

Habitats Risk Assessment

**Aggregate Recycling Facility
Spencer Recycling Ltd
Unit 4
Weaver Industrial Estate
Speke
Liverpool
L19 8JA**

Version 1

Keith Lewis BSc (Hons) MSc
Pearl Environmental

05/11/2018

1.0 INTRODUCTION

Spencer Recycling Limited are applying for an Environmental Permit (waste facility) at their premises at Unit 4 Weaver Industrial Estate, Speke, Liverpool, in order to allow a proposed operation involving the *recycling of inert and excavation wastes*. Such materials are screened and crushed using attachments to the mobile plant, with the resulting secondary aggregates being sold back to the industry for reinstatement works such as highways and construction.

Although the location of the premises is within an established industrial estate, it is within 1km of protected nature conservation sites, and hence a bespoke permit application is being applied for to the EA. This assessment forms part of that application. An aerial view of the proposed site is shown below.



An assessment of the potential risks posed by newly permitted waste facilities to important habitats is required by the Conservation (Natural Habitats & c.) Regulations 1994, (commonly known as the 'Habitats Regulations'). This relates to the protection of 'European Sites', (SACs, SPAs and cSACs in England) and to cSACs in Wales, and Ramsar sites. For non-landfill waste facilities such as this proposal, a search buffer of 1km is used.

2.0 IDENTIFICATION of RELEVANT SITES

An internet search of various statutory and non-statutory bodies was undertaken in order to identify and characterise nearby nature conservation sites (within 1km). These are listed below.

MERSEY ESTUARY SSSI/ RAMSAR Site/ SPA Site

UNITS of the SSSI within 500m

Unit 1 of the SSSI is 58m (South West) of the proposal site, and this is 'littoral sediment' of unfavourable but recovering condition.

Unit 2 of the SSSI is located 232m from the proposal site and comprises 'Supralittoral Rock' in a favourable condition, and this represents the area immediately above the tide line but influenced by splashing.

The proximity of the SSSI units to the proposal is shown in the plan below:



Reason for Notification

Having large areas of intertidal sand and mudflats, the Mersey Estuary is an internationally important site for wildfowl and waders. The site also includes reclaimed marshland, salt marsh, brackish marshes and boulder clay cliffs with freshwater seepages. The estuary is also a valuable staging post for migrating birds in spring and autumn.

VAM (Views About Management)

English Nature has produced a VAM document ('Views About Management') for this SSSI. The 'Views About Management' gives a straightforward account of the basic management that is needed to conserve and enhance the wildlife or geological features of the SSSI. By giving a clear and simple statement of management principles for conservation, these views will help to clarify and build upon

the existing understanding between SSSI owners and occupiers and Natural England about the management of their SSSIs. The **Main Management Themes** for the Mersey Estuary SSSI are:

Littoral sediments (mud and sand flats)

Intertidal mud and sand flats include a range of generally muddy or sandy low-gradient shores that are exposed to air during low tide and submerged during the higher tides. High energy shores, such as those on open coasts, are generally sandy in nature whilst more sheltered, low energy flats are muddier. They support a wide variety of marine invertebrates that represent an important food source for many fish and bird species.

Good water quality and sediment quality should be maintained, and the sediment budget within the estuarine or coastal system should not be restricted by anthropogenic influences.

The birds that use mud and sandflats for feeding and roosting are vulnerable to disturbance from human activities, for example, bait digging, dog walking and wildfowling. These activities can lead to reduced time spent feeding, or individuals being restricted to areas with a poor food supply. Disturbance should therefore be minimised, especially at times when bird populations may be stressed, such as during severe winter weather. The location and extent of mud or sandflats is dependent on the extent to which the estuary or coast where they occur is constrained from responding to sea level rise and changing sediment regimes. Management needs to create space to enable landward roll-back to take place in response to sea-level rise, and should also allow the system to be dynamic and retain the flexibility to respond to associated changes such as the movement of physical features within the system, e.g. migrating subtidal sandbanks.

Coastal Saltmarsh

Saltmarshes form the upper vegetated portions of intertidal mudflats in sheltered coastal locations, such as estuaries, lagoons and beach plains. There is typically a zonation of vegetation, from plants adapted to regular immersion by the tides (halophytes), through to more widespread plant species in the areas less frequently covered by the sea. The halophyte plant species are confined to this type of habitat, and areas of structurally diverse vegetation provide good invertebrate habitat. Saltmarshes are also important nursery sites for several fish species, and important refuge, feeding and breeding grounds for wading birds and wildfowl.

Where saltmarshes require management this has traditionally been achieved by grazing, and previously used regimes should be continued. Grazing provides a variety of different habitats, particularly for wintering bird species, and if grazing were to cease there may be a loss of botanical diversity. The precise timing and intensity will vary according to local conditions and requirements, for example the type or availability of stock, or the need to avoid trampling ground nesting birds. However on many sites, the aim will be to create a short turf that can be attractive to over-wintering wildfowl, with a reduction in stock density in the early summer for the benefit of ground-nesting birds. Indeed, careful reduction of grazing can increase the number of breeding birds, without significantly altering the plant species composition. Care should be taken not to overgraze the site, as this may reduce the diversity of animal and plant species that the saltmarsh is able to support, as well as potentially impact the sediments supporting the saltmarsh.

Not all saltmarsh habitats require active management to retain their conservation interest. Where there has not been a history of grazing, the saltmarsh will be able to maintain itself and grazing-sensitive species are likely to be present, therefore grazing should not be introduced.

There are a number of factors that are contributing to saltmarsh change that management may need to take into consideration. These include coastal erosion as a result of coastal flood-defence works, rising sea-levels, variations in sediment deposition, and land claim for development.

Wet grassland with breeding and wintering bird interest

Wet grasslands occur on land that is subject to periodic flooding or has a seasonally high water table and is waterlogged for much of the year. Wet grassland often supports a wide variety of plants and animals, in particular birds and invertebrates, and is an important habitat for breeding waders and wintering wildfowl.

Wet grassland requires active management if it is to retain its conservation interest. Generally, each year's growth of vegetation must be removed. Otherwise it becomes dominated by tall, vigorous grasses and rushes which, together with an associated build up of dead plant matter, suppress less vigorous species and lower the botanical richness of the sward. Traditionally, this management is achieved by grazing. Cattle are often the preferred stock, being relatively tolerant of wet conditions and able to control tall grasses and rank vegetation. Cattle also tend to produce a rather uneven, structurally diverse sward. However, ponies, or even hill sheep, can be used if necessary. Grazing usually takes place at times between late spring and early autumn, but the precise timing and intensity will depend on local conditions and requirements, such as the need to avoid trampling ground-nesting birds. Heavy poaching should be avoided but light trampling can be beneficial in breaking down leaf litter and providing areas for seed germination. Agricultural operations in general should be avoided before mid-June to minimise disturbance to breeding birds or the destruction of nests. An element of managed scrub, both within and fringing a field can be of importance to birds and invertebrates, as can a surrounding hedge.

Partial winter flooding is important in maintaining suitable habitat conditions for wintering birds. A mosaic of winter flooded grassland and permanently un-flooded grassland is desirable, with both temporary and permanent pools present. The maintenance of a mosaic of shallow surface pools and un-flooded areas during the winter will provide roosting and feeding habitat for wintering wildfowl and waders. From April onwards, the area of standing surface water should be reduced to increase the area available for nesting waders and also by concentrating aquatic invertebrates in small pools to provide suitable feeding areas for their young. Some shallow areas of flooding should be maintained until late June to provide patches of bare muddy ground on which the birds and their young can feed as raised sward height makes feeding on the drier areas more difficult. The birds using these features are directly vulnerable to disturbance, which can cause them to lose time spent feeding or drive them to areas with a poorer supply of food. Management should seek to minimise any harmful disturbance, especially at times when bird populations are under stress, such as severely cold conditions. Predators, especially crows and related species, should be controlled and this may be best achieved by limiting their nesting sites.

Careful maintenance of existing ditches and drains is usually acceptable practice, but abandonment or deepening of ditches can be harmful.

All habitats

The habitats within this site are highly sensitive to inorganic fertilisers and pesticides, applications of which should be avoided both within the site itself and in adjacent surrounding areas. Herbicides may be useful in targeting certain invasive species, but should be used with extreme care. Access to this site, and any recreational activities within, may also need to be managed.

3.0 SOURCE CHARACTERISTICS of PROPOSED INERT WASTE FACILITY

The proposed waste management facility will only process *inert* materials, namely mixed hardcore (brick, concrete, ceramics etc), stone and soils (sands, clays etc). No organic, putrescible or contaminated materials will be authorised.

The objective of the facility is to produce recycled aggregates from mixed excavation wastes, which will be resold to the highways and construction industry for reuse in place of virgin materials.

The operation will take place in an existing open yard area within the established Weaver Industrial Estate, and will comprise the following:

1. The receipt and storage in bays of incoming inert excavation waste materials,
2. The screening and crushing of this material using specialist attachments on mobile JCB plant
3. The storage and bulk loading of recycled aggregate and soils for transport from site.

As the site is located within 1km of several 'European Sites' a *Bespoke Permit* is being applied for. Otherwise, the conditions of Standard Rules Permit SR2008No11 would apply (75,000 tonne per year inert waste transfer and treatment).

The site is located on the established Weaver Industrial Estate in Speke, South Liverpool. Neighbouring land uses includes:

1. another waste facility (Veolia Solvent Recovery Plant) adjacent to the North, the boundary to which comprises a substantial 6m corrugated acoustic fence (see photos);
2. open storage yards to the West and East, used for aggregates, civil engineering etc;
3. industrial units to the South.

The dock wall of the Mersey Estuary is located 58m to the South West, beyond a concreted yard currently used for open storage.

The typical operations of an inert waste treatment facility could potentially give rise to the following hazards, if not properly managed, and could impact on the Mersey Estuary SSSI site located 58m away beyond the sea wall to the South East:

- Dust
- Silty run off

Other issues such as litter, odour, vermin, release of toxins, nutrient enrichment etc are not associated with such operations.

4.0 SCREENING RISK ASSESSMENT

The potential hazards identified in section 3 above are assessed in table below, together with the proposed management techniques to be employed at the new site.

Hazard	Source	Potential Pathway to SSSI	Risk Assessment & Proposed Management Controls
Dust	Vehicle Movements Stockpiles Processing Activities Yard surface Loading/unloading	Air	<p>The prevailing wind direction at this location is from the West and South West (ie blowing from the SSSI site towards the facility). The SSSI would be most susceptible from dust from the facility during periods of strong winds from the North East and East.</p> <p>Although being located close to the estuary and therefore quite exposed to the wind, the existing 6m acoustic fence on the Northern boundary affords good protection. In addition, there is a substantial section of returning brick wall in the adjacent yard which further protects from westerly winds. Also, a line of 2-high portakabin offices/stores will be located along a section of the Western boundary to provide further protection from westerly winds from the estuary. This will result in the Northern end of the site being enclosed by high boundary walls, so storage and processing activities will be located here.</p> <p>The whole Western boundary fence has previously been supplemented by dust sheeting attached to a 3m scaffold fencing, and this will be reinstated. This will serve to reduce wind speeds from the estuary and reduce the risk of dust losses from the yard surface.</p> <p>Storage of all materials will be within bays constructed of concrete lego blocks or similar, to reduce dust loss from stockpiles. Maximum stockpile height of 3m.</p> <p>A speed limit of 5mph will be in force within the yard to reduce transport-related dust on the site surface.</p> <p>Checks for dusty conditions within the site to be undertaken throughout the day by management.</p> <p>Dust suppression (mains water and grey harvested water) to be employed on the yard surface during dry windy weather. This will be a hose or towed bowser to keep the concrete trafficked surface damp.</p> <p>Processing is currently proposed to be limited to the use of small grab attachments to the JCB, and this will be for an estimated 2-3 hours of the day. As such, the height of these attachments is easily controlled and will be kept as low to the ground as possible.</p> <p>Trafficked areas of the concrete surface (of yard and access) will be kept free of mud at all times by either manual brushing or the hiring in of a mechanical road sweeper.</p> <p>Should dust be observed to be leaving the boundary at any point, all processing and loading/unloading activities will cease until the issue is rectified using application of water suppression.</p>
Water run off	Rainwater impacting on yard	Overland and drainage	All materials on site are INERT in nature so rainwater run off from storage areas will be chemically clean, but may be potentially silty

			<p>in nature (ie not organic or nutrient-rich).</p> <p>However, the whole yard is concreted with falls directing rainwater from the yard drains to gulleys which lead to the foul sewer on Blackburne Street. An oil interceptor/silt trap will be installed at the yard which will capture and settle any solids, with only settled clean rainwater entering the drain. The interceptor will be subject to regular visual inspection and maintenance, and all checks recorded as per EMS procedures.</p> <p>Spill kits available on site in case of leaks of hydrocarbon (eg hydraulic oil from split hose on plant or wagon).</p> <p>All site surfaces are concreted, the integrity of which will be checked regularly, with any repairs implemented as soon as practicable.</p>

5.0 CONCLUSION

The proposed permitted site is located within 1km of the Mersey Estuary SSSI, RAMSAR and SPA. However, these designated areas are located upwind of the proposed site, and since the activities at the facility will be limited to inert materials, there exists only a limited and localised potential for a negative impact. Potential risks are highlighted as dust and silty run off, and suitable measures are proposed alleviate those risks. These are a combination of site design, infrastructure and management controls which will be employed in order to minimise such emissions throughout the life of the permit.

APPENDIX 1

Proposed Site Layout Plan

