.030	-	0.01	0.03	0.002	-	-

Total Depositions/Concentrations and Exceedances

Concentrations/Depositions and Critical Loads/Levels	NH ₃ (µg/m ³)	N Dep. (kg N/ha/yr)	Acid Dep. (kEq H ⁺ /ha/yr)	PM ₁₀ (µg/m ³)	Odour (Ou/m ³)
Process Contribution (PC) at receptor edge	0.00561	0.03	0.002	-	-
Background concentration at receptor edge 	0.97	13.31	1.733 (N: 1.559 S: 0.175)	-	-
Predicted Environmental Concentration/Deposition (PEC) 	0.98	13.34	1.74	-	-
Environmental Assessment Level or Critical Load / Level 	Lower: 1 Upper: 3 	2 Luronium natans	maxN: 0.879 maxS: 0.594 minN: 0.285 Old sessile oak woods with Ilex and Blechnum in the British Isles	-	-
ALTERNATIVE CRITICAL LOAD INFO					
USE OWN THRESHOLDS?					
% of relevant standard PC 	Lower: 1% Upper: 0%	2%	0.23%	-	-
% of relevant standard PEC 	Lower: 98% Upper: 33%	667%	197%	-	-
EXCEEDANCE 	Lower: No exceedance Upper: No exceedance	11.34	0.86	-	-

Project Notes

Greensykes

SAVE RESULTS



SAVE INPUTS



[Use this Back button. Do not use the browser back button - you could lose all inputs!]

BACK



Centre for
Ecology & Hydrology
NATURAL ENVIRONMENT RESEARCH COUNCIL



ENVIRONMENT
AGENCY



Background Levels and Critical Loads

Region: England

Gridreference: 306696,520345

Habitat: please select...

Concentrations/Depositions and Critical Loads	Conc NH3 (µg/m3)	N Dep. kg N/ha/yr	Acid Dep. kEq H+/ha/yr
Background concentration to habitat	0.97		
Background deposition to habitat		13.31	0.97
Critical Load / Level	1-3	-	0.00 [MaxN:0.00 MinN:0.00 MaxS:0.00]

Background 0.97 + Source loading (0.03) = 1.

