

Diffuse pollution audit form

A. Business details

Farm Name	
Main Farm Code	
Business Name	
Contact Name	
Address	
Postcode	
Telephone number	
Email	

B. Catchment Characteristics

1. Approximate proportion of catchment used for intensive agriculture %
2. Other land uses
3. Predominant farming systems present
4. Soil types present
5. Is the catchment part of a Nitrate Vulnerable Zone (NVZ)? Yes No
6. Does the catchment contain oligotrophic or mesotrophic lochs? Yes No
7. Is the agricultural land drained by small watercourses? Yes No
8. Is the catchment important for spawning salmonids? Yes No
9. Does the catchment drain to designated bathing waters or other waters used for recreation? Yes No
10. Are there designated sites within the catchment (e.g. SSSI, SPA, SAC, Ramsar)? Yes No

Details (e.g. sensitivity to diffuse pollution)

11. Other known catchment sensitivities

C.2. Livestock

	Average number on farm	Movements on and off farm each year (specify whether live or dead-weights for animals sold)						
		Bought			Sold			
		No.	Age	Weight	No.	Age	Weight	
Cattle:	Cows:	Spring calving						
		Autumn calving						
	Calves:	Spring born						
		Autumn born						
		Heifers						
		Steers						
		Bulls						
	Sheep:	Ewes						
		Lambs						
		Gimmers						
		Tups						
		Pigs						
	Horses							
	Other (specify)							

General description of livestock system:

C.3. Livestock Feed

Bought-in

Type of feed	%protein	%P	%K (where possible)	Quantity

Home-produced (e.g. hay, silage, grain)

Type of feed	Quantity

C.4. Livestock Housing

Type of housing	Type of stock housed	Number of stock housed	Period of housing

Bedding

	Quantity (tonnes or number and size of bales)
Straw (bought in)	
Straw (home-produced)	

C.6. Cropping

Crop	Area	Typical yield		Chemical fertiliser inputs	Fate of crop residues (e.g. straw)	Pesticide inputs (include rates of application)	Cultivation		
		Grain	Straw / silage*				Ploughing date	Seedbed preparation	Sowing date
Winter wheat									
Winter barley									
Spring barley									
Oilseed rape									
Potatoes									
Swedes									
Grass –grazed									
Grass – silage									
Grass - hay									
Other (specify)									

* For silage, hay and straw, estimate from number and size of bales or size of silage pit

Crop rotation (if applicable):

Silage storage:

Bales

Pit

C.7. Pesticide use

Are crops monitored and spray thresholds used?

Yes

No

Sprayer LERAP Star rating

Sprayer filling location

Are buffer widths reduced using LERAPs?

Yes

No

Fate of pesticide residues and washings

Use of pesticides on stock

C.8. Irrigation

Crop	Area irrigated

Source of irrigation water

**Water storage reservoirs
(location, size etc.)**

D. Checklist for Field Survey

The following features should be recorded and marked on a map during the field survey. Some information (e.g. presence or absence of field drains) may be provided by the farmer during the interview.

D.1. Fields

- Steepness
- Slope direction
- Slope uniformity
- Drained fields
- Drainage problems
- Wet areas
- Soil erosion
- Soil structural problems
- Areas prone to flooding
- Livestock feeding areas
- Poached areas

D.2. Water Margins

- Mark all watercourses
- Presence and condition of fencing
- Width and nature of any existing buffers
- Location and condition of stock watering points
- Presence or absence of water troughs
- Bank erosion
- Vegetation indicating nutrient enrichment (e.g. nettles, docks, thistle, willowherb)

D.3. Habitats

- Semi-natural vegetation
- Opportunities for habitat creation

D.4. Other

- Silage bale stores
- Field middens
- Eroding tracks
- Any obvious point source pollution

E. Checklist for Steading Survey

The following should be noted on a sketch plan:

Drain inlets

Open watercourses

Areas producing dirty water (e.g. yards)

Areas producing clean water (e.g. roofs)

Sprayer filling area

Silage pits

Straw-bedded courts

Slatted courts

Slurry store

Fuel tanks

The condition of these features should be noted as well as their location

All areas that drain to the slurry store should be noted

F. DATA COLLECTION FOR WHOLE FARM NUTRIENT BUDGET

Name:

Farm address:

Farm code:

Tel no:

Farm type : What are your major enterprises? Please tick all relevant boxes.

- | | | | |
|---------|--------------------------|--------------------------------|--------------------------|
| Dairy | <input type="checkbox"/> | Combinable crops | <input type="checkbox"/> |
| Beef | <input type="checkbox"/> | Potatoes | <input type="checkbox"/> |
| Sheep | <input type="checkbox"/> | Vegetables | <input type="checkbox"/> |
| Pigs | <input type="checkbox"/> | Other
(please specify.....) | <input type="checkbox"/> |
| Poultry | <input type="checkbox"/> | | |

Farm area :

hectares

acres

Total area of crops (including set-aside)

Total area of rotational & permanent grass

Total area of rough grazing

12 month data collection period :

Inputs to cropped and grass parts of farm

Inputs	Product analysis	Quantity (tonnes)
Fertiliser : <i>a) crops:</i> <hr/> <i>b) grass</i>	<hr/>	<hr/>
Livestock manure/slurry/wastes: <i>a) brought-in & applied for crops</i> <hr/> <i>b) home-produced & applied for crops</i> <hr/> <i>c) brought-in & applied to grassland</i>	eg: cattle, pig, poultry (for slurry please indicate approx. dry matter content) <hr/> <hr/>	<hr/> <hr/> <hr/>
Bedding :		
Brought-in feed: (Product name)	<u>% protein</u> <u>%P</u> <u>%K</u> (where possible)	
Livestock : <u>Type of animal</u>	<u>Number</u>	<u>Weight per animal or total wt</u>
Other (please specify) :		

Outputs from cropped and grass parts of farm

Outputs	Product analysis or type	Quantity (tonnes)	
		moved-off farm	fed (on own farm)
Crops (seed/grain/roots/vegetables):			
Straw		moved-off farm	used (on-own farm)
Hay/silage		moved-off farm	
Livestock including poultry: <u>Type of animal</u>	<u>Number</u>	<u>Weight per animal or total wt (specify liveweight or deadweight)</u>	
Milk :			
Livestock manure/slurry <i>a) moved-off farm</i> <hr/> <i>b) home-produced & applied for crops</i>	eg : cattle, pig, poultry (for slurry please indicate approx. dry matter content) <hr/>	<hr/>	
Other (please specify) :			

Notes on completing whole farm nutrient budget forms

Time period : Any 12 months

Inputs to cropped and grass parts of farm:

Fertiliser : List product analysis and quantities that were bought in the 12 month period which you have chosen. If you are able to record fertiliser in stock at beginning and end of the 12 months this will help to refine your budget.

Manures : Record under Inputs the manures which have been brought-in from another farm, and the manures produced on the farm that are applied for crops. Home-produced manures that are applied for crops should also be recorded on the Output page. This will allow account to be taken of the transfer of nutrients produced on the grass part of the farm to the cropped area.

Bedding : Record bedding type and quantity which is brought-in from another farm. In addition please record approximate tonnage of straw used on farm for bedding as an input to the grass area, so that we can fine-tune outputs and inputs between crop and grass/livestock enterprises.

Brought-in feed: Only record feeds including any nutrient analysis if available and quantities of materials brought-in. Nutrient analysis of some feeds but not all are built into the spreadsheets.

Livestock : Only record number of stock brought-in during the 12 month period, and their age or weight. Liveweight will be used here, although deadweight may be used when stock are moved-off the farm. If stock brought-in are kept on the farm only for a few weeks or months, please record the time kept on the farm. A calculation may be required to calculate weight gain.

Bed and breakfast pigs : If the dung or slurry is spread on the farm, then record the number of pigs, their age when they come on to the farm and the number of weeks on the farm. The net input to the farm will then be calculated as the amount of dung produced. If the dung or slurry is not spread on the farm, ignore all the brought-in feed and pig numbers as there is no net gain or loss of nutrients for the farmed land.

Poultry layers : If the hen muck is spread on the farm, record number of layers. Net input will be calculated as the amount of muck produced.

Other : e.g. Record quantity (tonnes) of ammonia brought-in to treat straw.

Outputs from cropped and grass parts of farm :

Crops (seed/grain/roots) :

Record crop type and quantity, including whether it went for low or high N malting or feed so that we can estimate the N concentration. In addition please record the approximate tonnage of crop feed on your farm, so that we can fine-tune outputs and inputs between crop and grass/livestock enterprises.

Straw :

Record straw e.g. type of bales (size or weight) and number or total weight that is moved-off your farm. In addition please record approximate tonnage of straw used on farm for feeding or bedding, so that we can fine-tune outputs and inputs between crop and grass/livestock enterprises.

Livestock :

Only record number of stock that are moved-off the farm during the 12 month period. Stock may be recorded as liveweight or deadweight, but please specify.

If weight of livestock is not known record age of livestock on entering farm and number of weeks on the farm. A calculation of liveweight gain can then be made.

Milk:

Record protein concentration if available as well as total quantity in litres.

Livestock manure/slurry :

Record the type and quantity if moved-off the farm, but also the home produced manures and slurry which are applied for crops. This will allow account to be taken of the transfer of nutrients produced on the grass part of the farm to the cropped area.

G. Fertiliser and manure plans in NVZs

Farmers must complete the following tables creating a fertiliser and manure plan in order to comply with the Action Programmes within NVZs.

Table 2 Standard figures for total nitrogen produced as livestock excreta

Stock Unit	Number of livestock units	Total N produced by 1 stock unit (kg/year)	Total N from all these animals (kg/year)
1 Dairy Cow (650 kg)		X 116 =	
1 Dairy Cow (550 kg)		X 96 =	
1 Dairy Cow (450 kg)		X 76 =	
1 Dairy heifer replacement over 24 months (500 kg)		X 58 =	
1 Suckler Cow		X 58 =	
1 Cattle grower/fattener over 24 months (500 kg)		X 58 =	
1 Cattle grower/fattener 12-24 months (400 kg)		X 47 =	
1 Young cattle 6-12 months ¹		X 12 =	
1 Bull beef cattle 6-13.5 months		X 23 =	
1 Calf (to 6 months) ¹		X 7 =	
1 Bull for breeding (1350 kg, alter figures for breed)		X 58 =	
1 Sheep		X 9 =	
1 Fattening Lamb 6-12 months ¹		X 3.2 =	
1 Fattening Lamb 0-6 months ¹		X 1.2 =	
1 Breeding Sow place (includes piglets to 3.5 weeks) ²		X 19.5 =	
1 Maiden gilt place ²		X 13 =	
1 Boar place		X 16 =	
For pigs fattened from 3.5 weeks			
- Number of pigs finished at 7.5 weeks/18 kg ³		X 0.28 =	
- Number of pigs finished at 11 weeks/35 kg ³		X 0.77 =	
- Number of pigs finished at 20 weeks/85 kg ³		X 2.5 =	
- Number of pigs finished at 23 weeks/105 kg ³		X 3.36 =	
For pigs fattened from 7.5 weeks:			
- Number of pigs finished at 11 weeks/35 kg ³		X 0.49 =	
- Number of pigs finished at 20 weeks/85 kg ³		X 2.22 =	
- Number of pigs finished at 23 weeks/105 kg ³		X 3.08 =	
1000 Laying Hens (98% occupancy)		X 660 =	
1000 Broiler Places (76% occupancy)		X 495 =	
1000 Broiler Breeder (77% occupancy)		X 975 =	
1000 Pullets (38% occupancy)		X 125 =	
1000 Male Turkeys Places (140 days) ⁴		X 1390 =	
1000 Female Turkeys Places (120 days) ⁵		X 650 =	
1000 Fattening Duck Places (50 days) ⁶		X 900 =	
1 Horse		X 50	
		Total N produced =	

¹ Presumes kept for only 6 months.

² Average number on unit at any time during the year.

³ Total number normally finished in a year assuming pigs are on the farm from 3.5 week or 7.5 weeks. Figures for pigs finished after import at other ages can be calculated by subtraction. E.g. if pigs are imported at 3.5 kg and kept until 105 kg subtract total N produced by pigs finished at 35 kg (0.77) from total N produced by pigs finished at 105 kg (3.36) and use the figure of 2.59 in column 3.

⁴ Male turkeys, assuming 2.1 crops per year; 80% occupancy.

⁵ Female turkeys, assuming 2.4 crops per year; 80% occupancy.

⁶ Ducks, assumes 8.5 occupancy.

Include cockerels, drakes etc in hen/duck numbers.

