Statement of Agricultural Benefit – Castell Malgwyn Farm (2)

Applicant: Mr Daniel James and Mrs Carys James (Stepside Agricultural Contractors)
Permit: SR2010 No4: mobile plant for land-spreading
Permit number: EPR/AB3891CX

Agricultural benefit statement is prepared by:

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This agricultural benefit statement has been prepared based on information provided by Stepside Agricultural Contractors. It is made on the understanding that all information provided is correct and representative of the fields to which the material is to be applied and of the waste material to be applied.

Farm address:

Castell Malgwyn Farm, Llechryd, Cardigan, Pembrokeshire, SA43 2QB

Wastes to be applied:

Waste Code	Waste Description	Physical Form	Waste Producer
02 05 02	Waste from the dairy products industry – sludges from on-site effluent treatment	Liquid sludge	Dairy Partners, Newcastle Emlyn
02 05 02	Waste from the dairy products industry – sludges from on-site effluent treatment	Liquid sludge	Volac/Sensient, Felinfach
02 05 02	Waste from the dairy products industry – sludges from on-site effluent treatment	Liquid sludge	First Milk, Haverfordwest
19 09 02	Sludge from water clarification	Liquid sludge	Dwr Cymru Welsh Water Llechryd WTW
19 09 02	Sludge from water clarification	Liquid sludge	Dwr Cymru Welsh Water Strata Florida WTW
19 09 02	Sludge from water clarification	Liquid sludge	Dwr Cymru Welsh Water Bontgoch WTW

Application:

- Fields CASTELL MALG 2, 3, 4, 20 & CM 8440, 8087, 8019, 0234, 1735 will be spread into the growing grass crops in February - April 2026 prior to first cut silage, and immediately after silage cuts and in advance of periods of grazing May – September 2026. Spreading of these grass fields may be split into up to 5 separate applications. The total of all applications will not exceed the max application rate for each field as listed in table 1. Each individual application will not exceed 50t/ha in any one application to a field (or the maximum application rate given in Table 1 where lower).
- Fields CASTELL MALG 10 & CM 7886 will be spread in March – May 2026 into the growing winter barley crops with up to two separate applications of liquid sludge. The total of all applications will not exceed the max application rate for each field as listed in table 1. Each individual application will not exceed 50t/ha in any one application to a field (or the maximum application rate given in Table 1 where lower).
- Spreading of the waste will be carried out in accordance with the Code of Good Agricultural Practice, The Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021 and in accordance with the requirements of the deployment and Environmental Permitting Regulations.
- NRW will be informed at least 48 hours prior to any spreading commencing and no spreading will occur within 48 hours of forecasted heavy rainfall.
- The liquid sludges are delivered by HGV road tankers which are discharged into a nurse tank ('holding tank'), pumped from a nurse tank to the slurry bag with hose, or discharged into a concrete above ground slurry store at the farmyard prior to spreading. Liquid sludge is spread from a nurse tank, slurry bag or the concrete above ground slurry store at the farmyard onto the deployed fields at the required timings as stated above. This is done by either umbilical method with the liquid delivered to tractor in deployed fields pumped through hose and spread by dribble bar applicator mounted onto the back of the tractor, or a tractor and vacuum tanker with dribble bar applicator. The dribble bar applicator places the liquid in bands onto the surface of the ground. This spread method is effective in limiting odour generation & nutrient losses associated with higher trajectory spread methods such as splash plate. Spreading is undertaken with the use of flow meters to ensure correct rates are applied.
- Should the timing, ground or weather conditions mean it's unsuitable for spreading then temporary storage of liquid sludge in nurse tanks, slurry bag, or concrete above ground slurry store at farmyard may be required. These potential locations are detailed on the attached field maps & within the LPD1 form.
- The nurse tanks do not have secondary containment, but are impermeable purpose built AW Trailers alloy nurse tanks featuring internal bracing, an anti-corrosive interior coating, designated fill and empty valves that can be shut by gate valves. These valves can be locked off in the event of temporary overnight temporary storage if the tank contains liquid to ensure secure temporary storage. The tanks are normally in use just prior to or when spreading activity is being undertaken. In most cases the nurse tanks are unlikely to contain liquid overnight. The tank fills from the top via internal pipework with a 'swanneck' reducing chances off any spills when decoupling connecting pipes after filling. The empty valve allows the tank to be completely emptied to the bottom. The tank is sealed with roof to prevent odour, rainwater entering the tank and for safety, and can be vented if required. A hydraulic lifting axle in the middle allows the tank to positioned and lowered, then locked into position so the whole tank is on the ground.
- The Labaronne Citaf self-supporting slurry bag is purpose built, sealed, can be vented and has designated fill and empty valves and is sited on a suitable flat area. The bag has a 10 year manufacturer guarantee: 100% against all material (technical fabric) and manufacturing (welding) defects. The technical fabric is composed of polyester coated with PVC and protected with an anti UV treatment on both sides. The bag has a life expectancy of 20 years +. The liquid is pumped across to the bag from a nurse tank or pumped from a lorry using a pump and lay flat hose across field connected to the bag fill valve. There are 2 gate valves in sequence over a metre apart and a non return valve. The bag features a number of degassers with anti-odour filters. The slurry bag will have a soil bund around the perimeter and will be fenced to prevent access & damage.
- The concrete above ground slurry store at the farmyard is impermeable with concrete sides and base and has fill and empty valves. The tank has an open top and a 30cm minimum freeboard will be maintained at all times.
- The nurse tanks, slurry bag and concrete above ground slurry store will be completely empty before use. Only waste as specified in this deployment will be stored in the nurse tanks and slurry bag. The concrete above ground slurry store at the farmyard will be completely empty of any cattle slurry before use, with no cattle slurry added whilst in use to store waste under this deployment.
- The maximum application rate in Table 1 for each field will be split into multiple applications where it's over 50t/ha. Each individual application will not exceed 50t/ha in any one application to a field (or the maximum application rate given in Table 1 where lower).
- Liquid wastes of the same waste code may be stored together as a mix in the concrete above ground slurry store at the farmyard for operational purposes.
- The wastes may be applied separately or in combination to a field.
- The maximum application rates for each field listed in Table 1 apply to an individual waste being applied to a field and have been made on a field by field basis using The Nutrient Management Guide (RB209).

Benefits from waste application:

- The analysis and nutrient content of the wastes are shown in the waste analysis attachments.
- The wastes are a source of nitrogen, phosphate, potassium, sulphur, sodium, calcium and organic matter. The wastes can be beneficially used to replace a proportion of bagged mineral fertiliser.
- The risk of sulphur deficiency has been estimated as 'High' based on the soil texture and expected winter rainfall (RB209). The crop requirements are 50-80kg SO_3/ha. The amount of available sulphur supplied by the wastes at the proposed maximum application rates is 2-8kg SO_3/ha.
- The addition of sodium will improve the palatability of grass and is important in the diet for livestock health.
- The addition of organic matter to the soil will help improve soil structural stability, biological activity, water and nutrient holding capacity i.e. resistance to drought, and reduction of localised flooding, reduced leaching of nutrients, and improved workability in soil.

Materials applied in previous 12 months:

The fields within this deployment application have received the rates (t/ha) of materials as in 'Table 4 - Previous Land Treatment' within the previous 12 months.

It's considered that the nutrients applied from these applications were for the requirements of the previous crops before the material within this deployment is applied for the next crops.

Nutrients supplied by this application:

The recommended maximum application rates for each individual waste when applied on it's own to a field are shown in Table 1 and below. The rates have been made on a field by field basis using The Nutrient Management Guide (RB209).

Rates of application (t/ha)	**Nitrogen kg/ha**		**Phosphate (P_2O_5) kg/ha**		**Potash (K_2O) kg/ha**		**Magnesium (MgO) kg/ha**		**Sulphur (SO_3) kg/ha**	
	Total	Available	Total	Available	Total	Available	Total	Available	Total	Available
Dairy Partners liquid sludge @ 37 t/ha	89	18	54	32	12	10	3	0	14	3
Dairy Partners liquid sludge @ 44 t/ha	106	21	64	38	15	12	3	0	17	3
Dairy Partners liquid sludge @ 97 t/ha	233	47	141	85	33	26	7	1	38	8
Dairy Partners liquid sludge @ 100 t/ha	240	48	145	87	34	27	8	1	39	8
Volac/Sensient liquid sludge @ 45 t/ha	50	10	54	32	57	46	7	1	9	2
Volac/Sensient liquid sludge @ 53 t/ha	58	12	64	38	67	54	8	1	11	2
Volac/Sensient liquid sludge @ 54 t/ha	59	12	65	39	69	55	8	1	11	2
Volac/Sensient liquid sludge @ 138 t/ha	152	30	166	100	176	141	21	2	28	6
First Milk liquid sludge @ 57 t/ha	108	22	55	33	13	11	2	0	17	3
First Milk liquid sludge @ 67 t/ha	127	25	64	38	16	12	3	0	20	4
First Milk liquid sludge @ 100 t/ha	190	38	96	57	23	19	4	0	30	6
First Milk liquid sludge @ 126 t/ha	239	48	121	72	29	23	5	1	37	7
Estimated Availability	20%		60%		80%		10%		20%	

Rates of application (t/ha)	Nitrogen kg/ha		Phosphate (P_2O_5) kg/ha		Potash (K_2O) kg/ha		Magnesium (MgO) kg/ha		Sulphur (SO_3) kg/ha	
	Total	Available	Total	Available	Total	Available	Total	Available	Total	Available
DCWW Llechryd WTW liquid sludge @ 100 t/ha	30	3	39	8	2	0	4	1	24	2
DCWW Llechryd WTW liquid sludge @ 166 t/ha	50	5	65	13	3	1	7	1	40	4
DCWW Llechryd WTW liquid sludge @ 250 t/ha	75	7	97	19	5	1	11	2	60	6
DCWW Strata Florida WTW liquid sludge @ 100 t/ha	40	4	11	2	1	0	1	0	31	3
DCWW Strata Florida WTW liquid sludge @ 250 t/ha	99	10	27	5	2	0	3	1	78	8
DCWW Bontgoch WTW liquid sludge @ 72 t/ha	36	4	55	11	1	0	5	1	25	3
DCWW Bontgoch WTW liquid sludge @ 85 t/ha	43	4	64	13	2	0	6	1	30	3
DCWW Bontgoch WTW liquid sludge @ 100 t/ha	50	5	76	15	2	0	7	1	35	3
DCWW Bontgoch WTW liquid sludge @ 200 t/ha	100	10	152	30	4	1	13	3	70	7
Estimated Availability	10%		20%		20%		20%		10%	

Application of wastes in combination:

When different wastes are applied to the same field the maximum application rates will be set so that the total combined amount applied will not exceed 250 t/ha, the total nitrogen loading will be less than 250 kg/ha, and the amount of available nitrogen and total or available phosphate and potash (whichever is appropriate) will not exceed the fertiliser recommendation or the amount removed in crop offtake (as listed in Table 1), whichever is the greater.

The following example shows the total maximum rate of application and nutrient content where a field has 50% DCWW Llechryd WTW liquid water clarification sludge and 50% Bontgoch WTW liquid water clarification sludge applied in total of all applications (no more than 50t/ha of liquid sludge spread in a single application).

	Rate of application (t/ha)	Nitrogen kg/ha		Phosphate (P_2O_5) kg/ha		Potash (K2O) kg/ha		Magnesium (MgO) kg/ha		Sulphur (SO3) kg/ha	
		Total	Available	Total	Available	Total	Available	Total	Available	Total	Available
DCWW Llechryd WTW liquid sludge	50	15	1	19	4	1	0	2	0	12	1
DCWW Bontgoch WTW liquid sludge	50	25	3	38	8	1	0	3	1	17	2
TOTAL	**100**	**40**	**4**	**57**	**12**	**2**	**0**	**5**	**1**	**29**	**3**

Table 1: Field, Soil & Cropping Details, Fertiliser Recommendations and Application Rates

					Nitrogen		Phosphate			Potash			Magnesium	
Field Ref.	Soil Type	Spreadable Area (ha)	Previous Crop	Next Crop	SNS	N Required (kg/ha)	P Index	P_2O_5 Required (kg/ha)	Crop Use (Offtake) (kg/ha)	K Index	K_2O Required (kg/ha)	Crop Use (Offtake) (kg/ha)	Mg Index	MgO Required (kg/ha)
CASTELL MALG 2	Medium soils	3.80	Grass 2 cuts silage + grazing	Grass 2 cuts silage + grazing	Moderate	205	2	65	65	2+	180	228	2	0
CASTELL MALG 3	Medium soils	3.70	Grass 2 cuts silage + grazing	Grass 2 cuts silage + grazing	Moderate	205	2	65	65	2-	230	228	3	0
CASTELL MALG 4	Medium soils	4.20	Grass 2 cuts silage + grazing	Grass 2 cuts silage + grazing	Moderate	205	2	65	65	1	270	228	3	0
CASTELL MALG 10	Medium soils	6.40	Spring barley	Winter barley	1	170	3	0	55	2+	40	68	3	0
CASTELL MALG 20	Medium soils	4.00	Grass 2 cuts silage + grazing	Grass 2 cuts silage + grazing	Moderate	205	3	20	65	2-	230	228	2	0
CM 7886	Medium soils	3.20	Winter wheat	Winter barley	1	170	1	85	55	2-	70	68	2	0
CM 8440	Medium soils	3.60	Grass 2 cuts silage + grazing	Grass 2 cuts silage + grazing	Moderate	205	0	125	65	0	320	228	3	0
CM 8087	Medium soils	3.20	Grass 2 cuts silage + grazing	Grass 2 cuts silage + grazing	Moderate	205	0	125	65	0	320	228	3	0
CM 8019	Medium soils	7.40	Grass 2 cuts silage + grazing	Grass 2 cuts silage + grazing	Moderate	205	0	125	65	0	320	228	3	0
CM 0234	Medium soils	5.50	Grass 1 cut silage + grazing	Grass 1 cut silage + grazing	Moderate	190	0	100	39	0	200	138	3	0
CM 1735	Medium soils	4.40	Grass 1 cut silage + grazing	Grass 2 cuts silage + grazing	Moderate	205	0	125	65	0	320	228	3	0
TOTAL		**49.40**												

Nutrient requirements based on:
Winter barley 6.5t/ha straw removed
Grass 1 cut silage (23t FW/ha), silage 25% DM, totalling 1.7kg/t P2O5 and 6.0kg/t K2O removed in offtake + grazing
Grass 2 cuts silage (23t FW/ha at 1st cut, 15t FW/ha at 2nd cut), silage 25% DM, totalling 1.7kg/t P2O5 and 6.0kg/t K2O removed in offtake + grazing
Expected DM yields of grass 9-12t/ha, good growth class

	Dairy Partners, Newcastle Emlyn - liquid sludge						Volac/Sensient, Felinfach - liquid sludge						First Milk, Haverfordwest - liquid sludge					
Field Ref.	N Applied - Waste (kg/ha)	P_2O_5 Applied - Waste (kg/ha)	K_2O Applied - Waste (kg/ha)	MgO Applied - Waste (kg/ha)	Application Rate (t/ha)	Total Tonnes	N Applied - Waste (kg/ha)	P_2O_5 Applied - Waste (kg/ha)	K_2O Applied - Waste (kg/ha)	MgO Applied - Waste (kg/ha)	Application Rate (t/ha)	Total Tonnes	N Applied - Waste (kg/ha)	P_2O_5 Applied - Waste (kg/ha)	K_2O Applied - Waste (kg/ha)	MgO Applied - Waste (kg/ha)	Application Rate (t/ha)	Total Tonnes
CASTELL MALG 2	**21	*64	*15	*3	44	167	**12	*65	*69	*8	54	205	**25	*64	*16	*3	67	255
CASTELL MALG 3	**21	*64	*15	*3	44	163	**12	*65	*69	*8	54	200	**25	*64	*16	*3	67	248
CASTELL MALG 4	**21	*64	**12	*3	44	185	**12	*65	**55	*8	54	227	**25	*64	**12	*3	67	281
CASTELL MALG 10	**18	*54	*12	*3	37	237	**10	*54	*57	*7	45	288	**22	*55	*13	*2	57	365
CASTELL MALG 20	**21	*64	*15	*3	44	176	**12	*65	*69	*8	54	216	**25	*64	*16	*3	67	268
CM 7886	**47	**85	*33	*7	97	310	**12	**38	*67	*8	53	169	**38	**57	*23	*4	100	320
CM 8440	**48	**87	**27	*8	100	360	**30	**100	**141	*21	138	497	**48	**72	**23	*5	126	454
CM 8087	**48	**87	**27	*8	100	320	**30	**100	**141	*21	138	442	**48	**72	**23	*5	126	403
CM 8019	**48	**87	**27	*8	100	740	**30	**100	**141	*21	138	1021	**48	**72	**23	*5	126	932
CM 0234	**48	**87	**27	*8	100	550	**30	**100	**141	*21	138	759	**48	**72	**23	*5	126	693
CM 1735	**48	**87	**27	*8	100	440	**30	**100	**141	*21	138	607	**48	**72	**23	*5	126	554
TOTAL						**3648**						**4631**						**4773**

	Dwr Cymru Welsh Water Llechryd WTW - liquid water clarification sludge						Dwr Cymru Welsh Water Strata Florida WTW - liquid water clarification sludge						Dwr Cymru Welsh Water Bontgoch WTW - liquid water clarification sludge					
Field Ref.	N Applied - Waste (kg/ha)	P_2O_5 Applied - Waste (kg/ha)	K_2O Applied - Waste (kg/ha)	MgO Applied - Waste (kg/ha)	Application Rate (t/ha)	Total Tonnes	N Applied - Waste (kg/ha)	P_2O_5 Applied - Waste (kg/ha)	K_2O Applied - Waste (kg/ha)	MgO Applied - Waste (kg/ha)	Application Rate (t/ha)	Total Tonnes	N Applied - Waste (kg/ha)	P_2O_5 Applied - Waste (kg/ha)	K_2O Applied - Waste (kg/ha)	MgO Applied - Waste (kg/ha)	Application Rate (t/ha)	Total Tonnes
CASTELL MALG 2	**5	*65	*3	*7	166	631	**10	*27	*2	*3	250	950	**4	*64	*2	*6	85	323
CASTELL MALG 3	**5	*65	*3	*7	166	614	**10	*27	*2	*3	250	925	**4	*64	*2	*6	85	314
CASTELL MALG 4	**5	*65	**1	*7	166	697	**10	*27	**0	*3	250	1050	**4	*64	**0	*6	85	357
CASTELL MALG 10	**3	*39	*2	*4	100	640	**4	*11	*1	*1	100	640	**4	*55	*1	*5	72	461
CASTELL MALG 20	**5	*65	*3	*7	166	664	**10	*27	*2	*3	250	1000	**4	*64	*2	*6	85	340
CM 7886	**3	**8	*2	*4	100	320	**4	**2	*1	*1	100	320	**5	**15	*2	*7	100	320
CM 8440	**7	**19	**1	*11	250	900					0	0	**10	**30	**1	*13	200	**720**
CM 8087	**7	**19	**1	*11	250	800	**10	**5	**0	*3	250	800	**10	**30	**1	*13	200	640
CM 8019	**7	**19	**1	*11	250	1850	**10	**5	**0	*3	250	1850	**10	**30	**1	*13	200	1480
CM 0234	**7	**19	**1	*11	250	1375	**10	**5	**0	*3	250	1375	**10	**30	**1	*13	200	1100
CM 1735	**7	**19	**1	*11	250	1100	**10	**5	**0	*3	250	1100	**10	**30	**1	*13	200	880
TOTAL						**9591**						**10010**						**6935**

* Total nutrient content of waste used on P, K or Mg index 2 or above
** Available nutrient content of waste used on P, K or Mg index 0 or 1
The assumed availability of total nutrients in the Dairy Partners, Volac/Sensient & First Milk liquid sludges are N 20%, P_2O_5 60%, K_2O 80%, MgO 10%, SO_3 20%
The assumed availability of total nutrients in the DCWW water clarification sludges are N 10%, P_2O_5 20%, K_2O 20%, MgO 20%, SO_3 10%

Potential negative impacts from this application and mitigation measures planned:

Waste composition & receiving soils

- Potentially Toxic Elements: The supplied concentrations at the proposed application rates are all lower than the maximum permissible levels detailed in the Sludge (Use in Agriculture) Regulations for biosolids applied to agricultural land, which is believed to be a suitable comparison for wastes applied to agricultural land.
- Physical contaminants: The wastes are produced by managed processes. The wastes do not contain physical contaminants.
- Dwr Cymru Welsh Water Llechryd & Bontgoch water treatment works use iron-based coagulants to condition the water. Liquid sludge from these sites will only be spread on fields with a soil pH of 5.5 or above.
- Dwr Cymru Welsh Water Strata Florida water treatment works uses aluminium-based coagulants to condition the water. Liquid sludge from this site will only be spread on fields with a soil pH of 6.0 or above.
- The pH of the receiving soil for field CM 8440 is pH 5.6 and no Dwr Cymru Welsh Water Strata Florida liquid sludge will be spread on this field as a result. The pH of the receiving soils for all other fields ranges from pH 6.1 to 7.0.
- Oils, fats & grease: The Dairy Partners liquid sludge contains 1.77% oils, fats & grease. Application at this percentage is unlikely to have detrimental effects on plant growth which can be seen with wastes containing 4% content or more. As a precaution the sludge will be surface applied with low trajectory dribble bar applicator which places the liquid sludge in bands on surface to reduce leaf contact, and the max application rate for each field will be split into up to 4 applications where the max application rate is over 50t/ha.
- Waste pH: Although the Dairy Partners & First Milk liquid sludges are slightly acidic, they're weakly buffered and unlikely to result in a change in soil pH. The slightly acidic nature is most probably associated with the presence of food based organic acids. Acidic food-based wastes are routinely applied to agricultural land without adverse effects on crop health, or significant decreases in soil pH. Use of the wastes will be carefully monitored, through low rates of individual application and close monitoring of crop health, for any adverse signs resulting from acidity around roots.
- BOD: The BOD of the Volac / Sensient liquid sludge is low and below the range for cattle slurry (10-20,000 mg/l). The BOD of the First Milk liquid sludge is within the range for cattle slurry. The BOD of the Dairy Partners liquid sludge is in the range for pig slurry (20-40,000 mg/l). Consequently, the environmental risks applying these wastes will be similar to that of the materials mentioned. To mitigate the pollution risk to watercourses the wastes will not be applied at a rate greater than 50 t/ha in a single application (or the maximum application rate given in Table 1 where lower). The proposed method of application, no-spread zones and precautions as stated in this document should be sufficient to minimise the pollution risk to manageable levels.
- Soils have been sampled to 7.5cm depth for permanent grass fields & to 15cm depth for temporary grass & arable fields with a 'half cheese' corer soil sampler walking a 'W' pattern across each field collecting approx. 25 sub samples per field.
- Receiving soils have been analysed and are suitable for application at the proposed application rates.
- Some of the fields have a magnesium index of 3. The magnesium applied by the wastes is low and is less than is likely to be removed by the crops. Grass is not responsive to magnesium however herbage levels should be maintained to prevent 'Grass Staggers' in lactating animals. Potassium applications can reduce magnesium uptake resulting in 'Staggers'. The addition of magnesium will help maintain levels over a rotation period. The receiving soils have magnesium indexes of 2 or 3. Application of liquid sludges at the proposed application rates with potassium also being applied in the sludges is very unlikely to reduce potassium availability which can be seen in soils where the magnesium index is 5 or above.

Operations

The fields in this deployment have been designated as 'high risk' following site checks on the proximity to surrounding protected areas (e.g. SSSIs) and groundwater source protection zones with some fields within 500m of the Afon Teifi SSSI, Coedydd a Corsydd Aber Teifi (Teifi Estuary Woodlands and Marshes) SSSI and Afon Teifi / River Teifi SAC. Coedmor NNR is also within 500m of some fields. On the basis of 'high risk' the proposed operation will be subject to a site-specific risk assessment for deploying mobile plant under a SR2010 No.4. The potential risks associated with the application of waste on this deployment have been identified as;

- Potential run-off after application: The wastes will be applied following the Code of Good Agricultural Practice. The maximum application rate for each field over 50t/ha will be split into multiple applications and will not exceed 50t/ha in any one application to a field (or the maximum application rate given in Table 1 where lower). The fields will be spread using precision spreading dribble bar equipment with no spreading areas enforced as per maps.

- All handling of the wastes will be in accordance to current regulations and relevant mitigation strategies will be adopted.
- Odour may potentially be emitted from the spreading of the Dairy Partners, Volac/Sensient & First Milk liquid sludges – to mitigate odour generation all handling of waste will be done in accordance to current regulations and relevant mitigation strategies will be adopted. Liquid sludge will be spread with low trajectory dribble bar applicator. This is an efficient method to prevent odour transmission & nutrient losses associated with higher trajectory spread methods such as splash plate. If any odour complaints are received, further odour mitigation methods will be implemented.
- The Dwr Cymru Welsh Water liquid water clarification sludges are considered to have no noticeable odour.
- Spillages: all spillages will be reported immediately to NRW.
- No waste will be spread within 10m of any ditch, pond or surface water, within 50m of any spring, well, borehole, or reservoir that supplies water for human consumption or farm dairies.
- The liquid sludges will be spread on delivery or temporarily securely stored as stated above. Operators will aim to empty spreading equipment before the end of each working day to avoid overnight storage of waste in machinery.
- Regular servicing of all machinery is conducted and spreading equipment is annually calibrated. To prevent waste being held in faulty machinery replacement spreading equipment will be available.
- Spreading machinery will travel over the field in a direction which will most easily allow the machinery to turn within the boundaries of the field. Any spreading equipment will be turned off prior to turning at the end of each run.
- Machinery turns will be routed to avoid rutting and wheel slip. The turns will not be executed on any buffer strips.
- There will be sufficient trained staff available to ensure that the operation continues throughout operational hours (i.e. there will be sufficient cover for illness, holiday etc.).
- Rights of way have been marked on the spread risk maps. There is a public footpath across field CM 1735.
- Weather conditions will be monitored prior to spreading with wind speed and direction assessed.
- Consideration for the public and local residential receptors will be taken into account.

Signed: Robert Tucker	**Date:** 17/10/2025