



NMP Online – User Update 6.1 – Revised January 5th 2017

GLAS NMP guidelines

1. Previous Information

- Link to all NMP documentation is available at <https://www.teagasc.ie/environment/soil/nmp/>
- GLAS Bulletin 4 - Frequently asked questions on GLAS NMP's:
https://www.teagasc.ie/media/website/environment/soil/Bulletin-4_answers-to-common-NMP-queries_updated-27.10.2016.pdf
- GLAS Bulletin 5 - Use Plan Safety in NMP online:
https://www.teagasc.ie/media/website/environment/soil/Bulletin-5_Plan-Safety-option_updated.pdf
- GLAS Bulletin 14 and GLAS maps for Teagasc Clients
- Soil Fertility information is available at <https://www.teagasc.ie/crops/soil--soil-fertility/>

2. Recent Clarifications

Nutrient Management Planning Submission

Tranche 1

DAFM have confirmed that they see no requirement for an extension of the deadline dates for the submission of GLAS Tranche 1 NMPs based on the requirements from the scheme Terms and Conditions – see table below

Nutrient Management Plan not prepared by end of 1st full calendar year in the scheme.	No further GLAS payment will issue until NMP completed
Nutrient Management Plan not prepared by end of 2nd full year in the scheme	Rejection from GLAS and claw-back of all GLAS monies received to date

The Department have confirmed that no further payments will be made to Tranche 1 participants after Dec 31 2016 until an NMP has been submitted. However, on submission outstanding payments will be processed immediately. To avoid delays in payments, potential difficulties arising from inspections and risk of rejection from GLAS, all GLAS Tranche 1 NMPs should be completed and submitted as soon as possible (subject to availability of submit button)

Tranche 2

The initial deadline of 31 March 2017 for Tranche 2 GLAS NMPs should be adhered to. The deadline for receipt in relation to Rejection from GLAS is 31-12-2017 (as in Tranche 1)

3. Other Clarifications

Recent clarification from DAFM in relation to LIPP, organic manures and P index 1 or 2 soils is below.

"Manure produced by grazing livestock on a holding may be applied to Index 4 soils on that holding in a situation where there is a surplus of such manure remaining after the phosphorus fertilisation needs of all crops on soils at phosphorus indices 1, 2 or 3 on the holding have been met by the use only of such manure produced on the holding."

It is acceptable for an adviser to indicate that crop requirement for LIPP and THM are satisfied by a Zero or very low application of organic manure on these plots. This is acceptable even where these plots are at index 1 or 2 and where manures have subsequently to be allocated to P index 3 even P index 4 soils. In other words it is within the rights of the planner to say that LIPP and THM have no requirement for organic manures.

Q. Do LIPP lands that are Islands have to be soil sampled where there is no possible access with machinery (no access via road/bridge)?

David Buckley DAFM - These can be described as mountain land/rough grazing meaning it does not have to be sampled assuming that is what it is and is not in receipt of fertiliser.

Q. We also have instances of LIPP land that is untrafficable and does this need to be soil sampled for the GLAS NMP?

David Buckley DAFM - Yes for the reasons set out in the bullet point directly below.

Q. Trafficable grassland which receives no applied chemical/organic fertiliser - can the farmer opt to not soil sample this area as this would only give them additional chemical n and p which wouldn't be used.

David Buckley DAFM - Must sample. GLAS Advisor can still allocate Zero chemical N and P. No issue with creating the crop type Grassland- Zero chemical N and P. Organic fertilisers may still be applied to these areas.

4. Preparing Plans - MAPS

- Where a farm has no organic manures produced during the winter period the adviser can replace Map 3 – Soil P and Organic Manure Map with a map showing a P Colour layer and Chemical Fertilisers labels.
- Where farms have high P status soils and lower K status soils then the adviser may consider modifying map 3 to Soil K colour layer and Organic manures label (or if no organic manures produced on the holding create a K colour layer map with Chemical Fertiliser label).

5. Dilution

- In the Slurry Summary page there is a new feature “Dilution factor – Dilutes added to Slurry” and in the Farm Yard Manure page there is a Nutrient Adjustment Factor. These were added to tackle two issues which led to an inaccurate estimate of the nutrient values of cattle slurry and Farm Yard Manure. Dilutes added to slurry also includes rainfall on open tanks but does not appear in “Total Slurry Produced”

Slurry - Slurry Storage Balance					
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Farm Slurry Storage Balance					
Slurry Produced (Animals)	A	200.2	m ³	44037.8	Gallons
Slurry Produced (Dirty Yards)	B	122.4	m ³	26924.2	Gallons
Slurry Produced (FYM Seepage)	C	0.0	m ³	0.0	Gallons
Slurry Produced (Dairy Washings)	D	0.0	m ³	0.0	Gallons
Total Slurry Produced	E=A+B+C+D	322.6	m ³	70962.0	Gallons
Dilutes Added to Slurry	F=B+C+D	122.4	m ³		
Dilution factor	G = A/E	0.6	%		
Total Available Net Storage		387.2	m ³	85172.0	Gallons
Surplus Storage Available		64.6	m ³	14210.0	Gallons
Advisor notes			Farmer notes		

6. Slurry

There are two calculations in the system for the nutrient value of slurry.

- From a regulatory/Nitrates perspective (on the land and fert max page) the calculation of nutrient's in slurry is calculated as follows

Nutrients in Slurry = Nutrients / Year * Storage Period in Weeks (dependent on zone or county that the farm is located in) / 52 (weeks)

e.g. = (85 * 16) / 52

This value is used in the calculating the amount of chemical fertiliser a farmer can use.

- However from a Nutrient Management perspective the calculation is based on

Nutrients in Slurry = Volume of Slurry * Nutrient Composition of the Slurry

The volume of slurry needs to be computed to calculate

- The storage requirement under Manure storage Capacity (not Required for GLAS)
- The amount of slurry to be spread

In calculating the volume of slurry; the NMP system has the capacity to make a reasonably accurate estimate based on the following components

Source	Included Y/N or Maybe included in NMP online
Neat Slurry from Animals	Y Included based on Animal type and winter housing criteria
Dairy Wash	Is Dairy wash and Collecting yard wash completed and if going to slurry is the storing method
Dirty Yards	If dirty yards entered under Slurry Produced
FYM Seepage	For L and M Straw usage Dependent on animal type
FYM Heap Seepage	If unroofed FYM Heaps entered
Rainwater entering Open slurry Tanks	Maybe - Included automatically if open slurry tanks inputted into NMP online and the figures appear under "Dilutes added to Slurry"

Because of the amount of water / dilutant entering the slurry, the nutrient value of the slurry can be quite different from the book value of a neat slurry (default values). This could lead to significant inaccuracy in nutrient advice. For this reason we have included options in NMP online which will allow you to be reasonably accurate in setting the nutrient value of slurry on the farm.

There are 3 types of cattle slurry listed in the plan. These are

- Cattle Slurry – Composition based on a calculation of slurry and additional water/seepage adding to the slurry. The dilution factor is based on the calculation shown in the table above and where the "Manure Storage Capacity" optional setting has been selected and completed
- Cattle Slurry 7% - Composition based on assumption of Low/ Medium additional water and seepage adding to the slurry where the "Manure Storage Capacity" optional setting has been not been selected.
- Cattle Slurry 3% - Composition based on an assumption of High additional water/seepage adding to the slurry where the "Manure Storage Capacity" optional setting has been not been selected.

The choice of which type of cattle slurry the user selects on the organic manures page depends on the plan you are completing

GLAS Plans and Non-Derogation NMP's

For GLAS and Non Derogation plans the "Manure Storage Capacity" and full winter facilities are normally not fully entered

Use "Cattle Slurry" when

- A detailed plan including storage capacity is not completed but you estimate a very low volume of additional water and seepage adding to the slurry
- A detailed plan including storage capacity is completed. In this case the dilution factor is calculated and automatically used in determining nutrient content for application

- In this situation the volume of slurry spread should **slightly exceed** the available amount shown.

Use “Cattle Slurry 7%” when

- A detailed plan including storage capacity is not completed but you estimate a Low/ Medium volume of additional water and seepage adding to the slurry
- In this situation the volume of slurry spread should **slightly exceed** the available amount shown.

Use “Cattle Slurry 3%” when

- A detailed plan including storage capacity is not completed but you estimate a high volume of additional water and seepage is adding to the slurry
- In this situation the volume of slurry spread should **significantly exceed** the available amount shown.

You as the user need to decide which is most appropriate on an individual plan basis.

Derogation Plans

For a derogation plan where winter storage details are entered the dilution effect is calculated by the system and “Cattle Slurry” should be used.

7. Farm Yard Manure.

Where there is Farmyard Manure (FYM) on a farm there is an additional issue to be addressed, as the figures for volumes produced and nutrient content from the Nitrates Directive Statutory Instrument (SI) and accepted default figures simply do not add up. This leads to a nutrient value applied to crops far in excess of what is available. In particular at Medium and High Straw the calculated nutrient content is substantially higher than the combination of the manures produced by the animal and straw. To rectify a multiplier is applied and there is no requirement for user intervention as **the system handles the calculation.**

8. Comments and Queries

- Q On the fertiliser programme page what are the limits of Organic fertilisers that can be applied per Ha or per Acre – on the right hand side.

This is a calculation of the total organic N applied in manures on a per hectare basis. The regulation states that this figure should not exceed 250 kg/ha on a derogation farm or 170 Kg on a non-derogation farm. (Foot note to Tables 12 & 13). This equates to the following max application of manures for derogation farmers. However, the amounts listed below may be beyond what is practical for a particular crop type and are likely to lead to excess application of individual nutrients.

Organic fertiliser	N Content	Non- Derogation		Derogation	
		Gals/acre	t/ha	Gals/acre	t/ha
Cattle Slurry (SI spec)	5	3000	34	4400	50

Dilute Cattle Slurry (7% DM)	2.7	5600	63	8200	93
Very Dilute Cattle Slurry (3% DM)	1.3	11600	131	17000	192
Soiled Water	0.6	25100	283	37100	417
FYM (SI spec)	4.5	3300	38	4900	56
Pig Slurry	4.2	3500	40	5300	60
Poultry Slurry	13.7	1000	12	1600	18
Broiler litter	11	N/A	15	N/A	23
Layers Litter	23	N/A	7	N/A	11
Turkey manure	28	N/A	6	N/A	9
SMC	8	N/A	21	N/A	31

It is recommended that the amount specified for application would be based on the soil fertility status, nutrient advice and best practice in relation to Nitrates (buffer zones etc), with particular emphasis on avoiding repeated applications of excess amounts of P & K

Q. I have a few plans where N & P are exceeding the recommended and SI on a field basis but not on a farm basis.

A. The maximum chemical N and P are calculated on a whole farm basis for the Nitrates Directive For grassland the Nitrates limits are an average; whilst on certain crops e.g. 2 cut silage the off takes and build-up requirement, may be significantly higher than on grazing ground where a significant amount of nutrient is returned in the form of dung and urine. The green book recommendations backing up NMP online reflect this. On an individual plot basis the recommendations for crops with high offtakes will exceed the SI grassland limits.

For tillage crops the SI figures and the recommendations are for the most part the same and users are recommended not to go above the limits/nutrient advice for tillage crops. From a practical perspective users may recommend minor amounts above the recommended (but never exceed the “Max Chemical Allowed” for the whole farm.

Do not exceed the chemical usage for GLAS Area based actions with chemical N restrictions – See Appendix 1

Q. If I allocate all the chemical P under “Nutrient Advice” recommended on certain plans I will go above the maximum chemical allowed – Is this permitted?

A. **Absolutely NOT.** The maximum N and P are calculated on a whole farm basis. However a number of factors affect the maximum amount of Chemical N and P

- Level of Concentrate usage
- Import (or export) of organic manure
- Where organic manure is spread (50% availability assumed on index 1 and 2)

Where meal usage is high the maximum Chemical P allowed is reduced accordingly. In this scenario the extra P is considered to be in in the Manure and/or spread back on the land by grazing livestock. In this case the planner will need to adjust back the chemical P as appropriate from the recommended level and decide; which are the priority areas to receive chemical P based on off-takes. In summary what you need to do is consider where the P in concentrates going is and focus chemical P on areas where it is not being returned.

Q Nutrient advice and Nutrient applied figures going into the red – Is this a problem

A On an individual plot basis it would be almost impossible to keep all figures out of the red. The red figures should be used as a guide but in general it would not be recommended to go over the recommendation by a substantial amount. Preparing a plan is about coming up with a practical plan for the farmer within the overall limits in a way that reflects his fertiliser allocation patterns. For example, a farmer using CAN and Pasture sward only on a plot is unlikely to change to use 4 or 5 different products to exactly meet the fertiliser requirement of that plot. However, where current practice is not adequate to meet requirements then incremental change should be recommended, for example introducing a compound that better reflects the needs of the farm.

Q. When can GLAS NMP's be submitted to DAFM?

A. This facility is currently unavailable and there is a button "Submit to DAFM but this will not allow submission at this stage and we will alert users when this is working.

Q. What updates/improvements to NMP online have taken place in recent weeks?

- Reports are now printing the chemical fertiliser and the fertiliser plan
- Crop Yield adjustments for Tillage crops are operating correctly
- FYM from Horses and non-bovine/ovine is now calculating in the system
- Slurry from sheep on slats is now calculating
- Check out section above on Dilution and slurry

Q. How should former REPS 4 habitats which are now designated landscape features under BPS be dealt with?

A. Former REPS 4A habitats which have been designated as Landscape Features – use crop type: REPS 4A Habitat (BPS Designated Landscape Feature)"

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Appendix 1 Nutrient Management Planning

GLAS Actions and Habitat Grasslands – C. Keena 7th December 2016

GLAS CROP	GLAS Limits	NMP Online Recommendations	
Low Input Permanent Pasture	40 kgs chemical N / ha No restriction on slurry , P and K (other than S.I. No. 610 of 2010)	40 kgs N / ha P.K.: Offtakes only. No build-up. See Note 1	
Traditional Hay Meadows	40 kgs chemical N / ha No restriction on slurry , P and K (other than S.I. No. 610 of 2010)	40 kgs N / ha P.K.: Offtakes only. No build-up. See Note 1	
Farmland Birds	Breeding Wader and Curlew	No Fertiliser allowed None	
	Chough	40 kgs chemical N / ha No restriction on slurry , P and K (other than S.I. No. 610 of 2010)	40 kgs N / ha P.K.: Offtakes only. No build-up. See Note 1
	Corncrake	30kgs chemical N / ha No restriction on slurry , P and K (other than S.I. No. 610 of 2010)	30 kgs N / ha P.K: Offtakes only. No build-up. See Note 1
	Geese and Swans	No fertiliser restriction (other than S.I. No. 610 of 2010)	As normal grassland No separate crop type in NMP online - use existing field crop type
	Hen Harrier	40 kgs chemical N / ha No restriction on slurry , P and K (other than S.I. No. 610 of 2010)	40 kgs N / ha P.K.: Offtakes only. No build-up. See Note1
	Twite A	35 kgs chemical N / ha No restriction on slurry , P and K (other than S.I. No. 610 of 2010)	35 kgs N / ha P.K.: Offtakes only. No build-up. See Note 1
	Twite C	Half rate fertiliser for cereal crop	Half rate N.P.K for Spring Oats irrespective of crop
	Grey Partridge	Half rate fertiliser for the crop	Farmers to be advised that the portion of the 12 m Grey Partridge Margin being established in any year may receive half the prescribed rate of fertiliser for Spring Oats but won't show on NMP Online. See Note 2 No separate crop type in NMP online - use existing field crop type
Riparian Margins	No fertiliser allowed	See Note 2 No separate crop type in NMP online - use existing field crop type	
Arable Margins	No fertiliser allowed	See Note 2 No separate crop type in NMP online - use existing field crop type	
Catch Crops		If Sown post 15 Aug / Not to be Grazed: No chemical N.P K allowed	

		If Sown pre 15 August AND to be Grazed: 50.12.25 kgs N.P.K / ha (except for 0 kgs P if P Index is 4)
Environmental Fallow Land	No fertiliser allowed	None
Wild Bird Cover	Half rate for a cereal crop	Half rate for Spring Oats irrespective of crop
Commonage	No fertiliser allowed.	None use GLAS Commonage Crop type
Farmland Habitat (Private Natura)		Depends on type Note 3
GLAS Rough Grazing	No fertiliser allowed.	None use GLAS Rough Grazing Crop type

Note 1. NMP on Habitat Grasslands

Where fertiliser is allowed within GLAS and the NMP Online recommends rates replacing offtakes, **if** the desired outcome is to improve the species richness of a habitat grassland, **ZERO** chemical and / or organic fertiliser may be the correct advice. Where habitat grasslands have a lower requirement than the Maximum allowed in S.I. No 31 of 2014, there is no requirement to apply slurry to these grasslands, as their phosphorus fertilisation needs may be 0 even if Index 1 for Phosphorus.

Note 2. GLAS Linear Actions

*GLAS Linear Actions (Arable Margins, Riparian Margins, Fencing Watercourses, Twite B and Grey Partridge) will not appear as separate crops in NMP Online (Use crop type for the full field). The full field area will be used to calculate fertiliser requirements (similar to riparian buffer zones in S.I. No 31 of 2014).

Note 3. GLAS Farmland Habitat (Private Natura)

Where GLAS Farmland Habitat (Private Natura) is farmed, the Crop Type entered on NMP Online will depend on the nature of the Farmland Habitat. They will fit into the existing range of Crop Types. Note Fertiliser application on Farmland Habitat (Private Natura) may be considered an Activity Requiring Consent (ARC). Where a GLAS participant wishes to undertake such an activity on a GLAS parcel, they should ensure that they obtain consent from GLAS Unit, DAFM.

ARC-12	Applying inorganic or organic fertiliser , including slurry and farmyard manure. [Consent is not required for these activities on established reseeded grassland or cultivated land provided it is greater than 20m from a river, stream or floodplain; or greater than 50m from a wetland, lake, turlough or pond.]
ARC-13	Applying lime . [Consent is not required for this activity on established reseeded grassland or cultivated land provided it is greater than 20m from a river, stream or floodplain; or greater than 50m from a wetland, lake, turlough or pond.]