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**From:** Zara Hanshaw  
**Sent:** 04 July 2022 16:52  
**To:** Megan O'Mara  
**Cc:** Planning  
**Subject:** NYM/2022/0390 Redmire Farm, Tranmire

Good afternoon Megan,

I have reviewed the SCAIL information submitted as part of this application and used it to complete the calculation. By my calculations, the development is breaching the critical load for nitrogen deposition (>1%) for the North York Moors SPA, SAC and SSSI, coming in at 26.99%, 26.61% and 26.61% respectively. This is showing different results from the preliminary information provided in the SCAIL screenshots that have been submitted, so I have attached my results and screenshots of my inputs in case there's an error there! Also, the supporting agricultural information states that there are 31 cows, but only 12 have been included in the SCAIL assessment; I have run the SCAIL calculation on the basis of 12 cows. If the nitrogen deposition does exceeds 1% then there is a likely significant effect on the adjacent SAC and SPA and therefore the development would contravene the Conservation of Habitats and

Species Regulations 2017, and would not be acceptable. As a SCAIL is only a simple assessment, I would therefore recommend that a detailed air quality assessment is completed, by an air quality specialist.

Best wishes,

**Zara Hanshaw ACIEEM**  
**Assistant Ecologist**  
[\(she/her\)](#)

North York Moors National Park Authority  
The Old Vicarage, Bondgate, Helmsley, York, YO62 5BP

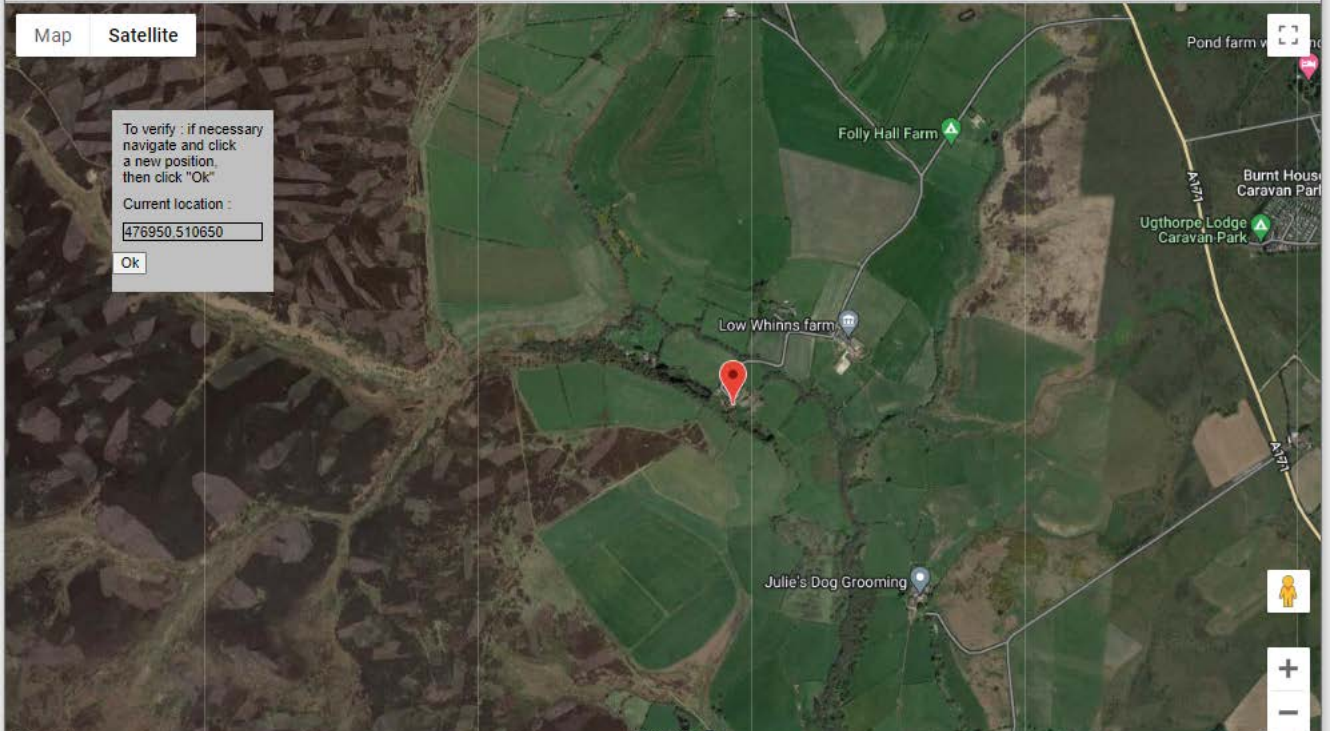
Map Satellite

To verify : if necessary  
navigate and click  
a new position,  
then click "Ok"

Current location :

476950,510650

Ok



**Site Information** North York Moors (SPA) ?

Region: England  
 Site Name: North York Moors  
 Site Code: [?](#) UK9006161  
 Designation Status: [?](#) SPA  
 Distance from Installation (m): [?](#) 99  
 Receptor Type: Habitat  
 Grid Reference: 476868.3,510594.1  
 Met Site: [?](#) CHUR  
 Run Mode: [?](#) Conservative  
 PM<sub>10</sub> Percentile: [?](#) Average

**Installation Information** ?

No.	Name	No. of sources	No. of new sources	PM <sub>10</sub> (t/a)	NH <sub>3</sub> (t/a)	Odour (kOu/a)	Conc NH <sub>3</sub> (µg/m <sup>3</sup> )	Dep N (kg/ha/yr)	Dep Acid (kEq H <sup>+</sup> /ha/yr)	Conc PM <sub>10</sub> (µg/m <sup>3</sup> )	Conc Odour (Ou/m <sup>3</sup> )
1	MIDDEN	1	0	-	0.047	-	0.27	1.4	0.095	-	-

**Total Depositions/Concentrations and Exceedances** ?

Concentrations/Depositions and Critical Loads/Levels	NH <sub>3</sub> (µg/m <sup>3</sup> )	N Dep. (kg N/ha/yr)	Acid Dep. (kEq H <sup>+</sup> /ha/yr)	PM <sub>10</sub> (µg/m <sup>3</sup> )	Odour (Ou/m <sup>3</sup> )
Process Contribution (PC) at receptor edge	0.26985	1.40	0.094	-	-
Background concentration at receptor edge <a href="#">?</a>	1.49	18.20	1.49 (N:1.30 S:0.19)	-	-
Predicted Environmental Concentration/Deposition (PEC) <a href="#">?</a>	1.76	19.6	1.58	-	-
Environmental Assessment Level or Critical Load / Level <a href="#">?</a>	Lower: 1 Upper: 3 <a href="#">?</a>	5.0  Pluvialis apricaria (North-western Europe - breeding)	maxN: 0.47 maxS: 0.15 minN: 0.18 Pluvialis apricaria (North-western Europe - breeding)	-	-
<b>ALTERNATIVE CRITICAL LOAD INFO</b>					
<b>USE OWN THRESHOLDS?</b>					
% of relevant standard PC <a href="#">?</a>	Lower: 27% Upper: 9%	28%	19%	-	-
% of relevant standard PEC <a href="#">?</a>	Lower: 176% Upper: 59%	392%	336%	-	-
<b>EXCEEDANCE</b> <a href="#">?</a>	Lower: 0.76 Upper: No exceedance	14.60	1.11	-	-

**Project Notes**

Redmire Farm, Tranmire

LOAD INPUT DATA ?

### Project Details

Project Notes ?

Project Run Mode ?  Conservative Met  Realistic Met

### Location Details

Select Country ?

### Installation Details

Installation ?

Installation Name ?

Installation Location ?   Landranger  x,y

### Source Details

Source ?

Source ?  Pig  Poultry  Cattle  User defined emissions

New or Existing Source ?

Source Name ?

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

Landranger  x,y

Source Type ?

Type ?

Details ?

Livestock Number ?

Housing Floor Area ?  m<sup>2</sup>

Number of days ?  days

Naturally Vented

Building Height ?  m

Fan Location ?

No. of Fans (optional) ?

Fan Diameter ?  metres

Fan Flowrate ?  m<sup>3</sup>/s

**Source Type** [?](#) Housing

**Type** [?](#) Beef cows

**Details** [?](#) Straw-bedded farmyard manure loose housing

**Livestock Number** [?](#)

**Housing Floor Area** [?](#)  m<sup>2</sup>

**Number of days** [?](#)  days

**Naturally Vented**

**Building Height** [?](#)  m

**Fan Location** [?](#) please select...

**No. of Fans (optional)** [?](#)

**Fan Diameter** [?](#)  metres

**Fan Flowrate** [?](#)  m<sup>3</sup>/s

**Total emissions** [?](#)

Pollutant	Source Emissions	Running total of all emission sources	Units
NH <sub>3</sub> :	47	47	(kg)
PM <sub>10</sub> :	558	558	(kg)
Odour:	1475901000	1475901000	(kOu)

[GET EMISSIONS VALUES](#) [?](#)

**Designated Site details:**

**Search Radius** [?](#)  km [RUN RECEPTOR SEARCH](#) [?](#)

**No. of Designated Sites** [?](#) 11 [VERIFY RECEPTOR LOCATIONS](#) [?](#)

Site No.	Name	Distance(km)	Designation	Country	Easting	Northing
1	North York Moors	0.099	SPA	undefined	476868.3	510594.1
2	North York Moors	0.099	SSSI	undefined	476867.2	510595.4
3	North York Moors	0.099	SAC	undefined	476867.8	510593.9
4	Tranmere	1.203	SSSI	undefined	477366.2	511778.6
5	Arnecliff & Park Hole Woods	5.392	SSSI	undefined	478328.9	505436.8
6	Arnecliff and Park Hole Woods	5.393	SAC	undefined	478332.3	505437.4
7	Pinkney & Gerrick Woods	6.07	SSSI	undefined	471369.1	513036.9
8	Runswick Bay	7.192	SSSI	undefined	480809.6	516718.7
9	Staithe-Port Mulgrave	7.382	SSSI	undefined	479704.3	517498.6
10	Boulby Quarries	8.705	SSSI	undefined	475478.4	519229.8
11	Beck Hole	9.015	SSSI	undefined	481953.3	503151.2

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[GET EMISSIONS VALUES](#) ?

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User specified site  [Add site](#)

Site Name

Site Location  Landranger  x,y [VERIFY LOCATION](#) ?

Habitat within site  [CHECK BACKGROUND LEVELS](#) ?

**Human Health Receptor Details**

Receptor  [Add Receptor](#) PM<sub>10</sub> percentile  ?

Receptor Name

Receptor Location  Landranger  x,y [VERIFY LOCATION](#) ?

[CHECK BACKGROUND PM10 LEVELS](#) ?

[SAVE INPUT DATA](#) [CLEAR FORM](#) [CALCULATE](#)