

# Site Specific Risk Assessment

## Risk assessment for proposed land-spreading activity – Ffrwdwenith Ganol & Rhosygadair Fawr, Cardigan, Ceredigion

Risk assessment carried out by: Mr Daniel James & Mrs Carys James Date: November 2025

Data				Judgement				Action	
<i>Receptor</i> What is at risk? What do I wish to protect?	<i>Source</i> The agent or process with potential to cause harm	<i>Harm</i> The harmful consequences if things go wrong	<i>Pathway</i> How the receptor might come into contact with the source	<i>Probability of exposure</i> How likely is this contact?	<i>Consequence</i> Severity of the consequences if this occurs	<i>Magnitude of risk</i> The overall magnitude of the risk	<i>Justification for magnitude</i> Basis of my judgement	<i>Risk management</i> How I can best manage the risk to reduce the magnitude	<i>Residual risk</i> Magnitude of the risk after management
Surface water – ditches, watercourses and ponds	Nutrients, organic matter and solids	Surface water pollution	Direct application to surface water, underdrainage and run off	Low	High	Medium	No spread areas, buffer zones in place and accurate spreading with dribble bar.	Comply with COGAP, Sludge Regs and EPR. Spreading to be only undertaken when conditions are suitable. No spreading areas enforced as per plans attached to application.	Low
Groundwater /Soils	Nutrients and PTEs	Groundwater pollution and excessive nutrient build up	Over-application to land	Low	High	Low	The materials have low PTEs to be applied at proposed rates as detailed in application. Volac/Sensient liquid sludge is high in readily available nitrogen. The other liquid sludges are low in readily available nitrogen. Phosphate applied is equal to or less than crop recommendations or crop offtake.	Appropriate rate and timing of application. Comply with COGAP, EPR and Sludge Regs. Carry out soil analysis of all fields regularly. Fields spread with accurate dribble bar applicator into growing grass crops. No spreading within 50m of a spring, borehole or well.	Low
Humans and animals	Spreading activities – physical	Harm to humans or animals	Trespass, accidental contact  Public footpaths in fields F Ganol 11 & 12	Low	Medium	Low	Agricultural areas with limited public access.  Public footpaths to southern boundaries in fields F Ganol 11 & 12 buffered by 2m no spread areas.	Application during appropriate conditions & awareness of access issues. Enforce no spread areas.	Low
Soils	Physical damage to soil structure	Damage to soil structure and poor subsequent crop yields	Delivery and spreading activity	Low	Medium	Low	Delivery and spreading to be undertaken under appropriate ground conditions using low ground pressure equipment.	Comply with COGAP and Cross Compliance Criteria. Apply only in suitable conditions.	Low

## Risk Assessment continued

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Soils	PTE addition	Build-up of PTEs.	Spreading activity	Low	Medium	Low	The materials have low PTEs to be applied at proposed rates as detailed in application.	Comply with COGAP, Cross Compliance and Sludge Regs. Apply at specified rates. Soils sampled regularly.	Low
Soils	Nutrient build up	Reduced yield quality and quantity of subsequent crops, nutrient leaching, runoff to sensitive receptors & surface water	Spreading activity, over application	Low	Medium	Low	Volac/Sensient liquid sludge is high in readily available nitrogen The other liquid sludges are low in readily available nitrogen. Phosphate applied is equal to or less than crop recommendations or crop offtake.	Apply according to RB209 recommendations and COGAP. Application rates in ABS not to be exceeded. Carry out soil analysis of all fields regularly. Liquid sludges spread with low trajectory precision dribble bar applicator.	Low
Air	Odour during temporary storage and spreading activities	Odour issues and complaints	Airborne compounds	Medium	Medium	Medium	Nearby residents can be sensitive to odour.	Spread with a low trajectory dribble bar applicator into growing crops. Prevailing wind direction will be monitored.	Low
Air	Dust during spreading	Dust complaints	Dust during windy conditions	Low	Low	Low	Materials are liquid and have low potential for dust.	Assess wind speed and direction before spreading and proximity to surrounding receptors. Spread when conditions are suitable.	Low
Air	Airborne compounds	Air pollution, dry deposition, wet deposition	Ammonia emissions during spreading / temporary storage	Low	Medium	Low	Volac/Sensient liquid sludge is high in readily available nitrogen The other liquid sludges are low in RAN. Nitrogen applied is significantly less than crop requirements. Spread with low trajectory dribble bar applicator into growing grass crops.	Spread with low trajectory dribble bar applicator into growing crops. Avoid spreading on particularly hot or windy days. Spread at correct rates, at stated timings and suitable conditions.  Temporary storage in sealed, vented nurse tank / slurry bag reducing emissions.	Low
Air/People	Noise	Noise complaints	Noise from delivery, and spreading	Low	Low to Medium	Low	Agricultural machinery in agricultural areas.	Avoid sensitive spreading periods where possible e.g. bank holidays and weekends. Delivery during daylight hours where possible	Low

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Nitrate Vulnerable Zones (NVZs)	Agricultural nitrate pollution	Harm to environment through nitrate pollution	Spreading at incorrect timings for crop nitrogen uptake, spreading at incorrect application rates, during unsuitable weather or ground conditions, spreading too close to watercourses and other sensitive receptors	Low	Medium	Medium	Volac/Sensient liquid sludge is high in readily available nitrogen. The other liquid sludges are low in readily available nitrogen. The nitrogen applied through the liquid sludges is significantly less than crop requirements.  No spreading areas to watercourses as per maps. Spread with a low trajectory dribble bar applicator into growing grass crops and spreading at appropriate timings and rates as stated in ABS.	Liquid sludges spread with a low trajectory precision dribble bar applicator into growing grass crops at low rates of application at appropriate timings for crop uptake. 10m no spread areas enforced to watercourses. Ensure field conditions are appropriate for spreading. No spreading in periods where heavy rain is forecast or if land is waterlogged, frozen, soil temperatures are too low.  Liquid sludges spread at stated timings during appropriate conditions as in ABS. Spreading periods are not during NVZ closed periods for spreading organic manures with high readily available N. Grassland NVZ closed periods for spreading: 15th October – 15th January for all other soils.	Low
Hedgerows and trees	Physical damage from spreading equipment	Ecological + landscape	Physical damage from spreading equipment	Low	Low	Low	Experienced operators employed & instructed to take care around trees	Leave a 2.0m minimum buffer zone adjacent to trees, shrubs and hedges.	Low

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<p>Cardigan Bay / Bae Ceredigion SAC</p> <p>Habitat types for which the area is designated:</p> <p>Reefs, subtidal sandbanks, sea caves</p> <p>Species for which the area is designated:</p> <p>Grey seal, river lamprey, sea lamprey, bottlenose dolphin</p>	Deterioration of area through contamination, ammonia deposition, nutrient enrichment, habitat loss, siltation, smothering, noise disturbance	Harm to protected area through contamination, nutrient enrichment, disturbance	Spreading activity, airbourne compounds, flooding, nutrient run off or leaching, noise during stockpiling and spreading	Low	Medium	Medium	<p>No spreading areas to watercourses. Spread with a low trajectory dribble bar applicator into growing grass crops and spreading at appropriate timings.</p> <p>Material spreading into growing grass crops under correct conditions and timings.</p> <p>Nurse tanks and slurry bag sited in suitable locations and away from SAC. Temporary storage in sealed, vented nurse tank / slurry bag reducing emissions.</p> <p>Proximity of fields to SAC.</p>	Assess wind speed and direction before spreading and proximity to surrounding receptors when spreading fields in relation to this SAC. Spread when conditions are suitable with no or little wind and when the potential of any gusts is not in the direction of the SAC. Material spread with a low trajectory dribble bar applicator into growing grass crops at low rates of application. 10m no spread areas enforced to watercourses. Ensure field conditions are appropriate for spreading.	Low
Local human population and local environment	Flooding of site	If waste is washed off site, it may contaminate buildings / gardens / natural habitats downstream.	Flood waters	Low	Medium	Medium	Spreading undertaken only on fields at appropriate timings.	No spreading in periods where heavy rain is forecast or if land is waterlogged. Spreading operator to employ 10m no spreading areas as per attached plans to watercourses.	Low

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<p>Aberarth-Carreg Wylan SSSI</p> <p>This site is of special interest for its geological, geomorphological and biological features. The cliffs and foreshore vary considerably in structure, exposure and sediment type, supporting a wide range of marine and coastal wildlife. Bottlenose dolphin and Atlantic grey seal are of special interest and are known to feed and breed along the shoreline. Habitats of special interest associated with the cliffs and coastal slopes include cliff crevice and ledge vegetation, maritime grassland and coastal heathland supporting a large number of nationally scarce and regionally rare plant species. The scarce pearl-bordered fritillary butterfly and the regionally rare small blue butterfly are part of an important invertebrate community present.</p>	<p>Deterioration of site through contamination, ammonia deposition, nutrient enrichment, habitat loss, siltation, smothering, noise disturbance</p>	<p>Harm to protected site through contamination, nutrient enrichment, disturbance</p>	<p>Spreading activity, airbourne compounds, flooding, nutrient run off or leaching, noise during stockpiling and spreading</p>	<p>Low</p>	<p>Medium</p>	<p>Medium</p>	<p>No spreading areas to watercourses. Spread with a low trajectory dribble bar applicator into growing grass crops and spreading at appropriate timings.</p> <p>Material spreading into growing grass crops under correct conditions and timings.</p> <p>Nurse tanks and slurry bag sited in suitable locations and away from SSSI. Temporary storage in sealed, vented nurse tank / slurry bag reducing emissions.</p> <p>Proximity of fields to SSSI.</p>	<p>Assess wind speed and direction before spreading and proximity to surrounding receptors when spreading fields in relation to this SSSI. Spread when conditions are suitable with no or little wind and when the potential of any gusts is not in the direction of the SSSI. Material spread with a low trajectory dribble bar applicator into growing grass crops at low rates of application. 10m no spread areas enforced to watercourses. Ensure field conditions are appropriate for spreading.</p>	<p>Low</p>

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<p>West Wales Marine / Gorllewin Cymru Forol SAC</p> <p>Species for which the area is designated: Harbour porpoise</p>	<p>Deterioration of area through contamination, ammonia deposition, nutrient enrichment, habitat loss, siltation, smothering, noise disturbance</p>	<p>Harm to protected area and species through contamination, nutrient enrichment, disturbance</p>	<p>Spreading activity, airbourne compounds, flooding, nutrient run off or leaching, noise during stockpiling and spreading</p>	<p>Low</p>	<p>Medium</p>	<p>Medium</p>	<p>No spreading areas to watercourses. Spread with a low trajectory dribble bar applicator into growing grass crops and spreading at appropriate timings.</p> <p>Material spreading into growing grass crops under correct conditions and timings.</p> <p>Nurse tanks and slurry bag sited in suitable locations and away from SAC. Temporary storage in sealed, vented nurse tank / slurry bag reducing emissions.</p> <p>Proximity of fields to SAC</p>	<p>Assess wind speed and direction before spreading and proximity to surrounding receptors when spreading fields in relation to this SAC. Spread when conditions are suitable with no or little wind and when the potential of any gusts is not in the direction of the SAC. Material spread with a low trajectory dribble bar applicator into growing grass crops at low rates of application. 10m no spread areas enforced to watercourses. Ensure field conditions are appropriate for spreading.</p>	<p>Low</p>

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Airfield Perimeter Defences at Blaenannerch - Scheduled Monuments	Deterioration to scheduled monuments via ground disturbance, ammonia deposition, nutrient enrichment from run off or flooding	Damage to scheduled monuments via ground disturbance, ammonia deposition / run off causing nutrient enrichment at sites	Spreading activity, airborne compounds, nutrient run off to watercourses, flooding.	Low	Medium	Low	<p>No spread buffers to watercourses.</p> <p>Suitable tractors and low trajectory precision dribble bar applicators / tankers with low trajectory dribble bar applicators, tractors used for spreading in suitable conditions with wide tyres and correct tyre pressures for field work.</p> <p>Material spreading into growing grass crops under correct conditions and timings.</p> <p>Nurse tanks and slurry bag sited in suitable locations and away from scheduled monuments. Temporary storage in sealed, vented nurse tank / slurry bag reducing emissions.</p>	<p>Assess wind speed and direction before delivery &amp; spreading and proximity to surrounding receptors when spreading fields Camp 1-5. Material spread with a low trajectory dribble bar applicator into growing grass crops at low rates of application. 10m no spread areas enforced to watercourses. Ensure field conditions are appropriate for spreading.</p> <p>Delivery vehicles to use agreed routes.</p>	Low

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Blaenannerch Round Barrow - Scheduled Monument	Deterioration to scheduled monument via ground disturbance, ammonia deposition, nutrient enrichment from run off or flooding	Damage to scheduled monument via ground disturbance, ammonia deposition / run off causing nutrient enrichment at site	Spreading activity, airborne compounds, nutrient run off to watercourses, flooding.	Low	Medium	Low	<p>No spread buffers to watercourses.</p> <p>Suitable tractors and low trajectory precision dribble bar applicators / tankers with low trajectory dribble bar applicators, tractors used for spreading in suitable conditions with wide tyres and correct tyre pressures for field work.</p> <p>Material spreading into growing grass crops under correct conditions and timings.</p> <p>Nurse tanks and slurry bag sited in suitable locations and away from scheduled monuments. Temporary storage in sealed, vented nurse tank / slurry bag reducing emissions.</p>	<p>Assess wind speed and direction before delivery &amp; spreading and proximity to surrounding receptors when spreading fields Camp 1-5. Material spread with a low trajectory dribble bar applicator into growing grass crops at low rates of application. 10m no spread areas enforced to watercourses. Ensure field conditions are appropriate for spreading.</p> <p>Delivery vehicles to use agreed routes.</p>	Low