Site Specific Odour Management Plan – The Woodlands

Applicant: D Wise Ltd
Permit: SR2010 No4: mobile plant for land-spreading
Permit number: BB3505LT

Farm address: Fields Farm, Fields Lane, Willington, Tallarn Green, Wrexham, SY14 7LR.

Wastes to be applied:

Waste Producer	EWC Code	Description	Physical Form
D. Wise Ltd **Malpas, Cheshire, SY14 8D**	02 02 02	Eggshells from hatcheries, processing, and similar premises.	Eggshells – Stackable
D. Wise Ltd **Malpas, Cheshire, SY14 8D**	02 02 04	Sludge from on-site ETP from poultry preparation plant	ETP Sludge – non stackable

Aim:

To identity potential sensitive receptors to odour near the spreading areas, sources of potential odour generation, factors affecting odour, measures to reduce odour generation, odour monitoring & actions should any odour complaints be received.

Operations will be overseen by the technically competent manager / nominated competent person and all personnel will receive training relevant to their role prior to commencing operations.

Operation description:

The liquid wastes are delivered by tractor tanker which are then discharged into a Lagoon at the deployment site, the eggshell waste is delivered by tractor trailer and stored in stockpiles. The wastes aren't mixed. Each waste is spread from the storage location onto the deployed fields at the required timings as stated in the deployment agricultural benefit statement. The Liquid sludge will be applied using a rear mounted shallow disc injector and the eggshells waste being spread by a rear discharge spreader pulled by the tractor. The slot injector places the liquid under the surface and the discharge spread places the eggshell on the surface. The spreading method is effective in limiting odour generation & nutrient losses associated with higher trajectory spread methods such as splash plate. Application rates are stated in the agricultural benefit statement.

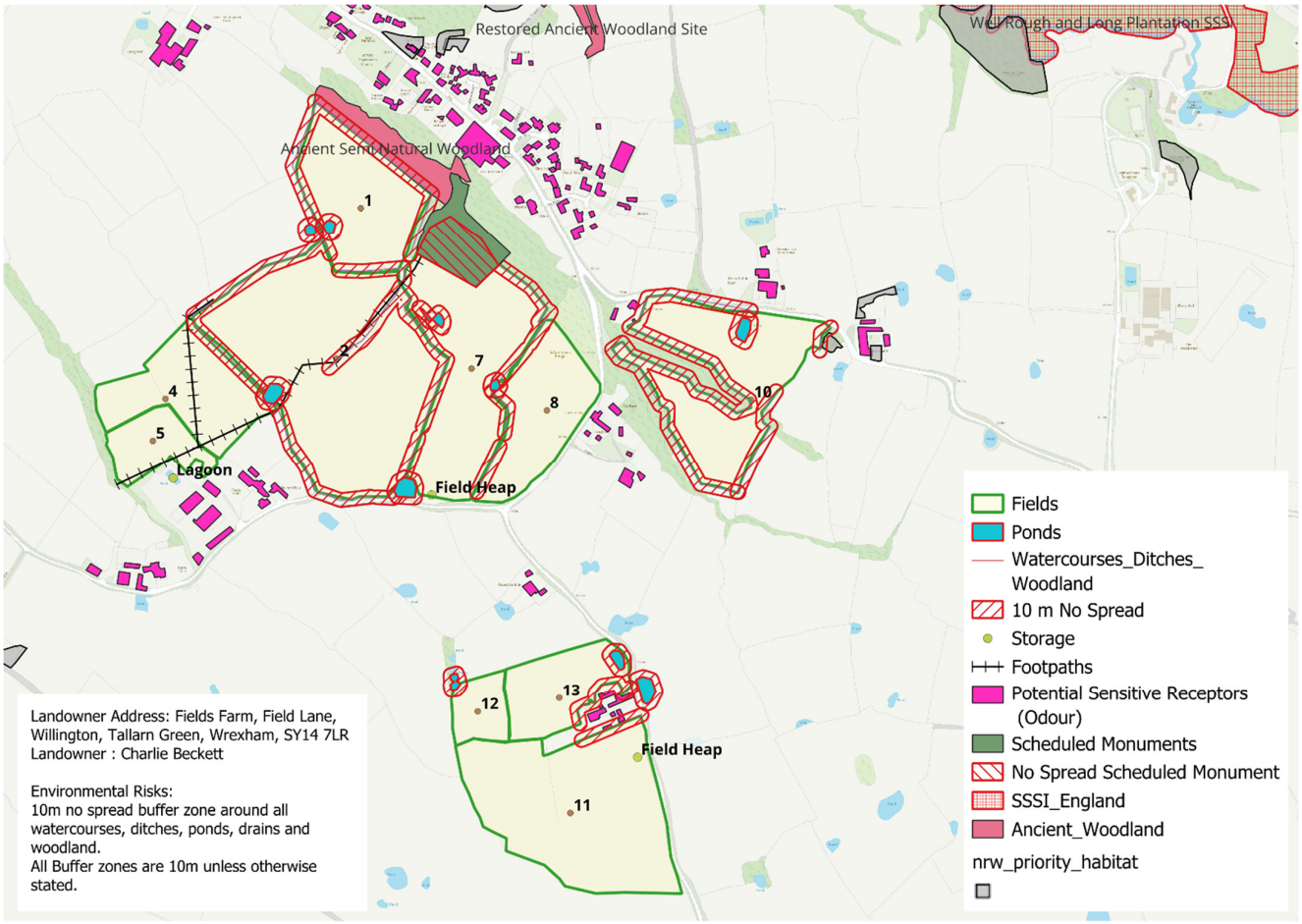
Odour potential of waste being applied:

The 02 02 04 and the 02 02 02 (egg shells) from D. Wise Ltd may have a moderately offensive odour and the potential to cause odour generation.

Potential sensitive receptors to odour near the spreading areas:

Deliveries to site are made in sealed tankers (ETP sludge) or covered tractor trailer (Eggshells) so there is very little potential for any off-site odour during delivery until the wastes reach the deployment area to be spread or are placed into temporary storage awaiting spreading. Temporary storage is in the long-standing farm lagoon situated in the farmyard (ETP sludge) or field heaps (eggshells). There are a number of dwellings within 250 metres of the spreading area, public footpaths through some fields and nearby to the spreading area. The locations of these potential sensitive receptors have been identified on the below map.

Potential Sensitive Receptors – Odour – Map



Sources of potential odour generation & control measures:

Delivery

Any odour issues generated by the delivery operation will be of a transient nature as the vehicles will be passing sensitive receptors. Deliveries to site are made in sealed tractor tankers or covered tractor trailer, which is very effective to control any odour. As a result, there is very little potential for any off-site odour during delivery until the wastes reach the deployment area to be spread or are placed into temporary storage awaiting spreading.

Unloading / Storage / Loading

There is potential for odours to be generated during the transfer of liquid waste from the tractor tankers into the Lagoon or from the transfer of eggshells from the trailer onto field heaps. These odours are generally short lived as once the actual operation involving the transfer of the materials has been completed, it is unusual for the temporary storage in the lagoon/field heaps to generate odours. Transfer of liquid waste is carried using suction pipe connected between th tanker and the lagoon. During decoupling there is the potential for odour release although this is only for a very short time and is likely to dissipate very quickly. The tipping of the eggshell trailer has the potential to produce odour for a very short time while tipping.

Control of odour from the Fields heaps storage can be achieved by ensuring that the wind during tipping is away from the nearest identified sensitive receptors. The rate of odour transmission falls as the distance from a receptor increases. Temporary storage periods and quantities will also be kept to as short as possible to reduce any potential for odour.

Loading of the temporary stored liquid and eggshells waste prior to the material being spread will potentially increase the amount of odour generated. Although the loading operation is of a limited duration, odour emissions may increase compared to an undisturbed store. Where spreading is carried out, the liquid is spread in deployed fields pumped through the tractor tanker into the injector which is a closed transfer system to control any odour from transfer. Where spreading is carried out by rear discharge spreader, odour will be short while the eggshells are spread. During decoupling there is the potential for odour release although this is only for a very short time and is likely to dissipate very quickly.

Where possible, and especially in sensitive locations, unloading, temporary storage and spreading operations should be avoided on hot summer days. Odours are more noted on these days as the heat increases the rate of evaporation and volatilisation of odorous compounds increases and therefore the transmission of odoriferous compounds through the air also increases. In addition, warm days encourage people to be outside or have windows open and therefore be more likely to be impacted by any odours.

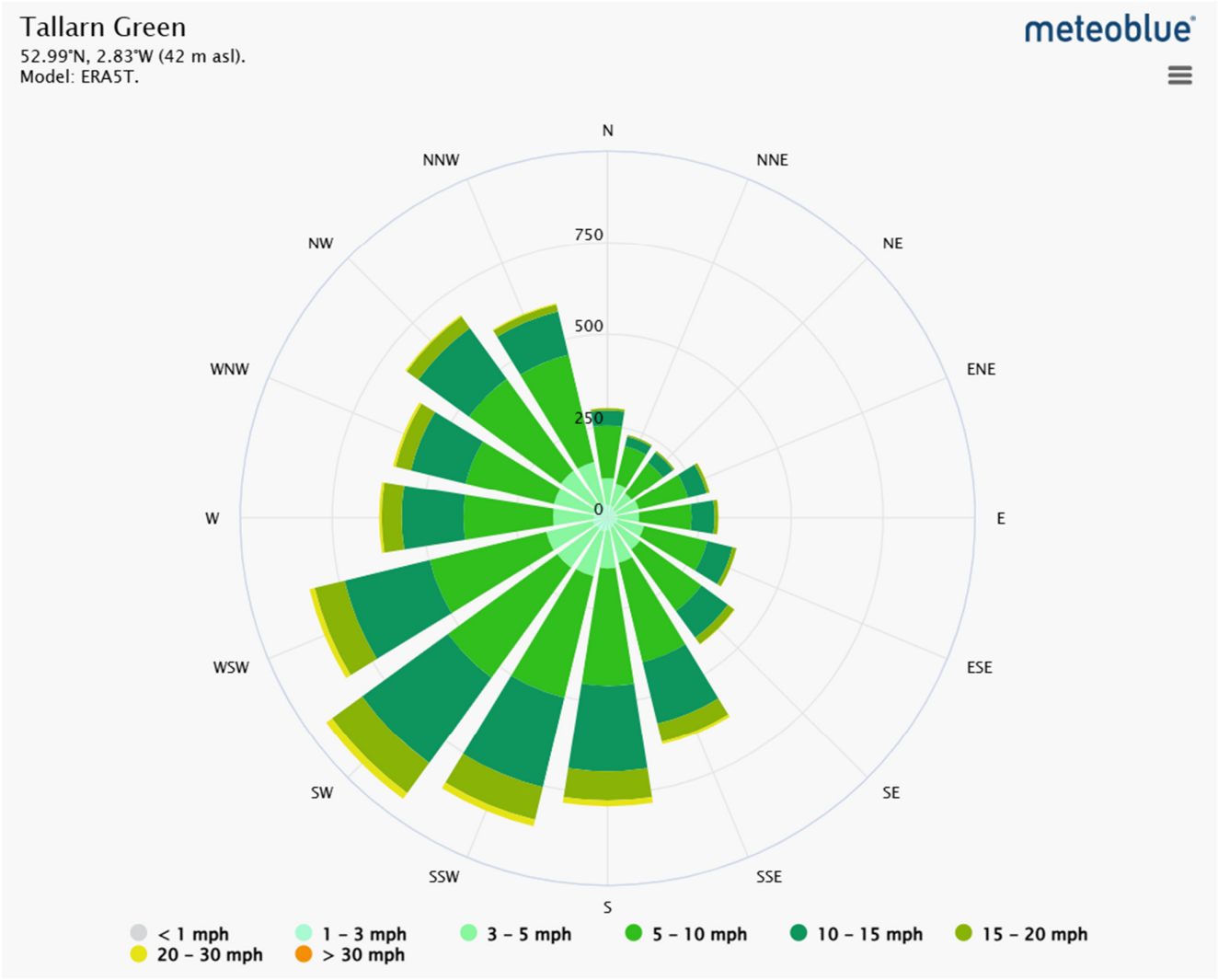
When waste is stored in the lagoon there is potential for odour issues to occur. Control of this odour can be achieved by ensuring that storage occurs at a suitable time of the year, ideally not when hot weather is predicted. If odour issues occur that stem from the lagoon or fields heaps, they will be covered when prevailing winds are directed towards any sensitive receptors.

Spreading

This part of the operation has the greatest potential to lead to odour generation and any odour derived complaints. The method of operation, itself dictated by cropping, crop nutrient requirements & soil type and ground conditions can have the most direct effect on control of odour emissions. Spreading method for the ETP sludge is by injector, the spreading method for the eggshells is via rear discharge spreader. Both spread methods are effective in limiting odour generation & nutrient losses and are best available techniques for the type of waste.
Spreading of the wastes should take place when the wind is blowing away from the nearest sensitive receptors and particularly hot days should be avoided whilst spreading. The application of waste is co-ordinated with local weather forecasts and in line with guidance from the Code of Good Agricultural Practice.

Factors affecting odour:

Several factors can impact the risk of odour. These include the distance of sensitive receptors from the spreading area, time of spreading, wind direction, topography, temperature and weather conditions, duration of operation, size of area spread & quantity spread.



Wind Direction for Tallarn

The distance of the sensitive receptors from the area being spread has one of the greatest potentials for the risk of odour with odour risk reduced the further the sensitive receptors are from the area being spread. Ensuring spreading is only undertaken near any sensitive receptors when conditions are suitable, and when the wind direction is away from the sensitive receptors will reduce odour risk.

Daily and weekly weather forecasts will be used to help reduce the impact of odours to sensitive receptors and ensure spreading is undertaken under suitable conditions. Should wind direction alter and pose greater risk of odour to nearby sensitive receptors spreading may have to stop until conditions and wind direction alter if odour is offensive. Odours are expected to be localised but where odours become persistent further action will be taken.

The size of the surface area spread can lead to greater risk of odour due to larger surface area for potentially odour emitting waste. Odour emissions are reduced by controlling the area of material exposed to the atmosphere during spreading through spread methods used. The duration of the operation will be reduced as much as possible through high work rates control and reduce odour emissions compared with other methods. Spreading on weekends and bank holidays will be avoided where possible and avoiding periods of warmer weather as there is likely to be greater risk with more people at home or outdoors.

Odour Monitoring:

Monitoring of odours will be carried out in the area around the site to help detect any off-site odours and identify the causes and any suitable action that needs to be taken. This monitoring will be based on the 'sniff test' at various locations around the site. Odour monitoring will be carried out by a person or persons who has not been working on site within the preceding 2-hour period to avoid undue influence from odour 'habituation'. These site visits could be carried out by land finders, TCM or by site operators when they visit the site.

There will be three possible evaluations:

1. No odour perceptible. No action required.

2. Slight odour perceptible. Check the area to determine the potential source. This is followed by a second odour estimation and a log of the odour incident and if any remedial action is required.

3. Perceptible odour. Immediate notification to TCM followed by site & boundary checks to determine whether the odour is from spreading area or an external source. An odour report/complaint form will be completed, and appropriate remedial action will be undertaken and reported.

A full upwind and downwind assessment will be carried out as soon as practicable at any time when local residents, other receptors or NRW telephone or make contact about off-site odours. An odour complaint form is also completed.

Further Actions:

Deliveries and spreading will be stopped if the measures in place do not control off-site odours satisfactorily and are causing odour nuisance to sensitive receptors. Spreading operations will not start again until the cause of the odour issue has been mitigated or the weather conditions giving rise to the odour issue have altered.