

# Site Specific Risk Assessment

Risk assessment for proposed land-spreading activity – Ffynnoncyff Farm, Ferwig, Cardigan, Ceredigion, SA43 1QD

Risk assessment carried out by: Mr Daniel James & Mrs Carys James Date: December 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. Liquid sludge soil incorporated within 12 hours for arable fields.	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 liquid sludge has low PTEs to be applied at proposed rates as detailed in application. Lower than average annual addition limits under Sludge Regs. Nitrogen applied is significantly less than crop recommendations. Some of the fields have phosphate indices of 3 above target levels and magnesium indices of 4. Phosphate applied is equal to or less than crop offtake and magnesium applied is also less than is likely to be removed by the next crop so there should be no increase to soil levels.	Appropriate given spreading rates and timing of application. Comply with COGAP, EPR and Sludge Regs. Carry out soil analysis of all fields regularly. Fields spread with dribble bar with the use of a flow metre. 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	Low	Medium	Low	Agricultural areas with limited public access.  There are no public footpaths in the fields to be spread.	Application during appropriate conditions & awareness of access issues.	Low

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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
Soils	PTE addition	Build-up of PTEs.	Spreading activity	Low	Medium	Low	The liquid sludge has 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	Liquid sludge applied at specified rates. Nitrogen applied is significantly less than crop recommendations. Some of the fields have phosphate indices of 3 above target levels and magnesium indices of 4. Phosphate applied is equal to or less than crop offtake and magnesium applied is also less than is likely to be removed by the next crop so there should be no increase to soil levels.	Apply according to RB209 recommendations, COGAP & The Water Resources (Control of Agricultural Pollution) (Wales) Regulations. Application rates in agricultural benefit statement not to be exceeded. Carry out soil analysis of all fields regularly.	Low

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Air	Odour during temporary storage and spreading activities	Odour issues and complaints	Airborne compounds	Medium	Medium	Medium	The sludge has moderate odour.  Nearby residents often sensitive to odour.	Liquid sludge spread with low trajectory dribble bar, liquid sludge soil incorporated within 12hrs for arable fields. Prevailing wind direction and weather will be monitored. Odour monitoring and mitigation measures in place in line with EMS. Temporary storage nurse tanks are sealed with roof and can be vented.	Low
Air	Dust during spreading	Dust complaints	Dust during windy conditions	Low	Low	Low	Sludge is liquid and has 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	Low	Medium	Low	The liquid sludge is high in readily available nitrogen. Nitrogen applied is significantly less than crop requirements. Spread with low trajectory dribble bar applicator into growing grass crop or for arable fields spread and soil incorporated within 12 hours.	Spread with low trajectory dribble bar applicator. Avoid spreading on particularly hot or windy days. Spread at correct rates, at stated timings and suitable conditions.  Liquid sludge soil incorporated within 12 hours for arable fields.	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	The liquid sludge is high in readily available nitrogen. The nitrogen applied though the liquid sludge 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, or soil incorporated within 12 hours following spreading for arable fields. Spreading at appropriate timings and rates as stated in ABS.	Liquid sludge spread with a low trajectory precision dribble bar applicator 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 sludge soil incorporated within 12 hours following spreading for arable fields.  Liquid sludge 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.	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: Reefs, subtidal sandbanks, sea caves</p> <p>Species for which the area is designated: 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, airborne compounds, flooding, nutrient run off or leaching, noise during spreading	Low	Medium	Medium	<p>No spreading areas to watercourses. Spread with a low trajectory dribble bar applicator into growing grass crops, or soil incorporated within 12 hours following spreading for arable fields. Spreading at appropriate timings.</p> <p>Proximity of fields to SAC. The closest field 21/4734 is approx. 190m at the nearest point from the 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 at low rates of application. Spread into growing grass crops, or soil incorporated within 12 hours following spreading for arable fields.</p> <p>10m no spread areas enforced to watercourses. Ensure field conditions are appropriate for spreading.</p>	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	<p>Spreading undertaken only on fields at appropriate timings.</p> <p>Temporary storage nurse tanks located in low risk locations and are sealed units.</p>	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>	Deterioration of site through contamination, ammonia deposition, nutrient enrichment, habitat loss, siltation, smothering, noise disturbance	Harm to protected site through contamination, nutrient enrichment, disturbance	Spreading activity, airborne compounds, flooding, nutrient run off or leaching, noise during spreading	Low	Medium	Medium	<p>No spreading areas to watercourses. Spread with a low trajectory dribble bar applicator into growing grass crops, or soil incorporated within 12 hours following spreading for arable fields. Spreading at appropriate timings.</p> <p>Proximity of fields to SSSI. The closest field 21/4734 is approx. 190m at the nearest point from the 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 at low rates of application. Spread into growing grass crops, or soil incorporated within 12 hours following spreading for arable fields.</p> <p>10m no spread areas enforced to watercourses. Ensure field conditions are appropriate for spreading.</p>	Low

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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 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, or soil incorporated within 12 hours following spreading for arable fields. Spreading at appropriate timings.</p> <p>Proximity of fields to SAC. The closest field 21/4734 is approx. 365m at the nearest point from the 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 at low rates of application. Spread into growing grass crops, or soil incorporated within 12 hours following spreading for arable fields.</p> <p>10m no spread areas enforced to watercourses. Ensure field conditions are appropriate for spreading.</p>	<p>Low</p>