NMP Online User Update

Issue 24 | March 2023

Teagasc
Agriculture and Food Development Authority

NMP Online

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1. General notes

The NMP online webpage is @ https://www.teagasc.ie/environment/soil/nmp/

NMP bulletin 23 on how to extract expired soil samples reports.

NMP bulletin 22 in relation to cow banding and upcoming deadlines.

NMP bulletin 21 on Nitrates Action Programme changes from earlier in 2022 and the OSI layer 1:5,000.

NMP bulletin 20 provides a link to videos on the upgraded mapping functionality.

NMP bulletin 19 on mapping improvements.

NMP bulletin 18 may also be of interest on how to extract soil sample data

The GAP Regulation was updated in March 2022 (SI 113/2022) and can be located @ https://www.irishstatutebook.ie/eli/2022/si/113/made/en/print

There was an amendment to the GAP regulation in July (SI 393/2022), which can be located @ https://www.irishstatutebook.ie/eli/2022/si/393/made/en/print

There was a further amendment to the GAP regulations in December (SI 716/2022), which can be located @ https://www.irishstatutebook.ie/eli/2022/si/716/made/en/print

2. Dairy Cow Banding

DAFM have introduced cow banding from 2023 onwards. This was outlined in bulletin 22 and is summarised in table 6 below of S.I 113 2022.

Table 6 Annual nutrient excretion rates for livestock

Livestock type	Total Nitrogen kg/year	Total Phosphorus kg/year
Dairy cow[7] (2022 only)	89	13
Dairy cow band 1[8] (from 2023)	80	12
Dairy cow band 2[9] (from 2023)	92	13.6
Dairy cow band 3[10] (from 2023)	106	15.8

In 2022, NMP Online was setup to account for the introduction of the three new cow types coming online in 2023. There are plans in the system that were setup using the new cow type. With the current upgrade, the selected cow will remain as selected in these plans. In 2022 plans, the only cow that should appear is Dairy cow with an 89kgs N/hd. Users had the ability to select any of the three new cow types in 2022 plans to help project forward into 2023 the WFSR (Whole Farm Stocking Rate kgs N/ha). These three new cow types cannot be used in any 2022 plan for DAFM compliance purposes.

There are also 2023 plans where the 89 cow was selected, before this current upgrade. The 89 cow is only valid for 2021 and 2022. With this upgrade if your plan has the 89 cow selected, you are prompted

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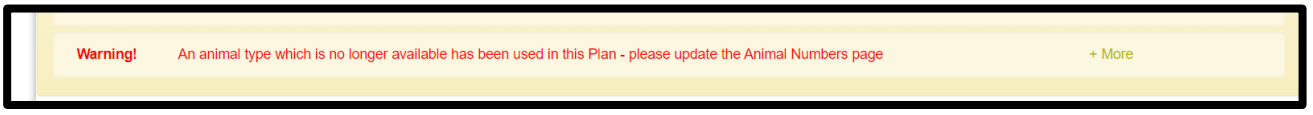
to update this cow type and this may selecting a different cow type in animal number Livestock type. The appropriate cow band should be selected for all dairy farms as per DAFM letter to farmers https://assets.gov.ie/248805/6d8a0ca7-4545-4f90-ad80-11c68c87aeb7.pdf

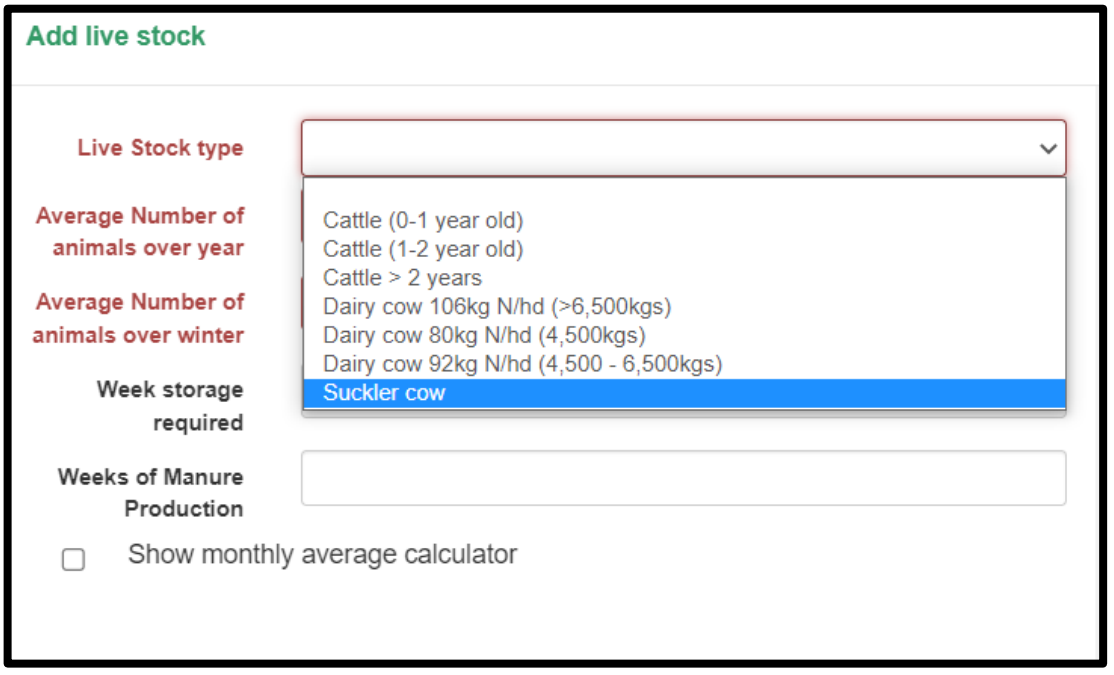
As per the image below taken from a 2023 plan, the dairy cow row of data is in pink because the 89 cow is selected.

Animal	No. Animals	N/head
Dairy cow	30	89.0
Cattle > 2 years	5	65.0
Cattle (1-2 year old)	22	57.0
Cattle (0-1 year old)	27	24.0

A warning will also be made visible in the warning section. This will lock down the reports until the correct dairy cow for 2023 is selected.



In new plans from 2023 onwards, the 89 cow will no longer be available for selection. As per the image below, you will be presented with the 80, 92 and 106 kg cow.



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As per table 6 section two above (taken from SI 113) that three additional cow bands have been added.

Cow 1: 80kg N/hd/year and 12kg P/hd/year

Cow 2: 92kg N/hd/year and 13.60kg P/hd/year

Cow 3: 106kg N/hd/year and 15.80kg P/hd/year

3. Dairy cow washings

Dairy cow washings and associated calculations will apply 30 litres/cow/day. It will also use DAFM calculation methodology for 21 or 31 days (depending on relevant year) which will ensure there is greater compliance with potential DAFM inspections.

DAFM have clarified that where dairy soiled water is managed and stored independently, that DAFM use the maximum number of cows present in the inspection year because the regulations stipulate a minimum period for the storage of this material. Dairy soiled water is produced all year round save for when cows are dried off.

However, where soiled water is managed and stored with slurry, it is thus treated with slurry. As such, DAFM use average numbers over the assessed winter, i.e. the previous winter; to determine compliance with over-all storage.

Three options

1. 21 or 31 days standalone soiled water storage depending on year and Dairy System type.
2. Cow days for late lactation cows (Steps 1 and 2 below)
3. 16 weeks autumn calves / cows milked through Step 3 in example 1, below

Q. If soiled water is stored in a separate soiled water tank but that tank does not meet 21 or 31 day storage for soiled water, how is this treated during an inspection.

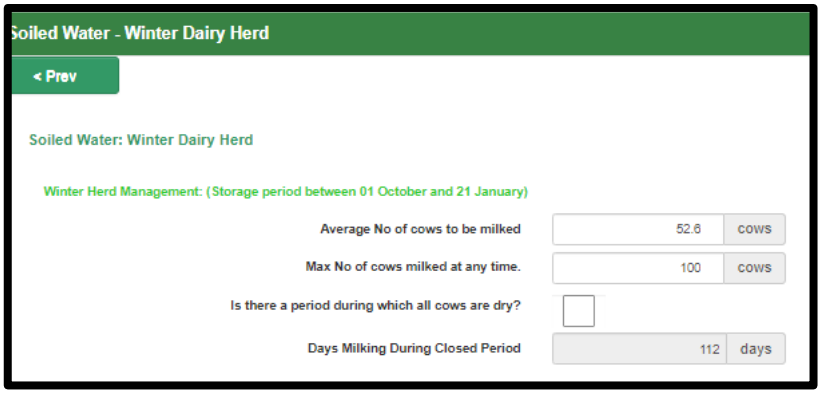
DAFM Response Soiled water storage systems are not interchangeable with long-term storage where a holding does not have the minimum statutory storage requirement in place for soiled water (in days). The holding is deemed ineligible for short-term soiled water storage. As such all soiled water produced on the holding is treated as slurry and is calculated as long-term storage and added to long-term storage.

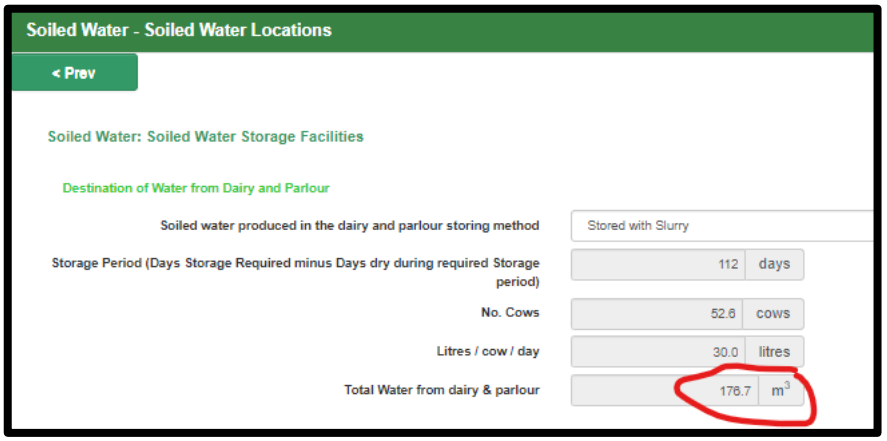
Example 1 - Dairy washings stored with slurry and some cows milked through:-

100 cows spring calving herd in Co. Cork with 10 empty cows milked through the winter months. All dairy soiled water (DSW) collected with slurry. The 90 cows are dried off over the period 15th to 30th November.

- STEP 1: 90 cows milked between 1st Oct and 14th Nov = 45 days x 90 cows = 4050 cow days x 0.03m^3 DSW per day = 121.5m^3 DSW
- STEP 2: 90 cows/ 2 milked between 15th Nov and 30th Nov = 16 days x 45 cows = 720 cows days x 0.03m3 DSW per day = 21.6m3 DSW
- STEP 3: 10 cows x 16 weeks x 0.21m3 DSW per week = 33.6m^3
- Total DSW storage requirement of 176.7m^3
- If there is a collection yard (10 x 10), its dirty all winter (because of the 10 cows). So its 100m^2 x 0.037 (rainfall/week) x 16 weeks = 59.2m^3 extra required.
- These figures are added to the required slurry figures for animal slurry, as all material is stored as slurry.

To calculate the average cow numbers, above and to get the same results in NMP online, add the cow days; in Step 1 and Step 2 = 4,770. Divide this by the 112 cows days (16 week zone Cork) = 42.59 and then added the 10 cows there for the full winter and total = 52.60. Some cows milked through; insert the average number of cows to be milked to match the 52.60 cow days calculated above, and do not tick "Is there a period during which all cows are dry". See yellow shaded text above and red-circled text below with the same result.





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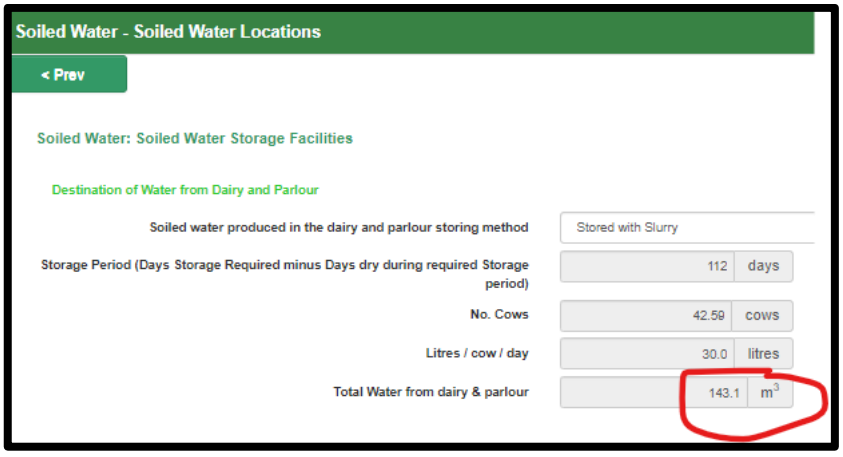
Example 1A - Where dairy washings are stored with slurry and there is a dry period.

100 cows spring calving herd in Co. Cork with no cows milked through the winter months. All dairy soiled water (DSW) collected with slurry. Ten cows sold before 1st October. The remaining 90 cows are dried off over the period 15th to 30th November.

- STEP 1: 90 cows milked between 1st Oct and 14th Nov = 45 days x 90 cows = 4050 cow days x 0.03m^3 DSW per day = 121.5m^3 DSW
- STEP 2: 90 cows/ 2 milked between 15th Nov and 30th Nov = 16 days x 45 cows = 720 cows days x 0.03m3 DSW per day = 21.6m3 DSW
- Total DSW storage requirement of 143.10m^3

To calculate the average cow numbers, above and to get the same results in NMP online, add the cow days; in Step 1 and Step 2 = 4,770. Divide this by the 112 cows days (16 week zone Cork) = 42.59. Insert the average number of cows to be milked to match the 52.60 cow days calculated above, and do not tick "Is there a period during which all cows are dry". See yellow shaded text above and red-circled text below with the same result.



Example 2- Stand-alone dairy washings storage:-

- Where dairy soiled water is managed and stored independently, then it's the maximum number of cows (not average) at any one time x 21 days (moving to 31 days in 2024) x 30L/cow/day. In addition, the 30L per cow figure is subject to review this year and may change.
- The 21 days storage requirement will be inspected from autumn 2023.
- Where dairy soiled water is managed and stored independently then the minimum 21 or 31 day storage requirement must be available all year round.

100 dairy cows and dried off the 1st December and start milking the 20th January. Winter of 2023/2024 so closed period starts 1st October 2022, End of the 16 weeks is 21st January. Dairy washings stored in a separate tank.

- 100 dairy cows x 16 weeks x 0.33m3/cow/week = 528m^3 separate slurry requirement.
- For 2023 - 100 cows x **21 days** x 30 litres/cow/day (0.21m^3 DSW per week) = 63m^3 dairy soiled water tank requirement.

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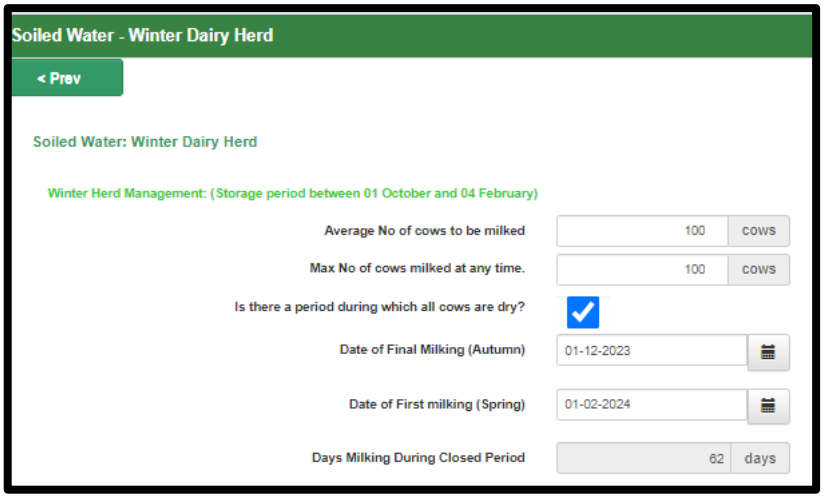
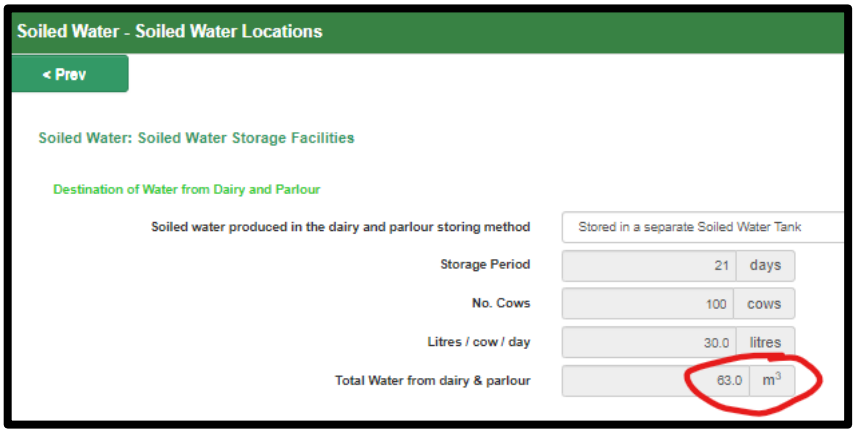
- For 2024 - 100 cows **x 31 days** x 30 litres/cow/day (0.21m^3 DSW per week) = 93m^3 soiled water tank requirement.
- See example below from the Winter Dairy Herd where DSW is stored in standalone tanks (key figure is the "Max No. of cows milked at any time" as this drives the storage requirements. See yellow shaded text above and red-circled text below with the same result.

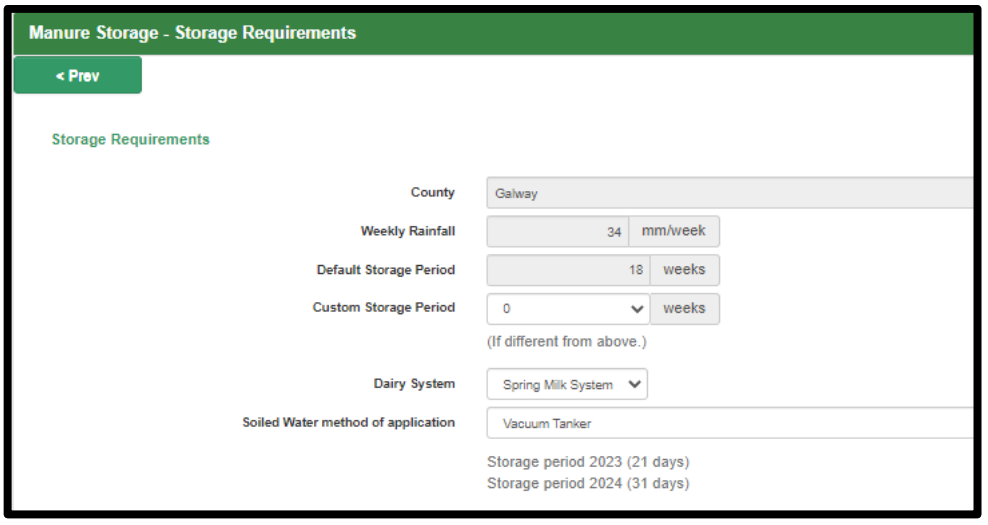




4. Dairy washings storage update

As per the updated SI the storage requirement for 21 or 31 days storage is being adjusted based on year of selection. Storage requirements are based on the peak number of cows milked in a given year by 30 litres/cow/day.

This page below (Manure Storage – Storage Requirements); now contains a dropdown so the user can select the Dairy System; Spring or Liquid Milk System, that will drive the storage period for 2023 plan years onwards.



5. Closed period changes and stored with slurry

If dairy washings are stored with slurry, the system will now take into account the implications on these calculations.

6. Plan summary layout and WFSR

DAFM changes on stocking rate calculations changed in 2022 to take account of projected WFSR and the imports in the same calendar year. Therefore, we have changed the layout of plan summary to make this easier to comprehend. See example below. The reports will also change to reflect this.

7. Soil sample update

In Land Set–up, the functionality to edit/change soil samples when a plot has been resampled (attaching a new soil sample to plots and taking the old sample off the same plot); is being improved to allow users to do so more efficiently. All of the updated soil samples are now visible at the top of the list of samples. As the user update the samples, they will be visible in the order that they were updated. The user will no longer have to search and update.

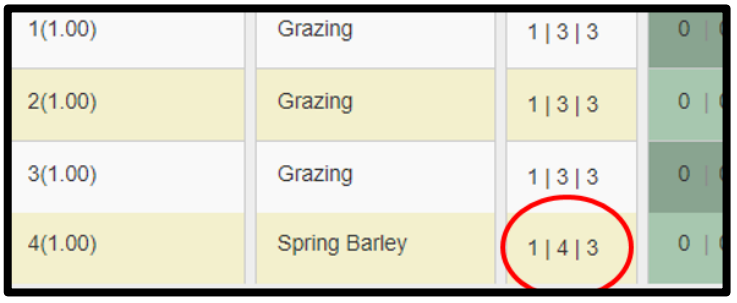
									Trace Elements					
	Sample Id	Sample Code	Sample Date	Sampled Area (ha)	pH	Lime Req	P Value	K Value	Soil Type	Mg	Cu	ER Mn	Zn	Bo
	11	11	02/03/2023	5.0	7.0	0.0	4.4	42.7	Clay	0.0	0.0	0.0	0.0	0.0
	10	10	02/03/2023	2.0	7.7	0.0	5.4	56.6	Clay	0.0	0.0	0.0	0.0	0.0
	7	7	02/03/2023	2.6	6.0	0.0	4.9	231.0	Clay	0.0	0.0	0.0	0.0	0.0
	9	null	02/02/2018	4.5	6.8	0.0	6.1	43.1	Clay	0.0	0.0	0.0	0.0	0.0
	8	8	02/02/2018	2.7	6.6	0.0	5.8	116.0	Clay	0.0	0.0	0.0	0.0	0.0
	6	6	02/02/2018	2.9	6.4	0.0	5.9	119.0	Clay	0.0	0.0	0.0	0.0	0.0
	5	5	02/02/2018	4.1	6.3	0.0	8.0	269.0	Clay	0.0	0.0	0.0	0.0	0.0
	4	4	02/02/2018	3.2	6.6	0.0	2.4	110.0	Clay	0.0	0.0	0.0	0.0	0.0
	3	3	02/02/2018	3.8	6.5	0.0	1.5	157.0	Clay	0.0	0.0	0.0	0.0	0.0
	2	2	02/02/2018	3.1	6.2	0.0	2.5	118.0	Clay	0.0	0.0	0.0	0.0	0.0

There is a 5ha limit for soil samples for all NMP's, a new warning will appear for a plan if the soil sample is applied to a plan that has exceeded 5ha.

8. No soil samples to P4

Farms without soil samples and with a GSR > 170 and 130 kgs/N/Ha have to default to P3 and P4 for 2022 and 2023 plan years respectively. This is now automated with and it will also occur for all tillage ground with no soil samples for 2023 NMP's onwards

In the example; below no soil sample is attached to the Spring Barley crop and it is automatically pushed to P 4. The same will happen to grassland crops with a GSR > 170 and 130 kgs/N/Ha have to default to P3 and P4 for 2022 and 2023 plan years respectively.



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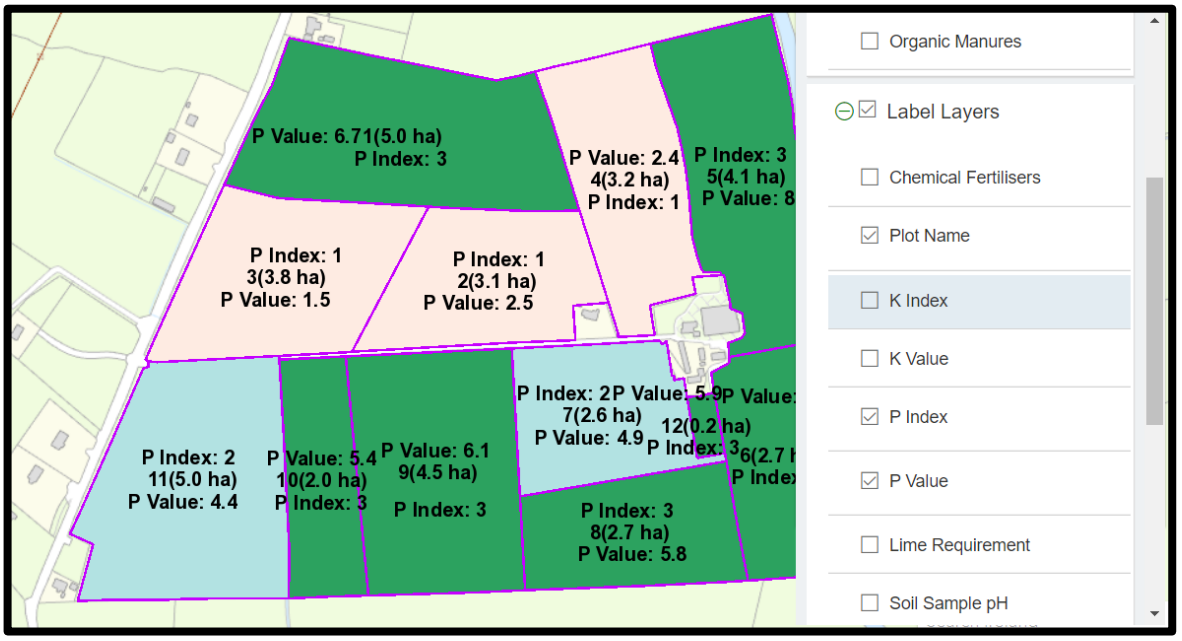
9. P & K layers

Following suggestions from users, the NMP system will show the existing colour layer with P and K index and/or P and K results on the maps. In the example below, you can see that the colour layer for P is selected, and both the P Value and the P Index is selected in the label layers. All of the selected items will display on the map that can then be shared with the client. These options are also available for K values.



10. Organic Fertiliser Page

Users will notice that the total P in Manure is difficult to apply fully. The P in slurry has been reduced from 0.8kg P/m3 to 0.5kg p/m3. The below table explains this change and how to approach the Organic fertiliser page.

Manure Allocations

Fertiliser	Estimated T	Applied T	Balance T
Cattle Slurry	277	282	0
Total P in Manures (Grazing + Non-Grazing 199.0)			199
Manure P allocated			141
Manure P remaining			58
Total Manure P on Index 1&2			141
Total Manure P on Index 3&4			58
Total Available P (kg)			128

The advice is to have the applied figure about 10% in excess of the estimated tonnage for home produced manures (extraneous water etc.); and exactly the same Tonnage for imported manures. Once this is done there will probably be "Manure P remaining". This is ok due to the changes outlined below. Cannot spread manure that is not produced.

This section in NMP online is causing some confusion as the figures circled in red have changed slightly when comparing early 2022 NMP's and plan created late in 2022. The reason for this is the change in Cattle slurry N/m3 from 5.0kgs N/m3 (up to 11th March 2022) to 2.4kgs N/m3 (from 11th March 2022 onwards).

The figure of Total Manure P on Index 1&2, 3&4 will also change in these plans. Due to the changes in Cattle slurry P/m3 from 0/80kgs N/m3 (up to 28th July 2022) to 0.50kgs N/m3 (from 11th March 2022 onwards).

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11. Top Tips

- Use Chrome as your browser
- Delete your cache and cookies
- Turn off “Plan Safety” unless doing a set of records for a farm that was >170 kg N/ha WFSR and didn’t apply for a derogation
- Do not forget if updating plans. You will need to review fertiliser advice due to the 10% cut in N
- If you leave the NMP Online screen idle for a period be sure to hit refresh/F5
- If you have any questions contact the NMP Helpdesk

Contact the Helpdesk by email or phone

NMPHelpdesk@teagasc.ie

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