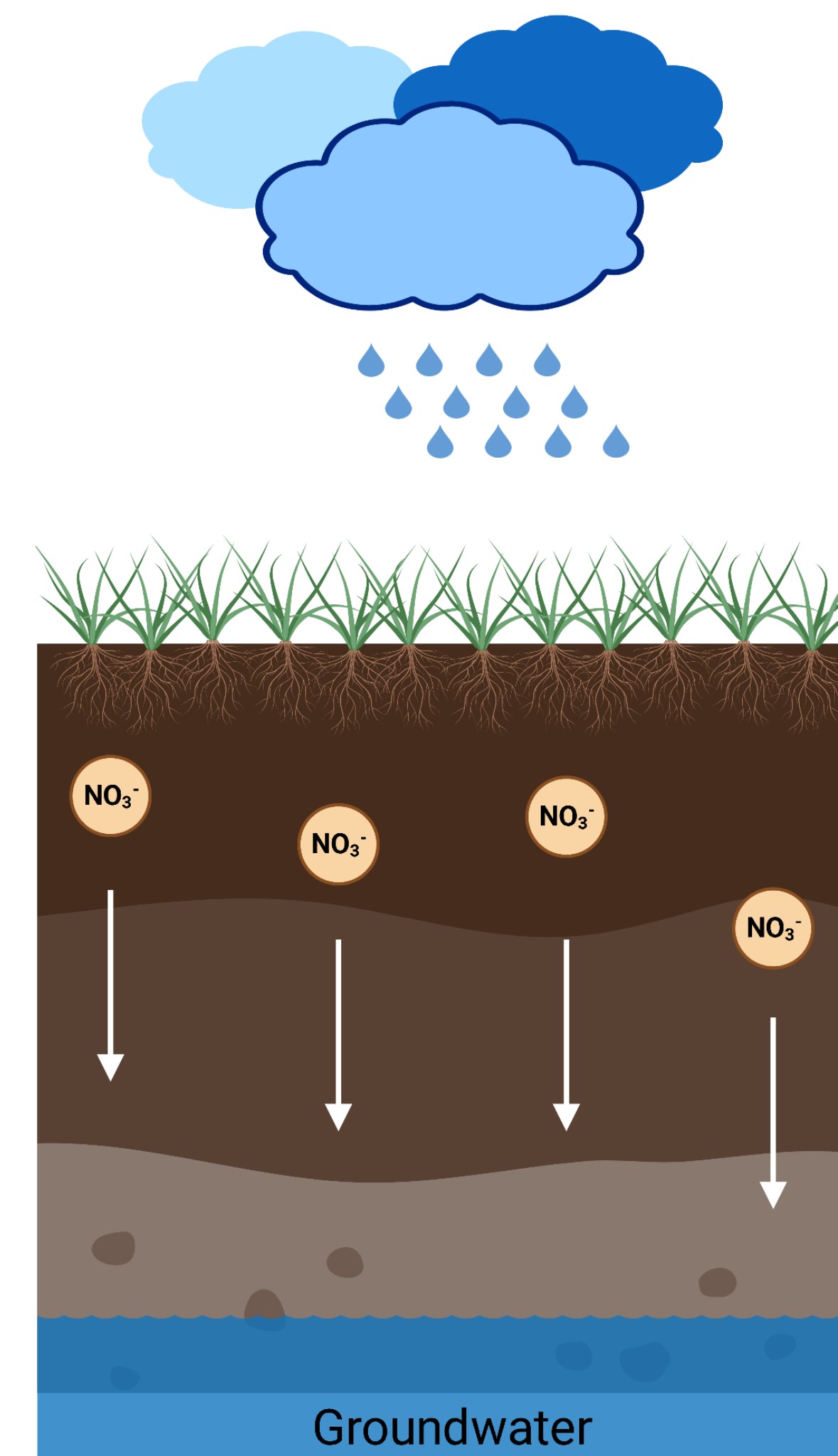


How much nitrogen leaves the root zone?

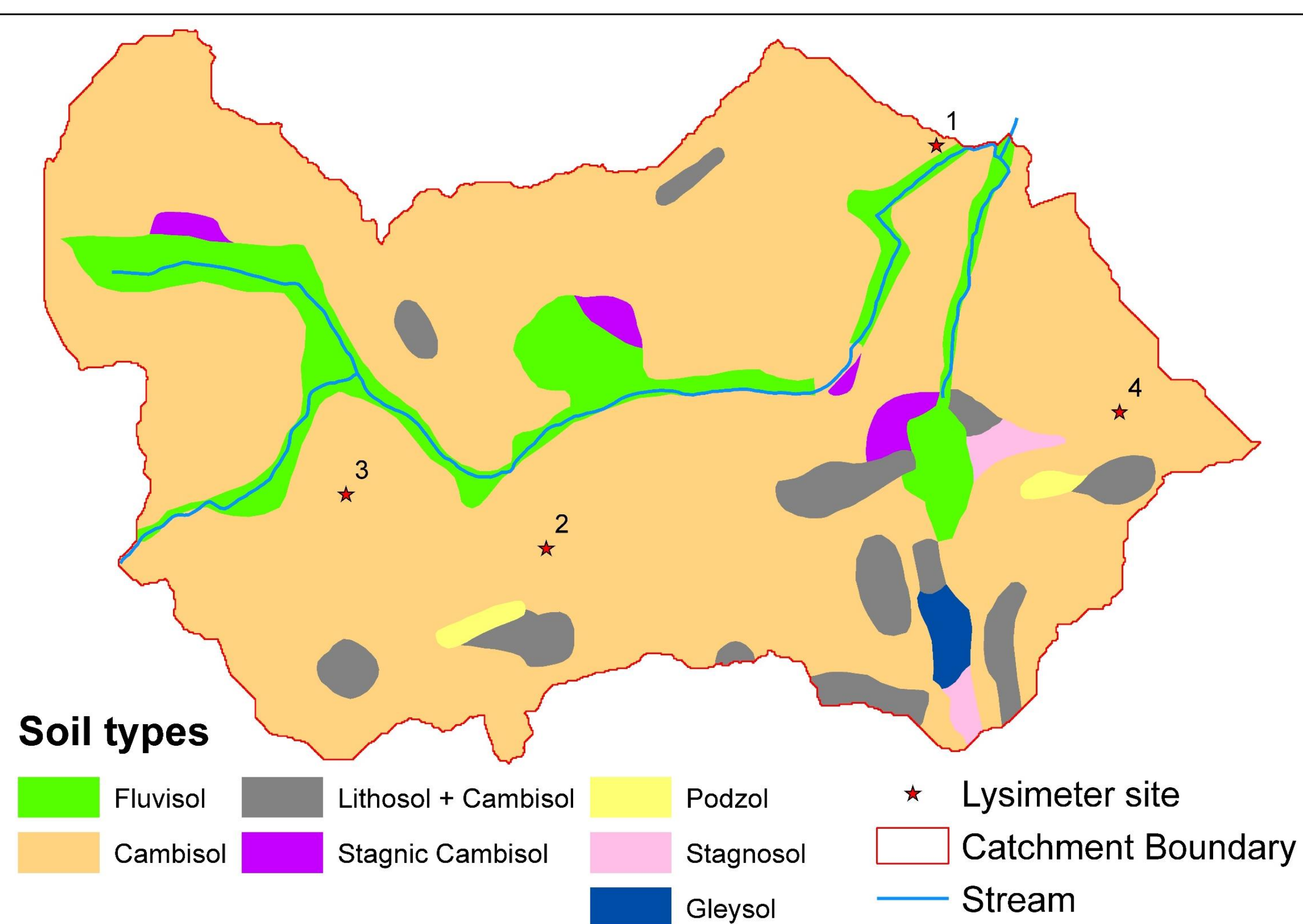
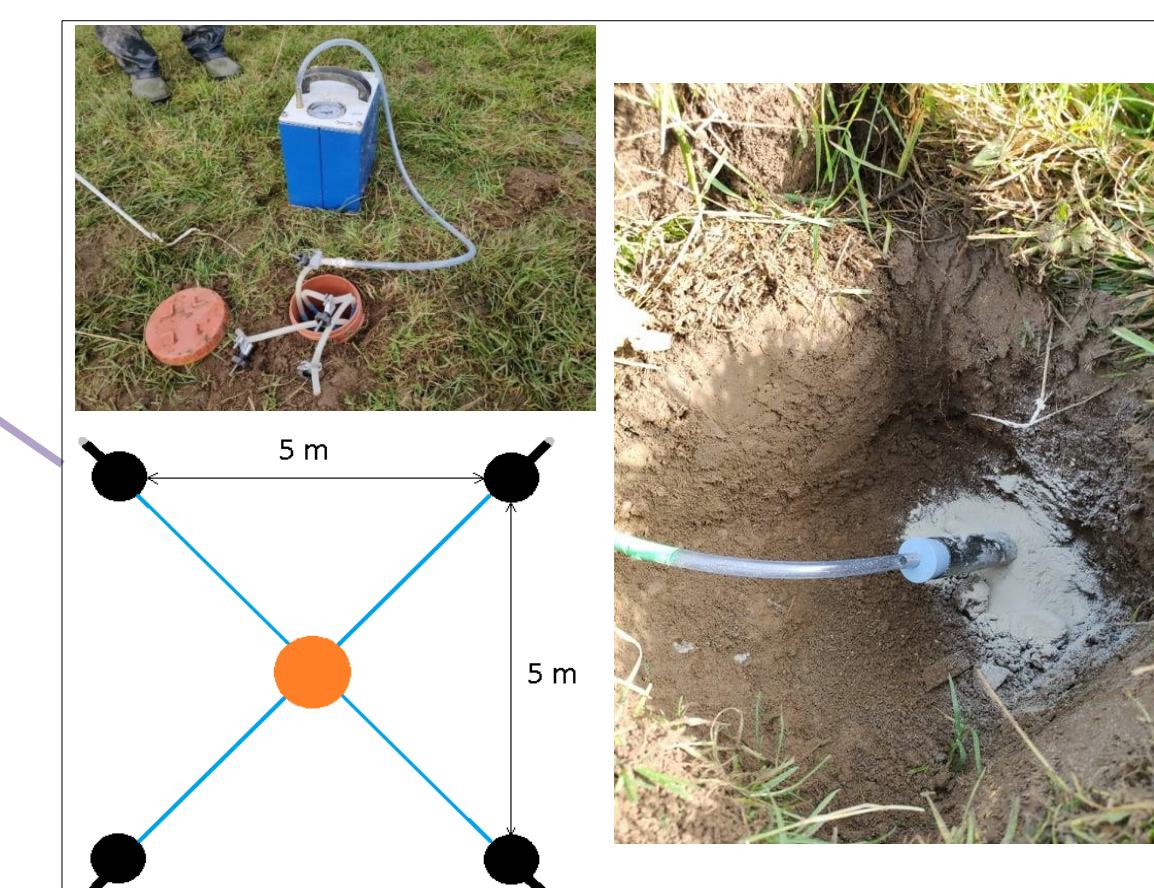
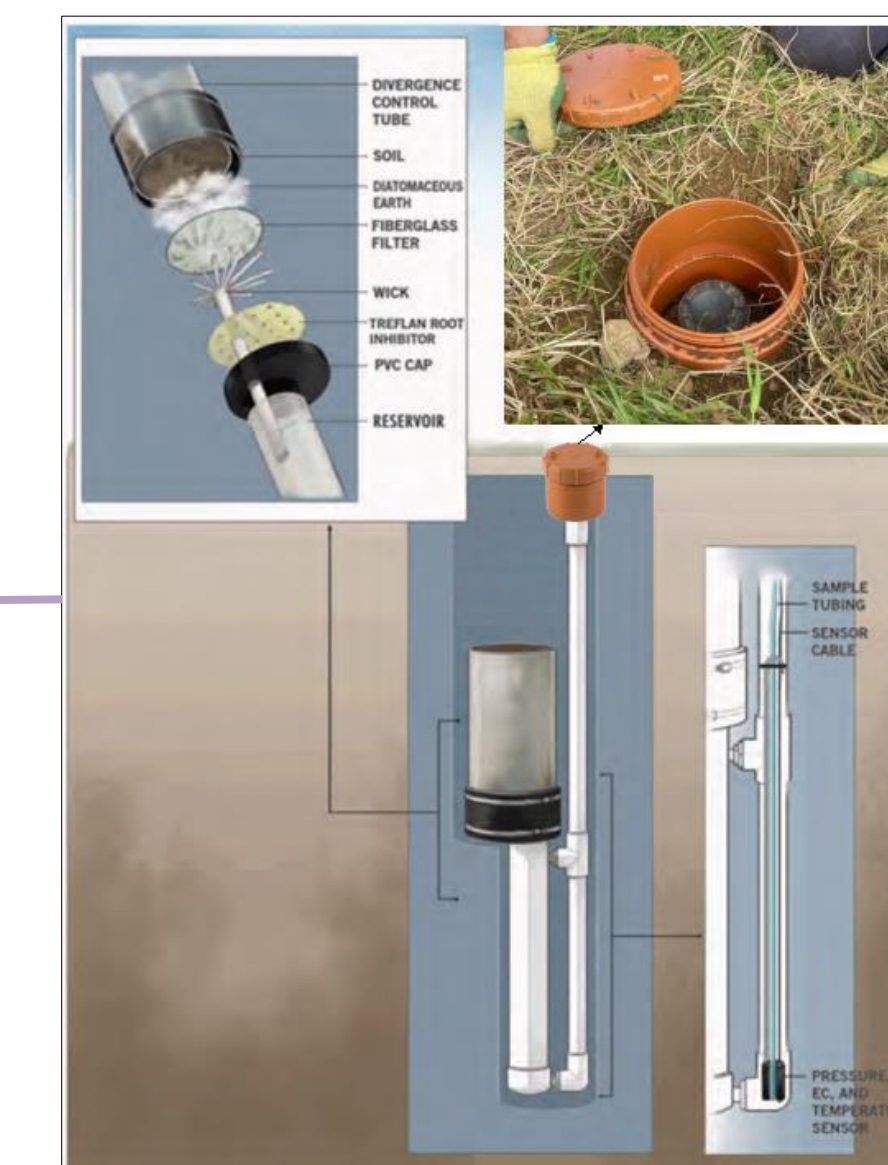
- Once the nitrate dissolved in soil water moves below the root zone, it can potentially have a negative impact on groundwater quality
- Devices called lysimeters allow us to measure the volume of water percolating vertically through soil and analyse its nitrate content
- Two sites established in Timoleague during autumn 2021, two new sites added in September 2022
- The sites differ in terms of grassland management and annual N inputs representative of the area



Our monitoring site layout



Legend
● Lysimeter
● Ceramic cup sampler



Site no.	Site description	Farm type
1	Low input pasture	Non-derogation
2	Intensively managed grazing paddock	Derogation
3	First cut silage field, in grazing rotation for the rest of the year	Derogation
4	First and second cut silage, then used in zero grazing system	Derogation

How to minimise nitrate leaching

- Free draining soils at higher risk of nitrate leaching
- Improving on-farm nitrogen use efficiency (NUE)
- Target fields that are most likely to respond to early N application
- Match chemical N applied to grass growth rates
- Reduce or cease N applications depending on the severity of soil moisture deficits or drought conditions
- Use protected urea for early chemical N applications