

Farming Advice Service Nitrate Vulnerable Zone (NVZ) 2020 webinar: question and answer document

The NVZ guidance for England can be found [here](#)

Question	Answer
<p>1. Will there be any changes to the NVZ rules after Brexit?</p>	<p>The findings of the post implementation review of the Nitrates Regulations is expected to be published in 2021. Furthermore, the Secretary of State recently announced the intention for a reformed regulatory regime for agriculture following agricultural transition. From 2021, Defra will start looking at how to improve the existing rules and processes, including those covered by the Nitrates Regulations taking into account recommendations from this review. Defra will be consulting on this new regulatory approach early in the agriculture transition, working in partnership with the sector to achieve regulations that are fair, clear and effective.</p>
<p>2. How long can you keep a FYM field heap in the same place?</p>	<p>You must move a temporary field heap at least every 12 months and leave a 2 year gap before returning to the same site.</p>
<p>3. What records are required to be kept to comply with the NVZ Regulations in case of inspection?</p>	<p>A summary of what is required is:</p> <ul style="list-style-type: none"> • a farm risk map (if organic manure is spread on the farm) • a livestock manure nitrogen farm limit calculation • a storage calculation (for farms that deal with slurry and poultry manure) • a nitrogen plan for all crops in all fields showing that you have taken account of: <ul style="list-style-type: none"> ○ the nitrogen in the soil ○ the nitrogen the crop requires ○ the crop available nitrogen applied from organic manures (if applicable) ○ the amount of nitrogen required from manufactured fertiliser • field records showing crop type, drilling date, actual applications of nitrogen from organic manure and manufactured fertiliser applications • N-max limit calculation (for those farms where more N than N-max has been applied to any field) to demonstrate your compliance with the N-max limits. <p>Briony produced a handy NVZ record keeping guide with Catchment Sensitive Farming (CSF) and Wessex Water. Please also refer to the NVZ pages on GOV.UK.</p>
<p>4. What time of year should I undertake NVZ record update?</p>	<p>Farm risk maps should be updated within 3 months of any change. Livestock Manure Nitrogen Farm Limit calculation should be completed annually in arrears by 30th April each year at the latest. Slurry storage calculation needs updating within 1 week of any changes and within 1 month of livestock being introduced to your farm for the first time. Nitrogen plan needs to be completed before any</p>

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	<p>nitrogen is applied to a crop that has been drilled or to a field intended to be planted. For permeant grassland make a plan based on a farming year starting 1 January. Field records need updating throughout the year and within a week of any applications of organic manure or manufactured fertiliser.</p>
<p>5. I am drawing up a new NVZ map, do you have any useful tips?</p>	<p>You must make a risk map and keep it with your farm records if you spread organic manure on your land. You must mark on the map:</p> <ul style="list-style-type: none"> • the location of each field and its area in hectares • areas with sandy or shallow soils • land with a slope greater than 12 degrees • land drains (except if they are sealed and impermeable) • sites where you plan to use temporary field heaps to store manure • all surface waters (for example, streams or ponds) and land within 10 metres of them • all springs, wells and boreholes on your land or within 50 metres of the boundary of your land • all land within 50 metres of a spring, well or borehole • low run-off risk land (if you intend to spread to this land to reduce the amount of storage you need to provide). <p>Your risk map can be printed or drawn by hand and it doesn't need to be to scale. The CSF guide to NVZ records includes some examples of risk maps, you can also use MAGIC maps. You must update the map with any changes within 3 months of the date of the change.</p>
<p>6. Do you have any recommended templates for record keeping?</p>	<p>You may find this NVZ record keeping guide useful that Briony produced with CSF and Wessex Water. The Tried & Tested website also has useful resources.</p>
<p>7. If digestate is made from something other than FYM or slurry, e.g. food waste, is the application limit the same?</p>	<p>Digestate (for example from food waste) is still classed as an organic manure so is subject to the closed periods for High readily available N manures and the 250kgN/ha/12 month spreading rate limit. IF the digestate has NO livestock manure in then you do not need to allow for it in your livestock manure N farm limit calculation.</p>
<p>8. Regarding manure heaps, I believe it states that they shouldn't be within 10 m of a field drain, is that possible?</p>	<p>The rules do state that you must make sure your field heap is at least 10 metres from any surface water (such as a river, pond or ditch) or land drain, or 30 metres if the land slopes at 12 degrees or more. It may be the case that in certain parts of the country where land drains are common that it may not be possible to find a suitable site for a temporary field heap. In that case other storage options need to be investigated. Such as storing it in a container, in a roofed building or on an impermeable base, where you can collect and store the runoff.</p>

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<p>9. Is there any flexibility in the rules on field heaps for farmers with low stock numbers, e.g. a few horses on livery?</p>	<p>Unfortunately no, all organic manure needs to be stored safely in line with the regulations. However if the livery yard is not part of a farm, it would not be subject to NVZ storage rules, but it would be advised as good practice.</p>
<p>10. What do you recommend as calculating tool?</p>	<p>PLANET is no longer supported so will not be updated going forward. Farm software packages such as muddy boots/FarmPlan have NVZ incorporated into them.</p> <p>If you are happy using paper based calculations, you can use the CSF/Wessex Water document.</p>
<p>11. How do you do livestock N calculations if only half of your farm is in NVZ?</p>	<p>It is complicated for farms that are part in and part out of an NVZ. The official line in the regulations is that you need to demonstrate your compliance with the 170kgN/ha livestock Nitrogen Farm Limit on your land within an NVZ. There are a few options, none of which are perfect.</p> <p>1 - treat your whole farm as if it is in an NVZ and do the calculation at 170 for your whole farm.</p> <p>2 - if you have land that is not in an NVZ and it is easy to separate this from the rest of the farm you can "export" livestock manure and/or animals to this land if this is easy to record. It is good practice to ensure that any land you farm outside an NVZ does not exceed a loading of 250kgN/ha/yr . For anyone who is part in and part out of an NVZ then please seek further advice.</p>
<p>12. Please explain more about digestate from food waste, is this included in the N Loading and also the maximum of organic matter limit of 250 kg per hectare?</p>	<p>Digestate that is not derived from any livestock manure IS subject to the 250kgN/ha organic manure field limit but DOES NOT need to be counted in the livestock manure farm N limit calculation (as it does not contain livestock nitrogen).</p>
<p>13. I believe there is going to be a review of designated NVZ areas in 2021. When is that going to happen and do you get a chance to appeal if newly designated, and do they ever remove land from NVZ status.</p>	<p>The Environment Agency concluded their four yearly review of Nitrate Vulnerable Zones (NVZs) in December 2020 and advised the Secretary of State that there has been no substantive change in patterns of nitrate pollution in England, concluding the NVZs should remain the same in 2021-2024 as the final zones for the previous 2017-2020 cycle and therefore there will be no new designations. The Secretary of State has agreed with this recommendation and the relevant maps will updated to reflect the new time period.</p>
<p>14. Are the standard figures for N produced for a class of animal for a 12 month period? For example if I buy cattle in October, then sell in April, having them for 6 months, do we take 6/12ths of the standard figure?</p>	<p>I would work this by calculating the average number of animals on the farm in the year. Lets say you buy 100 2-12 month old cattle on 1 April and sell them on 30 October. Assuming that in Jan - Mar and Nov and Dec you had no cattle on the farm. The average number of cattle on the farm is 58 not 100 so multiply the standard figure for the N produced by cattle 2-12 months in the 12 months by 58 animals not 100. It is the same calculation as you have done just the other way round but will be simpler to show to an inspector as they will be expecting the standard N production figures to be used.</p>
<p>15. What is the definition of a 'site' - is it a position in a field? If so, could a heap be moved around the same field to three locations?</p>	<p>A "site" for a temporary field heap is the footprint. The regulations state therefore that as long as the field heap is moved and none of the footprint overlaps that is ok. HOWEVER the regulation is trying to reduce the risk of pollution pathways being developed both across the surface of the ground and into the soil or percolating through the soil to the groundwater. Moving the field heap to a different field</p>

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	or further away from the original site will help reduce this risk of pollution and should be done where ever possible.
<p>16. How does the 250kgN/ha relate to the 300kgN N-MAX for grassland?</p>	<p>It is simpler to think of these 2 limits separately. The 250kgN/ha/12m is a spreading rate limit for organic manures. For grassland you can apply, on average across the area of grass on the farm, 300kg of crop available N/ha from organic manures and/or manufactured fertiliser (so on some grass fields you could apply more than 300kg provided you applied less than 300 on the others). IF you applied for example 250kgN/ha of FYM, this would provide 25kg of available N (10% of total N is available) Additional nitrogen from manufactured fertiliser can be spread depending on the crop need, provided you don't exceed the N max limit which for grass is 300 kg/ha.</p>
<p>17. I have a plan, which is acceptable for Farm Assurance, but my soil analysis that I do every year, does not include N, should I include it? I don't really know what is available in my soil, especially as rain clearly changes what is available. I go on application rates for chemical fertiliser and the agronomist recommendations.</p>	<p>Testing the soil for nitrogen can be expensive and would change regularly as nitrogen is very soluble. There is an accepted "book method" for assessing the nitrogen in the soil. Please refer to RB209 the fertiliser manual. Your agronomist I expect is using the book method to give a "SNS" (soil nitrogen supply) index for your fields so will be allowing for the N available in the soil. Please check this with them.</p>
<p>18. Does that not include dry ditches?</p>	<p>My opinion is that a water course is anything that has water in at any time of year, so a ditch, even if it is dry for most of the year, I would class as a watercourse.</p>
<p>19. Is it a requirement to determine nitrogen value of organic manures before spreading.</p>	<p>Yes but this does not necessarily have to be via laboratory analyses if standard figures are available. You can use the standard figures for organic manures but I would advise that getting an analyses is worth doing particularly if you are importing organic manure.</p>
<p>20. If part of the farm is in an NVZ could you calculate for the whole farm and the apply the percentage to the area within the NVZ?</p>	<p>I would not feel confident that this would be an approach that would be accepted at an inspection although I can see your logic. If possible, do the calculation for the whole farm in an NVZ at 170kgN/ha and if you are compliant with that I would be happy. If you are in fact loaded at higher than 170 kg N/ha this gets more complicated and I would speak to the FAS helpline for advice on your specific situation.</p>
<p>21. If outwintered cattle are fed in an open yard alongside the field, would you still have to have storage capacity for the obvious waste. Or would putting down straw mean you wouldn't need storage capacity for the waste.</p>	<p>Putting straw down will not make any difference. The run off (including rain that falls on it) from a yard that cattle are fed on would be classed as slurry regardless of whether there is straw bedding the yard and soaking up some of the liquid</p>

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<p>22. Practically when do you visit farmers to undertake NVZ records. As livestock numbers is Jan - Dec and needs recording by April, however n-max is based on harvest year?</p>	<p>Between January and before 30 April so all records can be updated by 30 April. I sometimes would do the nitrogen plan before this if nitrogen is being applied to autumn drilled crops. Preparing your records by 30 April is the legal requirement but will also help you to plan for the year ahead. Otherwise you may find you have exceeded the limit and cannot take any action to rectify the situation. Depending on the time of the inspection, the inspector may choose to inspect a previous years records.</p>
<p>23. If there isn't an N-max for a crop what do you put in for it in N-max calculations?</p>	<p>Nothing. For example oats does not have an N-max. If you grow oats on your farm you do not need to do an N-max calculation for the oats. However, whilst there is no N-max limit for oats (and some other crops) under the NVZ rules, no more fertiliser than the crop or soil needs should be applied under to the requirements of farming rules for water.</p>
<p>24. If you rent out part of your land to an arable farmer, who claims the BPS, presume they have to keep these records and carry out these actions and cross comply?</p>	<p>Yes, If part of the farm is rented out and the tenant claims the BPS, the tenant in my view would be responsible for the NVZ records / regulations on that land. If you still have land / animals on other parts of the farm you would need to adhere to the regulations on this. It is advisable to have a written agreement to make clear the responsibilities of each party.</p>
<p>25. Is this spreadsheet available on gov.uk</p>	<p>The government has not provided any spreadsheets or templates. The CSF / Wessex Water NVZ guide might be useful, as too would the tried and tested website. I have developed my own record keeping spreadsheets but I cannot make these public as there are various checks and alterations that I make regularly to make it farm specific.</p>
<p>26. What is classed as Dirty Water, that doesn't need to be stored?</p>	<p>Dirty Water slurry is defined by its dry matter and total nitrogen content (RB209), which in the past was allowed to be spread with less storage than prescribed in SSAFO/NVZ Regulations subject to a risk assessment. In 2015 this concession from Regulation was modified to Lightly Fouled Water slurry in CIRIA C759F, based on 'activity' rather than by 'analysis: a dilute form of slurry produced from any water collected from yards and buildings used by livestock where, as far as reasonably practicable, the yard or building is scraped or brushed down immediately after use to minimise contamination with livestock excreta.</p> <p>Back in 2015 the EA still allowed a lower storage capacity for LFW, not Dirty Water, when spread, for example, through a low rate irrigation system, provided it could be shown its application would not pollute surface water or groundwater; but subject to a more detailed plan that adequately quantified the diffuse pollution risk, along with the production of a nutrient management plan (NMP).</p> <p>As the SSAFO/NVZ Regulations do not actually allow for such a concession. Today we expect all farmers to comply with the Regulations when substantially enlarging or building new slurry stores. Farmers should look to reduce rainwater and wash water which may enter a store, to minimise the</p>

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	amount of slurry that needs to be stored, and to comply with FRFW. If a farmer is enlarging/building a new store they should contact the EA at the earliest time, to ensure the right store is built in the right place and to avoid any costly mistakes.