

Site Specific Risk Assessment

Risk assessment for proposed land-spreading activity – Clyn yr Ynys, Towyn Farm, Nant y Croi Farm & Hafod Farm, Cardigan, Ceredigion

Risk assessment carried out by: Mr Daniel James & Mrs Carys James Date: August 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 for liquid sludges and rear discharge muck spreaders for sludge cakes. Stockpiles of sludge cake sited in suitable locations away from watercourses.	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. Wastes soil incorporated following spreading where spread prior to planting of next crops.	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 significantly less than crop recommendations. Phosphate applied is equal to or less than crop recommendations.	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 for liquid sludges and rear discharge muck spreaders for sludge cakes. 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 footpath in field CYY 2074	Low	Medium	Low	Agricultural areas with limited public access.	Application during appropriate conditions & awareness of access issues. No spreading in field near footpath if in use. 2 metres buffer to footpath enforced.	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, stockpile areas for sludge cakes not fully cleared	Low	Medium	Low	Wastes applied at specified rates. The materials are low in available nitrogen. Phosphate applied is equal to or less than crop recommendations. Stockpile areas fully cleared and spread for sludge cakes, no return to same stockpile area within 2 years.	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	Nearby residents often sensitive to odour. The water clarification liquid sludges and sludge cakes have no noticeable odour.	Liquid wastes spread with a low trajectory dribble bar. Prevailing wind direction and weather will be monitored. Odour monitoring and mitigation measures in place in line with EMS. Liquid sludge in storage is in covered nurse tank, stockpiles of sludge cake are in fields to be spread.	Low
Air	Dust during spreading	Dust complaints	Dust during windy conditions	Low	Low	Low	Liquid sludges - materials have low potential for dust. The sludge cakes also have low potential for any dust. There is a low risk of dust during spreading.	Assess wind speed and direction before spreading and proximity to surrounding receptors. Spread when conditions are suitable. This especially applies to spreading of the sludge cakes.	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
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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Aberarth-Carreg Wylan SSSI	Deterioration of site through contamination, nutrient enrichment, habitat loss, smothering	Harm to protected site through contamination, nutrient enrichment, disturbance etc.	Spreading activity, airbourne compounds, flooding, nutrient run off or leaching	Low	Medium	Medium	No spreading areas to SSSI enforced and watercourses. Liquid sludges spread with a low trajectory dribble bar applicator, sludge cakes spread with rear discharge muck spreaders. Spreading at appropriate timings. Stockpiles of sludge cake sited in suitable low risk locations in fields to be spread. Proximity of stockpiles of sludge cake, liquid sludge temporary storage in nurse tank location to SSSI.	Assess wind speed and direction before spreading and proximity to surrounding receptors when spreading all fields. 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. Liquid sludges spread with a low trajectory dribble bar applicator, sludge cakes spread with rear discharge muck spreaders. 10m no spread areas enforced to watercourses and minimum 20m no spread area to SSSI. 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. Stockpiles of sludge cake sited in suitable low risk locations in fields to be spread.	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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Afon Teifi SSSI - 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	Deterioration of site through contamination, nutrient enrichment, habitat loss, smothering	Harm to protected site through contamination, nutrient enrichment, disturbance etc.	Spreading activity, airbourne compounds, flooding, nutrient run off or leaching	Low	Medium	Medium	No spreading areas to SSSI enforced and watercourses. Liquid sludges spread with a low trajectory dribble bar applicator, sludge cakes spread with rear discharge muck spreaders. Spreading at appropriate timings. Stockpiles of sludge cake sited in suitable low risk locations in fields to be spread. Proximity of stockpiles of sludge cake, liquid sludge temporary storage in nurse tank location to SSSI.	Assess wind speed and direction before spreading and proximity to surrounding receptors when spreading all fields. 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. Liquid sludges spread with a low trajectory dribble bar applicator, sludge cakes spread with rear discharge muck spreaders. 10m no spread areas enforced to watercourses and minimum 20m no spread area to SSSI. Ensure field conditions are appropriate for spreading.	Low

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Cardigan Bay SAC (- in particular the bottlenose dolphin)	Deterioration of site through contamination, nutrient enrichment, habitat loss, smothering	Harm to protected site through contamination, nutrient enrichment, disturbance etc. Impact on the habitats of the bottlenose dolphin and other habitats	Spreading activity, airbourne compounds, flooding, nutrient run off or leaching	Low	Medium	Medium	No spreading areas to SAC enforced and watercourses. Liquid sludges spread with a low trajectory dribble bar applicator, sludge cakes spread with rear discharge muck spreaders. Spreading at appropriate timings. Stockpiles of sludge cake sited in suitable low risk locations in fields to be spread. Proximity of stockpiles of sludge cake, liquid sludge temporary storage in nurse tank location to SAC.	Assess wind speed and direction before spreading and proximity to surrounding receptors when spreading all fields. 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. Liquid sludges spread with a low trajectory dribble bar applicator, sludge cakes spread with rear discharge muck spreaders. 10m no spread areas enforced to watercourses and minimum 20m no spread area to SAC. Ensure field conditions are appropriate for spreading.	Low

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West Wales Marine SAC (- in particular the European Protected Species - the harbour porpoise)	Deterioration of site through contamination, nutrient enrichment, habitat loss, smothering	Harm to protected site through contamination, nutrient enrichment, disturbance etc. Impact on the habitats of the harbour porpoise and other habitats	Spreading activity, airbourne compounds, flooding, nutrient run off or leaching	Low	Medium	Medium	No spreading areas to SAC enforced and watercourses. Liquid sludges spread with a low trajectory dribble bar applicator, sludge cakes spread with rear discharge muck spreaders. Spreading at appropriate timings. Stockpiles of sludge cake sited in suitable low risk locations in fields to be spread. Proximity of stockpiles of sludge cake, liquid sludge temporary storage in nurse tank location to SAC.	Assess wind speed and direction before spreading and proximity to surrounding receptors when spreading all fields. 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. Liquid sludges spread with a low trajectory dribble bar applicator, sludge cakes spread with rear discharge muck spreaders. 10m no spread areas enforced to watercourses and minimum 20m no spread area to SAC. Ensure field conditions are appropriate for spreading.	Low

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<p>Caeau Crug Bychan, Ty Gwyn a Llwyn Ysgaw SSSI</p> <p>(Caeau Crug Bychan, Ty Gwyn a Llwyn Ysgaw is of special interest for the species-rich wild plant community of these arable fields and for populations of nationally scarce and regionally rare plants)</p>	Deterioration of site through contamination, nutrient enrichment, species loss, smothering	Harm to protected site through contamination, nutrient enrichment.	Spreading activity, dust, flooding, nutrient run off or leaching	Low	Medium	Medium	<p>No spreading areas enforced to watercourses. Liquid sludges spread with a low trajectory dribble bar applicator, sludge cakes spread with rear discharge muck spreaders. Spreading at appropriate timings.</p> <p>Stockpiles of sludge cake sited in suitable low risk locations in fields to be spread.</p> <p>Proximity of stockpiles of sludge cake, liquid sludge storage tank and nurse tank locations to SSSI.</p> <p>Proximity of SSSI to fields to be spread and topography. Fields CYY 2074 & 7065 are 457m from the SSSI at the nearest point.</p>	Assess wind speed and direction before spreading and proximity to surrounding receptors when spreading all fields. 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. Liquid sludges spread with a low trajectory dribble bar applicator, sludge cakes spread with rear discharge muck spreaders. 10m no spread areas enforced to watercourses. Ensure field conditions are appropriate for spreading.	Low

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Craig y Gwbert Defended Enclosure - Scheduled Monument	Deterioration to scheduled monument via ground disturbance, dust from spreading, nutrient enrichment from run off / leaching	Damage to scheduled monument via ground disturbance, dust from spreading or run off / leaching causing nutrient enrichment at site	Spreading activity, nutrient run off / leaching to watercourses, dust during windy conditions from spreading activity. Closest field Hafod 0834.	Low	Medium	Low	<p>Materials have low potential for dust.</p> <p>No spread buffer to watercourse and no spread buffer to SSSI / SAC also ensuring greater spreading distance from scheduled monument.</p> <p>Suitable tractors and dribble bars / tankers with dribble bars, tractors and muck spreaders used for spreading in suitable conditions with wide tyres and correct tyre pressures for field work. Muck spreaders not overloaded.</p> <p>Material only spread on field Hafod 0834 agreed spreadable agricultural field area as per deployment application with material soil incorporated or spread in to growing crop.</p> <p>Agricultural machinery in agricultural areas.</p> <p>Stockpiles sited in suitable locations and far from scheduled monument.</p>	<p>Assess wind speed and direction before spreading and proximity to surrounding receptors. Spread when conditions are suitable with no or little wind. Material soil incorporated following spreading as soon as possible where spread prior to planting of next crop and within 24 hours.</p> <p>No spreading within 48 hours of forecasted heavy rainfall.</p> <p>Avoid sensitive spreading periods where possible e.g. bank holidays and weekends. Delivery during daylight hours where possible</p> <p>Suitable equipment used for spreading and no spread areas observed.</p>	Low

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Crug-Bychan Round Barrow - Scheduled Monument	Deterioration to scheduled monument via ground disturbance, nutrient enrichment from run off / leaching	Damage to scheduled monument via ground disturbance, run off / leaching causing nutrient enrichment at site	Spreading activity, nutrient run off / leaching to watercourses. Closest field Hafod 2675 – approx. 430m at the nearest point.	Low	Medium	Low	<p>Liquid sludge has very low potential for any dust.</p> <p>Suitable tractors and dribble bars / tankers with dribble bars used for spreading in suitable conditions with wide tyres and correct tyre pressures for field work.</p> <p>Material only spread on field Hafod 2675 agreed spreadable agricultural field area as per deployment application with material spread onto growing grass crop.</p> <p>Agricultural machinery in agricultural areas.</p> <p>Proximity of fields from scheduled monument.</p>	<p>Assess wind speed and direction before spreading and proximity to surrounding receptors. Spread when conditions are suitable with no or little wind.</p> <p>No spreading within 48 hours of forecasted heavy rainfall.</p> <p>Avoid sensitive spreading periods where possible e.g. bank holidays and weekends. Delivery during daylight hours where possible</p> <p>Suitable equipment used for spreading and no spread areas observed.</p>	Low

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Cardigan Island Defended Enclosure - Scheduled Monument	Deterioration to scheduled monument via ground disturbance, dust from spreading, nutrient enrichment from run off / leaching	Damage to scheduled monument via ground disturbance, dust from spreading or run off / leaching causing nutrient enrichment at site	Spreading activity, nutrient run off / leaching to watercourses, dust during windy conditions from spreading activity. Closest field Hafod 5505. Approximately 470m away at the nearest point.	Low	Medium	Low	Materials have low potential for dust. No spread buffer to watercourse and no spread buffer to SSSI / SAC also ensuring greater spreading distance from scheduled monument. Suitable tractors and dribble bars / tankers with dribble bars, tractors and muck spreaders used for spreading in suitable conditions with wide tyres and correct tyre pressures for field work. Muck spreaders not overloaded. Material only spread on field Hafod 5505 agreed spreadable agricultural field area as per deployment application with material soil incorporated or spread in to growing crop. Agricultural machinery in agricultural areas. Stockpiles sited in suitable locations and far from scheduled monument.	Assess wind speed and direction before spreading and proximity to surrounding receptors. Spread when conditions are suitable with no or little wind. Material soil incorporated following spreading as soon as possible where spread prior to planting of next crop and within 24 hours. No spreading within 48 hours of forecasted heavy rainfall. Avoid sensitive spreading periods where possible e.g. bank holidays and weekends. Delivery during daylight hours where possible Suitable equipment used for spreading and no spread areas observed.	Low