3rd September 2025

Kings Manor Farm Environmental

Via Email

Our Ref: RMA-LC2866_3 – Hinxhill Mitigation Scheme - Mitigation Statement

Dear Charlie,

RE: AGRICULTURAL LAND AT HINXHILL, ASHFORD, KENT, TN25 5NR – NUTRIENT MITIGATION STATEMENT

Further to our instruction to assess the suitability of the above site for nutrient offsetting, we have undertaken a detailed review of the potential nutrient reduction benefits associated with the cessation of intensive agricultural activity.

This Mitigation Statement sets out the proposed nutrient offsetting strategy for the land at Hinxhill. The site is currently under arable cultivation (cereal cropping) and lies within the wider Stodmarsh nutrient catchment, wherein mitigation measures are required to achieve nutrient neutrality for qualifying development proposals.

The following sections provide background information on the site context and existing land use, the assessment methodology and present the calculated nutrient reduction benefits arising from the proposed change in land management.

Purpose of Mitigation

The proposed mitigation scheme involves converting land at Hinxhill to low-input grassland, with the aim of generating nitrate and phosphate credits. These credits will be used to offset nutrient budgets associated with development projects that require mitigation within the Stodmarsh catchment.

The approach used in this assessment aligns with Natural England's guidance on achieving nutrient neutrality, with nutrient reduction values applied according to site-specific soil type classifications.

Site Location and Existing Land Use

The mitigation land is located on the eastern periphery of Ashford in Kent, within an agricultural landscape predominantly used for cereal cultivation. It comprises two distinct parcels: the northern parcel, centred at National Grid Reference (NGR) TR 04966 42602 (refer Figure 1) and the southern parcel, centred at NGR TR 05759 38123 (refer to Figure 2).

The site lies within the Upper Stour operational catchment, which ultimately drains into the Stodmarsh Special Area of Conservation (SAC) and Ramsar site (refer to Figure 3). The total agricultural holding extends to 427.04 hectares and is used for cereal cropping.
According to the Flood Estimation Handbook (FEH) online mapping, the Hinxhill site receives between 700 and 750 millimetres of annual rainfall (refer Appendix A), while data from the UK Soil Observatory (UKSO) confirms that the land is located within a Nitrate Vulnerable Zone (NVZ).

Assessment Methodology

A comprehensive spatial analysis of the site was undertaken using QGIS geographic information system (GIS) software. This analysis included the precise delineation of land parcels, classification of soil types in accordance with Natural England's soil drainage categories (freely draining, impeded and naturally wet) and the exclusion of areas unsuitable for agricultural use, such as existing woodland, urban land and other non-agricultural uses.

The proposed mitigation involves a change in land use from arable cropping to low-input grassland, aimed at achieving targeted nutrient reductions within the Stodmarsh catchment.

Nutrient reduction estimates have been calculated using the Stodmarsh Nutrient Budget Calculator, which incorporates Natural England's best-practice guidance and accounts for site-specific variations in soil hydrology and drainage. Nutrient benefit rates have been applied based on soil type, as shown below:

Soil Type	Phosphate Benefit (kg/ha/year)	Nitrate Benefit (kg/ha/year)
Freely Draining	0.15	28.18
Impeded	0.91	19.01
Naturally Wet	0.66	20.62

The nutrient benefits presented in the above table are based on the difference between the current land use (i.e. cereals) and that for the proposed land use (i.e. 'greenspace'). The relevant nutrient budget calculator outputs for each soil type are included in Appendix B.

The nutrient benefits listed above have been used in conjunction with the detailed, parcel-level breakdown of mitigation area and soil type to generate the nutrient benefits for each field within the mitigation land area. The full nutrient benefit calculations are included in Appendix B; these show the breakdown of nutrient benefits per field and a summary table showing the overall phosphate and nitrate benefits for the mitigation scheme.

Summary of Results

The conversion of arable land to low-input grassland on land at Hinxhill is estimated to deliver total reductions of **291.5 kg/year of phosphorus (P)** and **9,066.3 kg/year of nitrogen (N)** across the designated mitigation parcels.

This Mitigation Statement is to be submitted to Natural England for technical review and approval for use as a nutrient neutrality credit scheme.

Please do not hesitate to get in touch should you have any questions or require further information.

Yours sincerely,

Rob Murdock
Director

Encs:

	Figure 1:	Suitable Land for Mitigation – Northern Hinxhill
	Figure 2:	Suitable Land for Mitigation – Southern Hinxhill
	Figure 3:	Stodmarsh Catchment Area Plan
	Appendix A:	FEH Rainfall Data
	Appendix B:	Nutrient Benefit Calculations

Figures

N

Key

- Red Line Boundary
- Impeded Drainage
- Naturally Wet
- Freely Draining
- Unsuitable Areas
- Freely Draining Areas Excluded from Calculations

Figure 1:	**Suitable Land for Nutrient Mitigation – Northern Hinxhill**
Client:	**Kings Manor Farm Environmental**
Project:	**Hinxhill Mitigation Scheme**
Project No.:	**C2866**

RMA ENVIRONMENTAL

Drawn:	Checked:	Date:	Scale:
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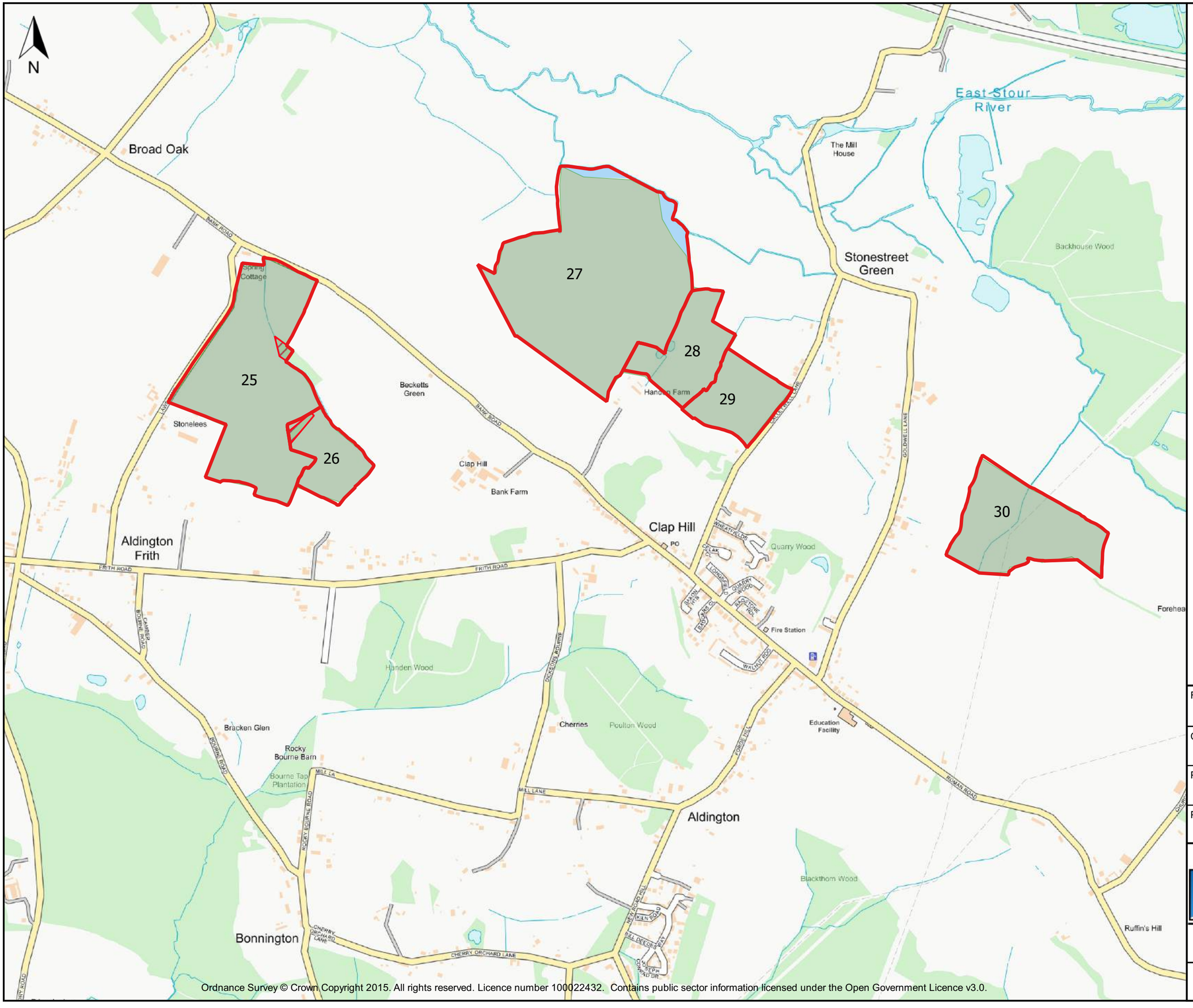

Key

- Red Line Boundary
- Unsuitable Areas
- Impeded Drainage
- Naturally Wet
- Freely Draining

Figure 2:	**Suitable Land for Nutrient Mitigation – Southern Hinxhill**
Client:	**Kings Manor Farm Environmental**
Project:	**Hinxhill Mitigation Scheme**
Project No.:	**C2866**

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Key

- Southern Mitigation Site
- Northern Mitigation Site
- Stodmarsh SAC/SPA/ Ramsar Site
- Stodmarsh Catchment

Figure 3:	**Stodmarsh Catchment Area Plan**
Client:	**Kings Manor Farm Environmental**
Project:	**Hinxhill Mitigation Scheme**
Project No.:	**C2866**

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Appendix A: FEH Rainfall Data

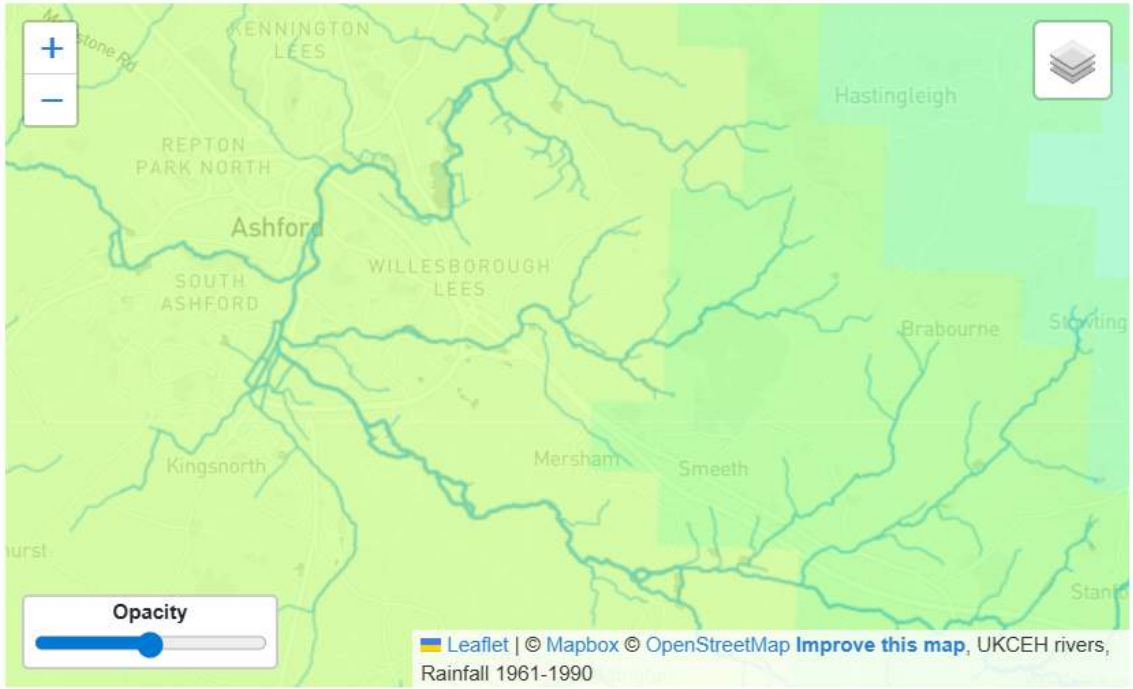
Elevation | Hydrogeology | Rainfall | Other

Land Cover Maps (LCM)

Rainfall

Catchment statistics | Legend

- 500 - 525 mm
- 525 - 550 mm
- 550 - 575 mm
- 575 - 600 mm
- 600 - 625 mm
- 625 - 650 mm
- 650 - 675 mm
- 675 - 700 mm
- 700 - 750 mm
- 750 - 800 mm
- 800 - 850 mm
- 850 - 900 mm
- 900 - 950 mm
- 950 - 1000 mm
- 1000 - 1100 mm



Download catchment boundary

UK Centre for Ecology & Hydrology | FLOOD ESTIMATION HANDBOOK WEB SERVICE

16 quota | 464 credits | Great Britain

Search

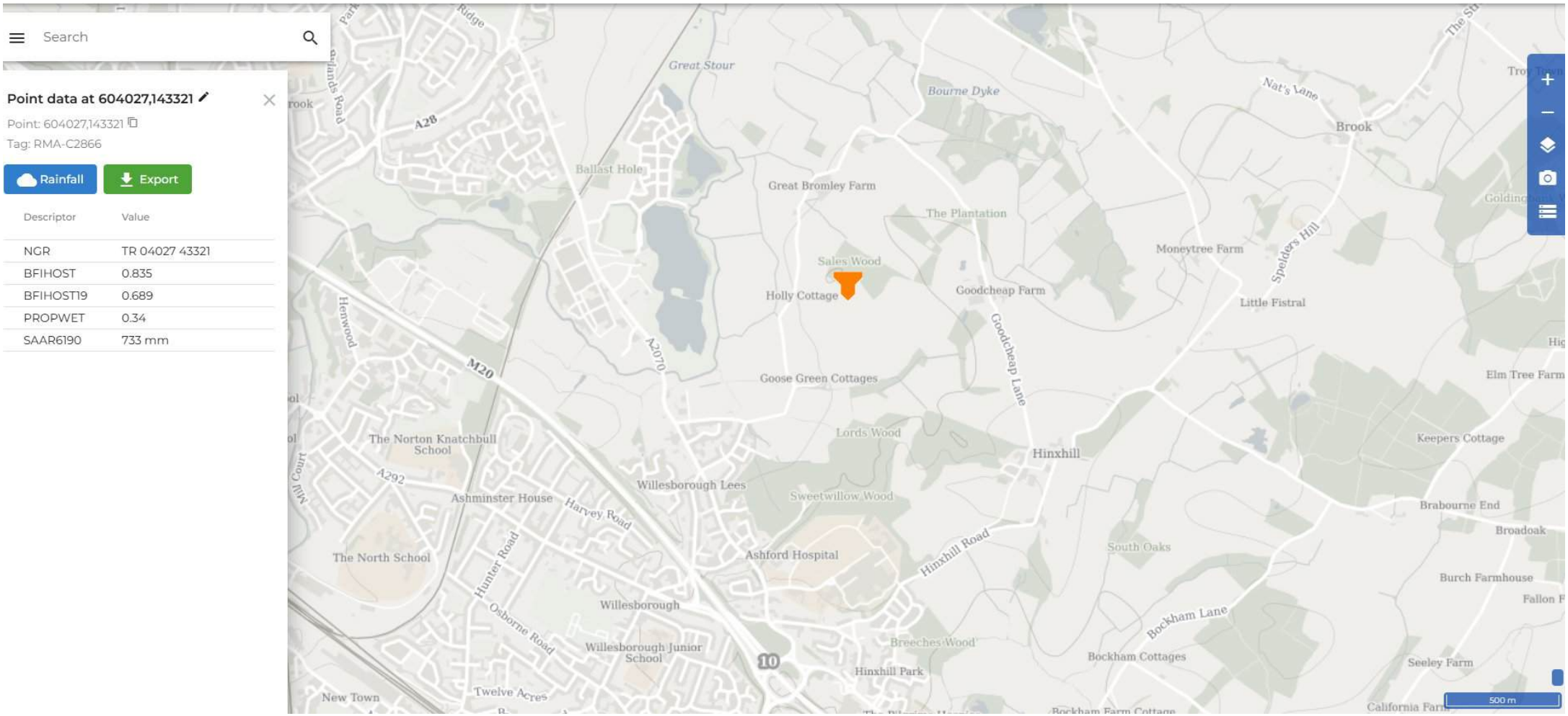
Point data at 604027,143321

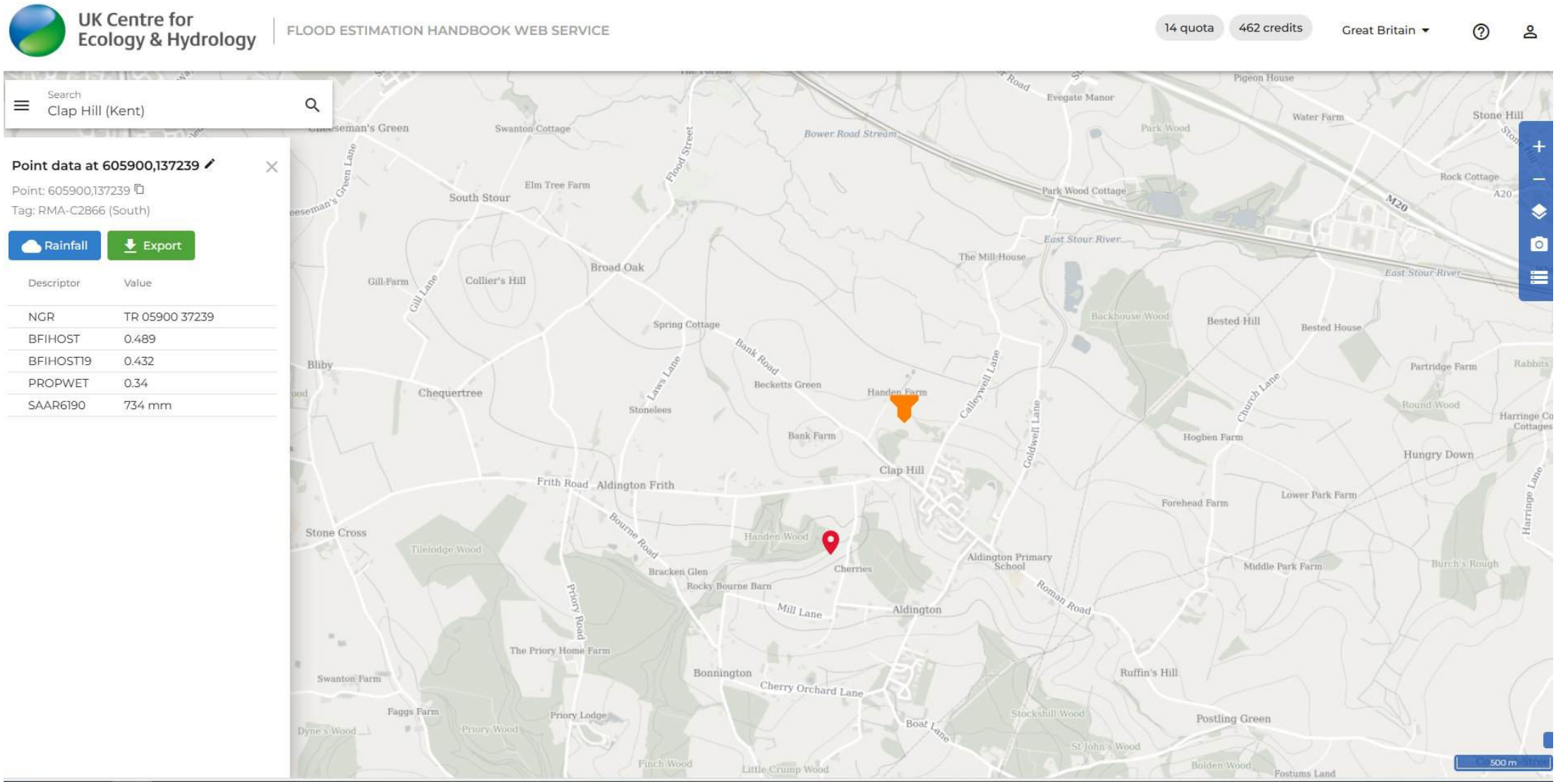
Point: 604027,143321

Tag: RMA-C2866

Rainfall | Export

Descriptor	Value
NGR	TR 04027 43321
BFIHOST	0.835
BFIHOST19	0.689
PROPWET	0.34
SAAR6190	733 mm




UK Centre for Ecology & Hydrology
FLOOD ESTIMATION HANDBOOK WEB SERVICE
14 quota
462 credits
Great Britain
Search
Clap Hill (Kent)
Point data at 605900,137239
Point: 605900,137239
Tag: RMA-C2866 (South)
Rainfall
Export
Descriptor
Value
NGR
TR 05900 37239
BFIHOST
0.489
BFIHOST19
0.432
PROPWET
0.34
SAAR6190
734 mm
Pigeon House
Evegate Manor
Water Farm
Stone Hill
Park Wood
Bower Road Stream
Cheeseman's Green
Swanton Cottage
Flood Street
Elm Tree Farm
South Stour
Park Wood Cottage
Rock Cottage
A20
M20
East Stour River
The Mill House
Broad Oak
Gill Farm
Collier's Hill
Gill Lane
Backhouse Wood
Bested Hill
Bested House
Spring Cottage
Bliby
Chequertree
Bank Road
Laws Lane
Beckett's Green
Handen Farm
Stonelees
Calleywell Lane
Goldwell Lane
Partridge Farm
Round Wood
Church Lane
Bank Farm
Hogben Farm
Hungry Down
Clap Hill
Frith Road
Aldington Frith
Forehead Farm
Lower Park Farm
Stone Cross
Bourne Road
Handen Wood
Tilelodge Wood
Bracken Glen
Cherries
Aldington Primary School
Middle Park Farm
Burch's Rough
Rocky Bourne Barn
Mill Lane
Aldington
Roman Road
Priory Road
The Priory Home Farm
Swanton Farm
Bonnington
Cherry Orchard Lane
Ruffin's Hill
Faggs Farm
Priory Lodge
Stockshill Wood
Postling Green
Dyne's Wood
Priory Wood
Boat Lane
St John's Wood
Finch Wood
Little Crump Wood
Bolden Wood
Fostums Land
500 m

Appendix B: Nutrient Benefit Calculations

Field	Soil Type	Area (ha)	Phosphate Benefit (kg/year)	Nitrate Benefit (kg/year)
1	Naturally Wet	49.9	32.9	1028.1
1	Freely Draining	8.0	1.2	225.7
1	Impeded	6.7	6.1	127.7
2	Freely Draining	11.6	1.7	325.5
2	Naturally Wet	7.4	4.9	153.4
3	Naturally Wet	13.6	9.0	281.3
4	Freely Draining	13.2	2.0	373.1
5	Freely Draining	33.8	5.1	952.5
5	Naturally Wet	23.8	15.7	489.7
5	Impeded	1.8	1.7	34.6
6	Naturally Wet	5.8	3.8	119.8
6	Impeded	11.3	10.3	214.8
7	Naturally Wet	3.3	2.2	67.4
7	Impeded	4.0	3.6	75.3
8	Naturally Wet	0.8	0.5	16.1
8	Impeded	3.6	3.3	68.1
10	Freely Draining	2.6	0.4	73.3
10	Naturally Wet	13.3	8.8	275.1
11	Naturally Wet	4.5	3.0	92.2
11	Impeded	14.0	12.7	265.2
12	Naturally Wet	4.4	2.9	91.1
12	Impeded	5.4	4.9	102.8
14	Naturally Wet	9.0	6.0	186.4
14	Impeded	30.5	27.7	579.4
15	Naturally Wet	7.0	4.6	145.0
16	Naturally Wet	7.4	4.9	152.2
16	Impeded	4.8	4.4	91.4
17	Freely Draining	0.6	0.1	18.0
17	Naturally Wet	3.0	2.0	62.3
18	Naturally Wet	0.6	0.4	12.8
19	Naturally Wet	3.0	1.9	60.8
19	Impeded	20.1	18.3	382.9
20	Impeded	2.8	2.5	52.8
20	Naturally Wet	1.4	1.0	29.7
21	Impeded	9.8	8.9	185.7
22	Impeded	6.7	6.1	127.6
23	Freely Draining	5.6	0.8	158.4
23	Impeded	8.2	7.5	155.9
25	Impeded	16.4	14.9	312.1
26	Impeded	3.5	3.2	67.3
27	Naturally Wet	1.0	0.6	19.6
27	Impeded	24.2	22.0	459.7
28	Impeded	5.2	4.7	98.1
29	Impeded	4.3	3.9	82.5
30	Impeded	9.1	8.3	173.0
	Totals	**427.0**	**291.5**	**9066.3**

	P Benefit	N Benefit
	kg/yr	kg/yr
FD	0.15	28.18
Impeded	0.91	19.01
NW	0.66	20.62

Totals	**Area (ha)**
Impeded	192.4
Naturally Wet	159.2
Freely Draining	75.5
Total	**427.0**

Land Composition	
Impeded + Naturally Wet Total	82%
Freely Draining	18%

Field	Soil Type	Area (ha)	Phosphate Benefit (kg/year)	Nitrate Benefit (kg/year)
5a	Freely draining	24.4	3.7	687.6
15a	Freely Draining	7.5	1.1	212.2
18a	Freely Draining	2.7	0.4	74.7
	Totals	**34.6**	**5.2**	**974.5**

Nutrients from current land use

This sheet contains 2 tables. The tables are separated by a heading, which describes the following table.
Note: You will need to fill in cells B5 to B8 in the first table 'Current land use information'. You will need to fill in cells A11 to A27, and B11 to B27 in the second table 'Current land uses'. Cells B28, C11 to C28 and D11 to D28 are automatically calculated and will state '0.00' unless the user inputs have been entered. Cells E11 to E27 are automatically generated and will state 'Not applicable' depending on automatically generated data in cells C11 to C27 and D11 and D27. Row 28 is a Total Row. The Total Row states 'Totals:' in cell A28 and automatically calculates the total sum of cells B11 to B27 in cell B28, C11 to C27 in cell C28 and D11 to D27 in cell D28. Cell E28 is intentionally blank.
How to fill in the table 'Current land use information'
Cell B5: Choose the operational catchment the site is located within from the dropdown list.
Cell B6: Choose the soil drainage type associated with the predominant soil type within the development site from the dropdown list.
Cell B7: Choose the annual average rainfall the development will receive from the dropdown list. If the rainfall volume is not on the list, select the nearest value.
Cell B8: Choose whether the development is in a nitrate vulnerable zone (NVZ) from the dropdown list.
How to fill in the table 'Current land uses'
Cell A11-A27: Choose the existing (pre-development) land use type(s) from the dropdown list.
Cells B11-B27: Enter the area in hectares of each land use type.
The nutrient load from current land uses is shown in cells C11-C27 for total phosphorus (TP) and cells D11-D27 for total nitrogen (TN).
The total nutrient load from current land uses is shown in cell C28 for TP and D28 for TN.

Current land use information

Description of required information	Data entry column - user inputs required
Operational catchment:	Upper Stour
Soil drainage type:	Freely draining
Annual average rainfall (mm):	700.1 - 750
Within nitrate vulnerable zone (NVZ):	Yes

Current land uses

Existing land use type(s) - user inputs required	Area (ha) - user inputs required	Annual phosphorus nutrient export (kg TP/yr)	Annual nitrogen nutrient export (kg TN/yr)	Notes on data
Cereals	1.00	**0.17**	**31.18**	Not applicable
Greenspace	1.00	**0.02**	**3.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
Totals:	**2.00**	**0.19**	**34.18**	

Nutrients from current land use

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Cell B8: Choose whether the development is in a nitrate vulnerable zone (NVZ) from the dropdown list.
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Cell A11-A27: Choose the existing (pre-development) land use type(s) from the dropdown list.
Cells B11-B27: Enter the area in hectares of each land use type.
The nutrient load from current land uses is shown in cells C11-C27 for total phosphorus (TP) and cells D11-D27 for total nitrogen (TN).
The total nutrient load from current land uses is shown in cell C28 for TP and D28 for TN.

Current land use information

Description of required information	Data entry column - user inputs required
Operational catchment:	Upper Stour
Soil drainage type:	Impeded drainage
Annual average rainfall (mm):	700.1 - 750
Within nitrate vulnerable zone (NVZ):	Yes

Current land uses

Existing land use type(s) - user inputs required	Area (ha) - user inputs required	Annual phosphorus nutrient export (kg TP/yr)	Annual nitrogen nutrient export (kg TN/yr)	Notes on data
Cereals	1.00	**0.93**	**22.01**	Not applicable
Greenspace	1.00	**0.02**	**3.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
Totals:	**2.00**	**0.95**	**25.01**	

Nutrients from current land use

This sheet contains 2 tables. The tables are separated by a heading, which describes the following table.
Note: You will need to fill in cells B5 to B8 in the first table 'Current land use information'. You will need to fill in cells A11 to A27, and B11 to B27 in the second table 'Current land uses'. Cells B28, C11 to C28 and D11 to D28 are automatically calculated and will state '0.00' unless the user inputs have been entered. Cells E11 to E27 are automatically generated and will state 'Not applicable' depending on automatically generated data in cells C11 to C27 and D11 and D27. Row 28 is a Total Row. The Total Row states 'Totals:' in cell A28 and automatically calculates the total sum of cells B11 to B27 in cell B28, C11 to C27 in cell C28 and D11 to D27 in cell D28. Cell E28 is intentionally blank.
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The nutrient load from current land uses is shown in cells C11-C27 for total phosphorus (TP) and cells D11-D27 for total nitrogen (TN).
The total nutrient load from current land uses is shown in cell C28 for TP and D28 for TN.

Current land use information

Description of required information	Data entry column - user inputs required
Operational catchment:	Upper Stour
Soil drainage type:	Naturally wet
Annual average rainfall (mm):	700.1 - 750
Within nitrate vulnerable zone (NVZ):	Yes

Current land uses

Existing land use type(s) - user inputs required	Area (ha) - user inputs required	Annual phosphorus nutrient export (kg TP/yr)	Annual nitrogen nutrient export (kg TN/yr)	Notes on data
Cereals	1.00	**0.68**	**23.62**	Not applicable
Greenspace	1.00	**0.02**	**3.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
		0.00	**0.00**	Not applicable
Totals:	**2.00**	**0.70**	**26.62**	