Site Specific Risk Assessment

Risk assessment for proposed land-spreading activity – Castell Malgwyn Farm, Llechryd, Cardigan, Pembrokeshire, SA43 2QB

Risk assessment carried out by: Mr Daniel James & Mrs Carys James Date: August 2026

Data				Judgement				Action	
Receptor What is at risk? What do I wish to protect?	*Source* The agent or process with potential to cause harm	*Harm* The harmful consequences if things go wrong	*Pathway* How the receptor might come into contact with the source	*Probability of exposure* How likely is this contact?	*Consequence* Severity of the consequences if this occurs	*Magnitude of risk* The overall magnitude of the risk	*Justification for magnitude* Basis of my judgement	*Risk management* How I can best manage the risk to reduce the magnitude	*Residual risk* Magnitude of the risk after management
Surface water – ditches, watercourses and ponds	Nutrients, organic matter	Surface water pollution	Direct application to surface water, underdrainage and run off, run off from slopes, soil erosion	Low	High	Medium	No spread areas, buffer zones in place and accurate spreading with dribble bar applicator.	Comply with COGAP and EPR. Spreading to be only undertaken when conditions are suitable. No spreading areas enforced as per plans attached to application. Material spread with low trajectory precision dribble bar.	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. Nitrogen applied is less than crop recommendations. Phosphate applied is less than or equal to crop recommendation. Some of the fields magnesium indices of 3 or 4, above target levels. Total magnesium applied is no more than 20kg/ha which is similar to what is likely 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. Footpaths in fields CASTELL MALGWYN 19, 23 & 25	Low	Medium	Low	Agricultural areas with limited public access.	Application during appropriate conditions, times of low use & awareness of access issues.	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	Low levels of PTEs in wastes, lower than average annual addition limits under Sludge Regs	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	Wastes applied at specified rates. The liquid sludges are low in readily available nitrogen. Phosphate applied is less than or equal to crop recommendation. Some of the fields magnesium indices of 3 or 4, above target levels. Total magnesium applied is no more than 20kg/ha which is similar to what is likely 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
Air	Odour during storage, loading / unloading and spreading activities	Odour issues and complaints	Airborne compounds	Medium	Medium	Medium	The water clarification liquid sludges have no noticeable odour. The Volac/Sensient (Arla) sludge from the dairy products industry has moderate odour. Nearby residents often sensitive to odour.	Liquid sludges spread with low trajectory dribble bar. Prevailing wind direction and weather will be monitored. Odour monitoring and mitigation measures in place in line with EMS. Liquid sludges in storage are in covered nurse tanks, slurry bag, or slurry store away from most receptors at farmyard.	Low
Air	Dust during spreading	Dust complaints	Dust during windy conditions	Low	Low	Low	Liquid sludges - materials have low potential for dust.	Assess wind speed and direction before spreading and proximity to surrounding receptors. Spread when conditions are suitable.	Low
Air/People	Noise	Noise complaints	Noise from delivery, and spreading	Low	Low to Medium	Low	Agricultural machinery in agricultural areas.	Avoid sensitive delivery & spreading periods where possible e.g. bank holidays and weekends. Delivery during daylight hours where possible	Low

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Air	Airborne compounds	Air pollution, dry deposition, wet deposition	Ammonia emissions during spreading / temporary storage	Low	Medium	Low	The liquid sludges are low in readily available nitrogen. Nitrogen applied is significantly less than crop requirements. Spread with low trajectory dribble bar applicator.	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 in temporary storage is in covered nurse tanks, slurry bag, or slurry store away from most receptors at farmyard.	Low
Afon Teifi SSSI Afon Teifi is of special interest for a range of river types and associated riverside habitats; flowering plants; bryophytes; otter; Cetti's warbler; bottlenose dolphin; brown hairstreak; fish; dragonflies and a variety of other invertebrates as well as both breeding and wintering bird communities and for geomorphological features.	Deterioration of site through contamination, nutrient enrichment, habitat loss, siltation, smothering, soil erosion, soil runoff.	Harm to protected site, habitat & species through contamination, nutrient enrichment, disturbance.	Spreading activity, flooding, nutrient run off or leaching to watercourses, soil erosion and soil run off.	Low	Medium	Medium	No spreading areas to watercourses draining to Afon Teifi SSSI and other no spread areas in place. Wastes applied at specified rates and timings. Liquid sludges spread with low trajectory dribble bar applicator. The liquid sludges are low in readily available nitrogen. Phosphate applied is less than or equal to crop requirement. Proximity of nurse tank, slurry bag locations & above ground slurry store location to SSSI.	Spread when conditions are suitable and as stated in ag benefit statement. Material to be spread into growing grass crops. Minimum 10m no spread areas enforced to watercourses. No spread areas enforced as per maps. No spreading within 48 hours of forecasted heavy rainfall.	Low

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Coedmor NNR Coedmor NNR is one of the last remnants of a huge forest, known as Coedmor Iscoed. The woodlands along this steep gorge survived and are 'ancient woodland' (existing since at least 1600). Coedmor is now a National Nature Reserve to protect these rare gorge oak woodlands and their wildlife.	Deterioration of nature reserve through contamination, nutrient enrichment, habitat loss, wildlife disturbance.	Harm to nature reserve, habitat & species through contamination, nutrient enrichment, disturbance.	Spreading activity, flooding, nutrient run off or leaching to watercourses, soil erosion and soil run off, noise disturbance.	Low	Medium	Medium	No spreading areas to watercourses draining to Afon Teifi and other no spread areas in place. Wastes applied at specified rates and timings. Liquid sludges spread with low trajectory dribble bar applicator. The liquid sludges are low in readily available nitrogen. Phosphate applied is less than or equal to crop requirement. Proximity of nurse tank, slurry bag locations & above ground slurry store location. Deliveries and spreading avoiding dawn and dusk where possible and weekends and bank holidays where possible.	Spread when conditions are suitable and as stated in ag benefit statement. Material to be spread into growing grass crops. Minimum 10m no spread areas enforced to watercourses. No spreading within 48 hours of forecasted heavy rainfall. No spread areas enforced as per maps.	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 operators to employ no spreading areas as per attached plans with minimum 10m no spread areas to watercourses.	Low
Hedgerows and trees	Physical damage from spreading	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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Afon Teifi / River Teifi SAC This area of conservation is special for a range of river types and associated riverside habitats and flowering plants. It is designated as an important habitat for otter, brook lamprey, river lamprey, bullhead, Atlantic salmon, sea lamprey and floating water-plantain. There are a wide variety of other invertebrates as well as both breeding and wintering bird communities.	Deterioration of area through contamination, nutrient enrichment, habitat loss, siltation, smothering, soil erosion, soil runoff.	Harm to protected area, habitat & species through contamination, nutrient enrichment, disturbance.	Spreading activity, flooding, nutrient run off or leaching to watercourses, soil erosion and soil run off.	Low	Medium	Medium	No spreading areas to watercourses draining to Afon Teifi / River Teifi SAC. Wastes applied at specified rates and timings. Sludges spread with a low trajectory dribble bar applicator The liquid sludges are low in readily available nitrogen. Phosphate applied is less than or equal to crop requirement. Proximity of nurse tank locations, slurry bag location & above ground store location to SAC.	Spread when conditions are suitable and as stated in ag benefit statement. Material to be spread into growing grass crops. Minimum 10m no spread areas enforced to watercourses. No spreading within 48 hours of forecasted heavy rainfall. No spread areas enforced as per maps.	Low
Ancient Woodland	Physical damage from spreading equipment, nutrient run off / leaching.	Harm to ancient woodland, habitat and species through contamination, nutrient enrichment, disturbance, physical damage.	Spreading activity, nutrient run off or leaching, soil erosion and soil run off.	Low	Medium	Medium	Spreading undertaken only on fields at appropriate timings. No spread buffers zones to ancient woodland.	No spreading in periods where heavy rain is forecast or if land is waterlogged. No spread buffers enforced to ancient woodland as per maps.	Low

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Coedydd a Corsydd Aber Teifi (Teifi Estuary Woodlands and Marshes) SSSI Events during the Ice Ages are largely responsible for the wide range of rich wildlife habitats occurring in this site. Irish Sea ice is thought to have blocked the old, more westerly course of the lower Teifi with glacial deposits, forcing the river to carve a deep gorge from Llechryd to Cardigan.	Deterioration of site through contamination, nutrient enrichment, habitat loss, siltation, smothering, soil erosion, soil runoff.	Harm to protected site, habitat & species through contamination, nutrient enrichment, disturbance.	Spreading activity, flooding, nutrient run off or leaching to watercourses, soil erosion and soil run off.	Low	Medium	Medium	No spreading areas to watercourses and other no spread areas in place. Wastes applied at specified rates and timings. Liquid sludges spread with low trajectory dribble bar applicator. The liquid sludges are low in readily available nitrogen. Phosphate applied is less than or equal to crop requirement. Proximity of nurse tank, slurry bag locations & above ground slurry store location to SSSI.	Spread when conditions are suitable and as stated in ag benefit statement. Material to be spread into growing grass crops. Minimum 10m no spread areas enforced to watercourses. No spreading within 48 hours of forecasted heavy rainfall. No spread areas enforced as per maps.	Low