

Habitats Assessment

J&M Demolition & Recycled Aggregates Ltd

Proposed Aggregate Recycling Facility

Horwich Loco Works

Horwich

Bolton

16th August 2021

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1.0 INTRODUCTION

J&M Demolition & recycled Aggregates Ltd ('J&M') has operated a small inert waste transfer/treatment at a plot located on the Western boundary of the Horwich Loco Works since January 2015. As the Loco Works is being progressively developed from North to South for housing, J&M are now required to move their operation to an empty plot at the far Southern end of the estate. An application will be submitted to the EA to surrender the environmental permit for the existing site.

In the meantime, an application is being made to the EA for a new permit at the proposed plot. The operation will be a mirror image of the existing one, although that type of permit (Tier 2 bespoke) is no longer available. Instead, a bespoke permit is required. The reason a Standard Rules Permit is not applicable is due to the proximity to a number of protected conservation sites within the vicinity to the Loco Works. Consequently, an assessment of the risk posed by waste recycling activities at the new site is required, to accompany the permit application. An assessment of the potential risks posed by newly permitted waste facilities sites 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 the proposal, a search buffer of 1km is used.

2.0 PROPOSED SITE OPERATIONS

The inert waste recycling operation involves the screening and crushing of mixed hardcore and soils to produce recycled aggregates and soils for reuse in the construction industry. Materials are brought to the yard from excavation/demolition projects in bulk tipper wagon and stored in stockpiles. This is then screened and crushed using tracked mobile plant. The products are then stored prior to being exported from site for reuse. Because the material is classed as a waste, an environmental permit is required from the Environment Agency.

Although bespoke, the permit will be based on the Standard Rules SR2008No11 (Inert & Excavation Waste Transfer & Treatment, 75,000 tonnes per annum).

The site is located at the far Southern tip of the estate, at NGR SD6420510369, as shown in Plan 1 below. It is an open yard bounded by an earth bund (4.5m) to the South and West topped with 2.4m steel palisade security fencing. This bund runs across the whole Western flank of the Loco Works, which itself is positioned on a plateau above lower moss/bog land to the West/South West, and industrial estates to the South.

Since the Loco Works shut down in 1983, this plot has been used for waste transfer stations for skip waste recycling, civil engineering and associated heavy storage, and as a training facility for JCB use.

Site surfaces are predominantly rolled compacted hardcore, with relic concrete pads in place beneath the site cabin and extending along the Northern boundary (associated with a former travelling crane).

There is no requirement for any preparation or construction works. An existing soil bund on the Southern and Western boundary (in addition to the estate bund) will be retained, as will the existing site cabin. The Southern half of the yard will be used for open storage, with processing taking place in the upper half.

Much of the material to be processed will derive from the demolition and construction ongoing throughout the rest of the Loco Works, thus preventing thousands of lorry loads leaving the estate with waste, and thousands entering with aggregates and soils for construction. It is anticipated that the life of the site (and permit) will be 3 years, by which time the redevelopment of the estate will have reached the far Southern end. At this point an application will be made to the EA to surrender the permit.



Plan 1. Aerial Photograph of Proposed Inert Waste Recycling Site

3.0 IDENTIFICATION of RELEVANT CONSERVATION SITES

In response to a pre-application submission to the EA, several protected habits/species were highlighted to exist within 1km of the proposed site boundary. These were as follows:

- Red Moss SSSI, located 104m to West
- Red Moss LWS, located 80m to West
- Protected Habitat (deciduous woodland), located 20m to South
- Protected Species (water voles) located 39m South

3.1 Red Moss SSSI/LWS

This is a wetland mossland site and is protected due to its biodiversity and undisturbed character. Since 1999 it has been undergoing a programme of restoration to recover water levels in order for mossland species to thrive. The site is managed by the Wildlife Trust for Lancashire on behalf of Bolton MBC, and is divided into 4 distinct units. These are listed below.

UNIT 1

Unit ID: 1011684

Unit area: 32 hectares

Main habitat: Bogs - lowland

Condition: Unfavourable recovering

Latest assessment date: 22/01/2019

Condition assessment comment:

The core mossland area is continuing to recover, works done over the winter 2017-18 have been very successful and water levels have been further stabilised. Sphagnum is continuing to spread within the pools with *S. fallax* & *S. cuspidatum* within the pools and lawn. Where the sphagnum has been established for some time further sp are forming hummocks such as *S. palustre*, *S. papillosum* and *S. subnitens* with *Calluna* & *E. angustifolium*. Scrub levels were very low across the moss (less than 1%) with exception of areas of lag fen where willow and birch scrub and woodland is an appropriate component of the habitat. The area covered in *Molinia* next to the railway has had water levels raised by winter 2017-18 bunding works, conditions are now right for this area to develop a more typical bog community. It was noted that sphagnum in the ditches and pools in this area have started to expand. The area of transitional mire with mix of *S. fallax*, *S. palustre*, *E. angustifolium* and *Juncus* are continuing to develop and the sphagnum is becoming more dominant. The areas affected by the historic inflow of water from the motorway and on adjacent brook are both recovering well after bunding / piling works, with *Typha* abundance drastically reduced and common cotton grass and sphagnum continuing to colonise the area, there is an abundance of *Polytrichum* suggesting there is residual enrichment in the peat but this is still an improvement of *Typha* swamp.

UNIT 2

Unit ID: 1011685

Unit area: 9 hectares

Main habitat: Bogs - lowland

Condition: Unfavourable recovering

Latest assessment date: 22/01/2019

Condition assessment comment: Area is developing well, Sphagnum with *S. fallax*, *S. cuspidatum*, *S. palustre*, *S. papillosum* and *S. subnitens* with *Calluna* & *E. angustifolium* replacing *Molinia*. The extra bunding done 2017-18 has helped to keep some of the higher areas of peat stay wet. Noted bog pond weed within pools and the water vole population has expanded into the re-wet areas

UNIT 3

Unit ID: 1011686

Unit area: 4 hectares

Main habitat: Bogs - lowland

Condition: Destroyed

Latest assessment date: 22/02/2019

Reason for adverse condition: Planning permission - other mineral and waste

Condition assessment comment: Bunding along edge of moss is working, water no longer directly flowing from this unit into core bog. Water levels within perimeter ditch high so it is not drying out the adjacent mossland. The wet area between the landfill and support lagg of reedbed, *Typha* swamp and wet woodland/scrub.

UNIT 4

Unit ID: 1015693

Unit area: 0.5 hectares

Main habitat: Bogs - lowland

Condition: Favourable

Latest assessment date: 19/06/2015

Condition assessment comment: Area of wet woodland buffer zone at edge of moss – willow and birch with ground cover of *Phalaris* and Himalayan balsam. Area is to be targeted with funds from loco works development to target the invasive weed problem.

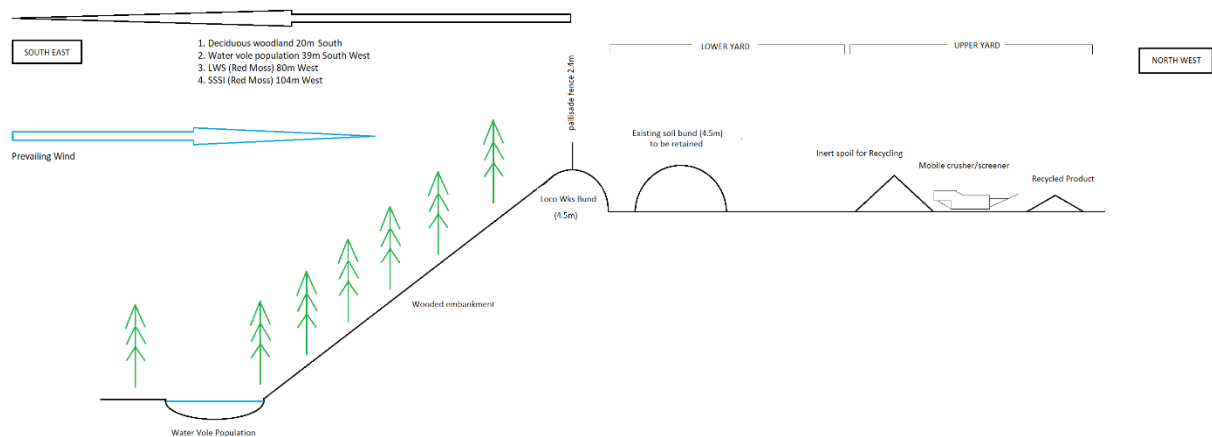
3.2 Deciduous Woodland

This protected habitat is located 20m South of the boundary and comprises low density mixed broadleaved species extending to an area of 5.6 hectares. This is immature woodland which starts at the foot of the steep embankment which separates the loco works from the natural habitats to the West and South.

3.3 Protected Species – Water Vole *Arvicola Amphibius*

There are numerous water bodies associated with the moss/bog land to the West and South which provide habitat for the water vole. The nearest is located 39m to the South at the foot of the vegetated embankment to the Loco Works. See appendix 1 for water vole assessment.

Plan 2 below shows the relationship between the proposed recycling site and the protected habitats/species.



Plan 2. Profile of Site and Protected Habitats/Species

4.0 SOURCE CHARACTERISTICS of PROPOSED RECYCLING FACILITY

The typical operations of an inert waste treatment facility could potentially give rise to the following hazards, if not properly managed:

- Dust
- Noise/vibration
- Silty run off

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

5.0 RISK ASSESSMENT & REMEDIAL MEASURES

Hazard	Source	Receptor	Pathway	Site Notes	Management Controls
Dust	Stockpiles Mobile plant Yard surface Loading/unloading	SSSI (104m) Woodland (20m) Water vole (39m)	Air	Prevailing wind is from West – all receptors are located upwind. Perimeter bund (and internal stockpile to be retained) shelter operations from prevailing wind. Lower half of yard will not be used for processing (storage only)	Mains water available Dust suppression will be in use on the screener and crusher Water hose in use for damping site surfaces and potentially dusty loading/unloading operations. Stockpile heights limited to 5m Site speed limit 5mph Crusher will be housed within a horseshoe of stockpiled material, as standard.
Noise/ Vibration	Mobile plant HGV Loading/unloading	SSSI (104m) Water vole (39m)	Air/ Ground transmission	Modern jaw crusher/screener – quiet operation. No high impact activities required (eg pecker) No line of site from activities to receptor (elevation change and perimeter earth bunds). Water voles not normally affected by noise/vibration No processing in lower half of yard (closest to SSSI) Existing working platform consists of several metres of made ground (compacted soils/hardcore) which absorbs vibration. History of similar activities at this and other yards on the Loco Works estate. Temporary (3 year) duration, during which time the whole estate will be subject to demolition and building associated with the housing development.	Crusher will be housed within a horseshoe of stockpiled material, as standard. Tailgates of wagons to be secured before exit
Water run off	Rainwater impacting on yard & stockpiles	SSSI (104m) Water vole (39m)	Overland. Perched groundwater	Surface is permeable, with rainwater percolating through to groundwater naturally. No drainage connections from the yard. Perimeter bund (4.5m) across S and W boundary prevent any overland flow of silty water down embankments. All waste materials are uncontaminated/inert (soil, stone, brick, concrete).	Waste acceptance and rejection procedures

Appendix 1.

Table 1 below summarises those Aspects of Developments which have the potential to pose a risk to water vole populations (taken from The Water Vole Mitigation Handbook as part of The Mammal Society Mitigation Guidance Series) and assesses the relevance at the Horwich site.

Table 1 Potential impacts of development on water vole population (39m to South)		
Aspect	Potential Mode of Effect	Relevance at Horwich Site
Habitat loss and deterioration	The quantity and quality of habitat lost (or altered) as a result of a development must be clearly stated, along with the timescale for which the loss will be experienced (e.g. until restoration for temporary losses). The implications for the local water vole population must be assessed. It should be made clear whether burrows will be lost or otherwise affected.	Not applicable. No loss of habitat- reuse of existing site.
Fragmentation	Dependent on the location, extent and timescales of any habitat loss, there may be a fragmentation effect that also needs to be assessed. Certain development types, such as highway schemes or large-scale housing developments, may result in the construction of culverts which can have a barrier effect and cause permanent fragmentation. The implications of such fragmentation, in addition to habitat losses, must be assessed.	Not applicable. No loss of habitat- reuse of existing site.
Incidental mortality during site clearance or construction	Operations affecting habitat suitable for water voles have the potential to kill (or injure) water voles. The likelihood of this occurring should be determined	Not applicable. Re-use of existing site. Site located 39m North beyond steep wooded embankment at an elevation of approx. 12m minimum.
Damage to burrows	In most cases, damage to water vole burrows will have been considered under 'habitat loss and deterioration', above. However, in some cases, such as for operations adjacent to wetland habitat that involve significant vibration, it may be appropriate to assess the likelihood of damage to burrows, and therefore also incidental mortality.	Negligible risk. Mobile plant (crusher, screener) will be located in upper half of site at distance of <100m from vole population (lower half to be used for plant/wagon storage only as too boggy).
Introduction of domestic predators	Residential developments may result in an increase in the numbers of cats present within a given area; the effect of this on the local water vole population will need to be assessed.	Not applicable.
Management	Changed management (e.g. increased frequency of mowing of banks or dredging of watercourses) can significantly degrade the habitat for water voles. Opportunities to deliver a beneficial effect through appropriate management should be sought	Not applicable.
Pollution	Although water voles are known to survive in watercourses with very poor water quality, the pollution of wetland habitat could	Negligible Risk. There is no drainage system (and the only concrete surfaces are undrained

	<p>have a significant effect through degradation of the habitat; it will be necessary for this potential impact to be mitigated through good drainage design and construction working practices, and is therefore not discussed in detail in this document.</p>	<p>relic pads). Rainwater will continue to infiltrate the site surface and percolate to perched groundwater. This is likely to be in hydraulic continuity with the water features and mossland to the South and West due to the drop in elevation.</p> <p>There is no risk of overland flow of silty run off due to the presence of perimeter bund of the Loco Works.</p> <p>The only materials to be imported to site are inert (mixtures of soils, brick, ceramics, concrete etc) with minimal leaching potential. Standard EA permit conditions for this operation do not require impermeable surfaces with drainage.</p>
Water level	<p>Altered water levels may result from new water level control structures or from changes to the surrounding hydrology (e.g. drainage). This could lead to flooding of burrows or to the drying-out of a standing waterbody.</p>	<p>Not applicable. No changes to existing drainage.</p>
Noise and visual disturbance	<p>In most cases, unlikely to have a significant effect on water voles.</p>	<p>Negligible risk. No line of sight from site to habitat. Intermittent noise from plant movement and processing is no different to existing and historical uses of the yard, namely: 2015-20 Civils Yard (AE Yates) 2005-15 Waste Processing Training for JCB Operations Pre 1983 – Loco Works</p>