



High Post Golf Course

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# Inert Waste Recovery Operation

Environmental Setting and Site Design (ESSD) Report

8<sup>th</sup> September 2021



This report was produced by Land & Mineral Management for Commercial Recycling (Southern) Ltd, trading, for the specific purpose of providing an outline Environmental Management System for Recovery work at High Post Golf Club

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## Contact Details:

Author: Lesley Loane

tel: 07970 103196

email: [ll@landandmineral.co.uk](mailto:ll@landandmineral.co.uk)

web: [www.landandmineral.co.uk](http://www.landandmineral.co.uk)

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# 1 Introduction

## Report Context

- 1.1 Land & Mineral Management (LMM) has been instructed by Commercial Recycling (Southern) Ltd to prepare an Environmental Setting and Site Design (ESSD) Report for inclusion in an environmental permit application for the recovery of waste at High Post Golf Club, near Salisbury Wiltshire. The location of the site is shown below. The land is primarily part of a driving range.

### Site Location *(Source: Mapcarta)*



- 1.2 The application seeks to obtain an environmental permit for the use of inert waste for engineering purposes in landscaping. A Waste Recovery Plan has been submitted to the Environment Agency and it has been agreed these works are a recovery activity.

## 2 Site Details

### Site Location & Access

- 2.1 The Site is centred at National Grid Reference SU 15261 36311 and is situated in the vicinity of the High Post junction of the main road between Salisbury and Amesbury (A345).
- 2.2 The Site is accessed via the unnamed road east of the A435.
- 2.3 Table ESSD1 summarises the surrounding land uses.

**Table ESSD1 – Surrounding Land Uses**

Boundary	Description
North	The road separates the site, clubhouse and parking areas from the main 18-hole course
South	Open fields / agricultural land,
East	Open fields / agricultural land.
West	The A345 highway beyond which there a number of industrial buildings.

### Site Classification

- 2.4 Use of waste in the restoration of the Site is fully detailed within the approved Waste Recovery Plan (WRP).
- 2.5 The activities at the Site will be regulated under the Environmental Permitting (England and Wales) Regulations 2016.

### Application Boundaries and Site Security

- 2.6 The proposed Permit boundary is shown below, an extract of the Permit Plan. The Site is on private land with no Public Rights of Way crossing it.

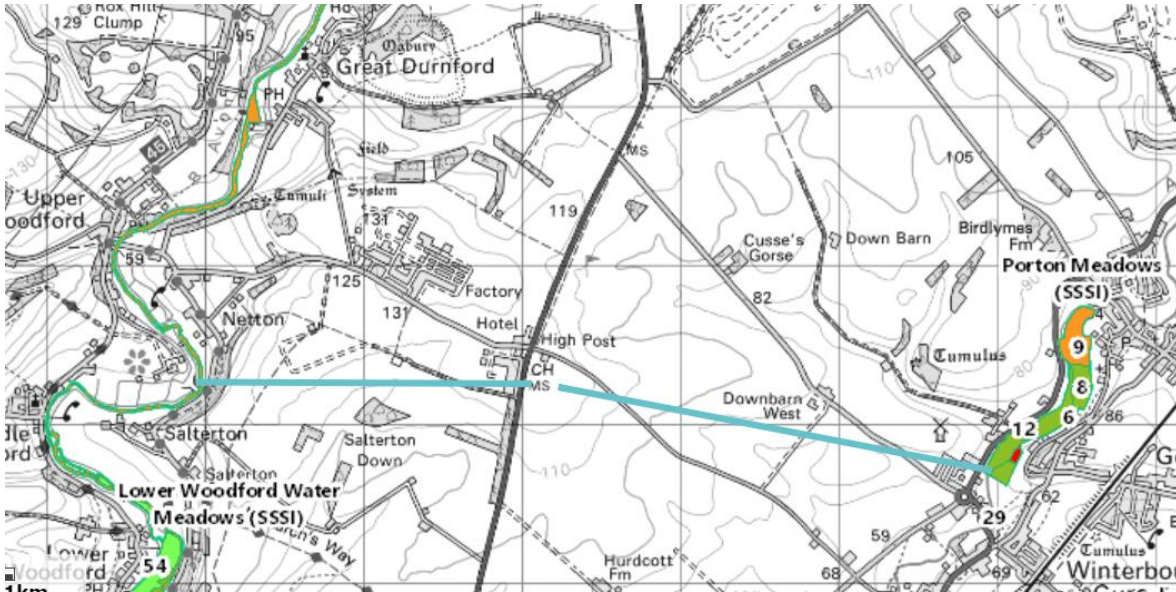


## Relevant adjacent former waste management activity boundaries

- 2.7 There is no recorded waste management disposal within close proximity to the site. The nearest is approximately 3.56km to the north at Porton Firs.

## Site Context

- 2.8 Habitat related receptors.



*Extract from Magic Map*

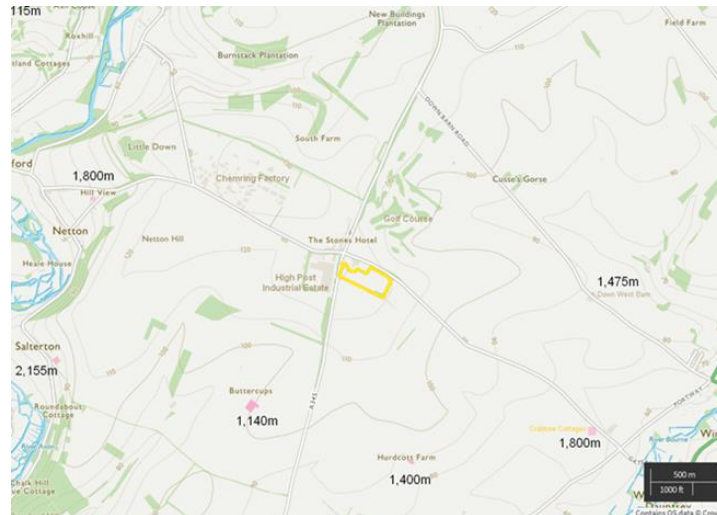
2115m to west River Avon SSSI & SAC / Lower Woodford Water Meadows SSSI 2350m

2785m to east Porton Meadows SSSI

Additionally ~1.48ha of Deciduous woodland adjacent to A345, south of the High Post Industrial Estate (not shown on map)

The Golf Course, not the driving range subject to this Permit application, is listed as a Priority Habitat Inventory as including Lowland Calcareous Grassland, Shrub and Deciduous woodland

## 2.9 Nearest Residential Properties



2.10 All residential properties identified are over 1000m from the site. High Post Industrial Estate lies to the west across the A345, as do further industrial premises including a petrol station and a hotel at 115m from the edge of the proposed development to the north.

2.11 The topography of the Site is shown on the existing layout drawing provided with the Permit application.

### 3 Source

#### Site Development

#### Historical Development







Date	Description
2001- 2018	A review of Google Earth shows that the site has been in constant use in connection with the golf course since it's purchase in 1975. Prior to that it is understood to have been part of the wider arable land that surrounds it on two sides. It is considered that there were no potentially polluting activities taking place on site.
	No pollution incidents are recorded on site or nearby.

**Proposed Development**

- 3.1 Across the range there are a number of small undulations, which can make collecting the balls with a motorised machine challenging without damaging the range surface. To eliminate the low spots, the main area of the driving range will be re-graded with a slight upward slope, which will help to reduce the run off of the balls. The end of the range will comprise an earth bank to act as a cut off and prevent the loss of balls.
- 3.2 Additionally, the practice area will be improved and made safer by the inclusion of banks. The drawings which accompany the Permit application show the details of what is proposed.
- 3.3 The works will be carried out in accordance with the approved Waste Recovery Plan.

**Proposed Waste Types**

- 3.4 These wastes were included in the WRP, and considered in the HRA, but the definitive list of waste will be that in the Permit when issued.

EWC Code	Description
17 01 01	Concrete
17 01 07	Mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06 (metal from reinforced concrete must have been removed).
17 05 04	Soil and stones (restricted to topsoil, peat, subsoil and stones only).

3.5 Waste will be accepted to the Site in strict accordance with the Waste Acceptance Procedures set out in the Management System, included within the Environmental Permit Application.

### **Consideration of Schedule 22 of the EPR 2016**

3.6 A HRA is included with this application.

## 4 Pathway & Receptor

### Geology

Period and Epoch or Age		Strata	Geological Description (BGS)
Cretaceous	Coniacian to Santonian	<b>Seaford Chalk Formation – Upper Chalk</b>  <b>Includes: Stockbridge Rock Member</b>	Firm white chalk with conspicuous semi-continuous nodular and tabular flint seams. Hardgrounds and thin marls are known from the lowest beds. Some flint nodules are large to very large.  The thickness of the sequence is 60-70m.  Stockbridge Rock Member: Very hard, locally porcellanous, creamy white chalk, grainy in part with abundant sponge spicules. Located at the western edge of the Landscaping. Estimated to be 2-3m thick.
	Turonian to Coniacian	<b>Lewes Nodular Chalk Formation – Upper to Middle Chalk</b>	Hard to very hard nodular chalks and hardgrounds with interbedded soft to medium hard chalks (some grainy) and marls; some griotte chalks. The softer chalks become more abundant towards the top.

- 4.1 The Chalk is sub horizontal with a low degree of localised folding. No faults are recorded locally across the area on the 1:50 000 geological map.

### Hydrology & Hydrogeology

#### Hydrology

- 4.2 The application area straddles the catchments of the Hampshire Avon (Upper) downstream of the Nine Mile River confluence (GB108043022352) and the Bourne (Hampshire Avon) (GB108043022390). The Hampshire Avon (Upper) is only present within the extreme west of the driving range.
- 4.3 No water courses are recorded within a radius of 250m from the Landscaping. The River Avon is in excess of 2km to the west and the River Bourne in approximately 2.8km to the east.
- 4.4 No waterbodies are recorded within a radius of 250m from the Landscaping. There is a small lake approximately 500m to the west of the driving range. This is likely to be artificial or perched on low permeability superficial materials and is not considered to be in hydraulic continuity with the Chalk aquifer

#### *Flooding*

4.5 The Environment Agency website shows that the Site lies within Flood Zone 1, indicating a low probability of flooding.

Hydrogeology

*Aquifer Characteristics*

4.6 The site is within the Upper Hampshire Avon Chalk groundwater body for the Water Framework Directive (WFD) Management Area abstraction licensing strategy. The aquifer is chalk, principal aquifer.

4.7 Private Water Supply Abstractions within 1km of the driving range\*

Ref	Licence owner	Grid Ref, distance and direction (WC)	BGS Ref - Grid Ref and distance and direction (BHs)
1	The Inn, High Post, Durnford, Salisbury, Wiltshire, SP4 6AT	SU 15063 36593 150m N	SU13NE6 - SU 15040 36570 130m N
2	Apsley Engineering, High Post, Salisbury, Wiltshire SP4 6AT	SU 15058 36527 85m N	SU13NE20 - SU 15050 36500 60m N
3	High Post Golf Club, Durnford, Salisbury, Wiltshire, SP4 6AT	SU 15151 36436 50m N	SU13NE44 - SU 15380 36210 Closest is 0m E
4	High Post Freeholds Ltd, 2 High Post Business Park, High Post, Salisbury, Wiltshire, SP4 6AT	SU 14937 36273 130m SW	SU13NE25 - SU 14900 36300 155m SW

\* All of these abstractions target groundwater from the Chalk.

4.8 Licensed Abstractions within 1km of the driving range

Ref	Licence Reference and owner	Grid Reference		Source	Purpose	Max. Daily Abstraction (m <sup>3</sup> )	Geology
LA1	SW/043/0024/004 HIGH POST GOLF CLUB BOREHOLE A - High Post Golf Club Ltd	415371	136202	Groundwater	Spray Irrigation	Aggregate 75	Chalk
LA2	SW/043/0024/004 HIGH POST GOLF CLUB BOREHOLE B - High Post Golf Club Ltd	415187	136425	Groundwater			
LA3	13/43/021/G/232 HIGH POST, DURNFORD BOREHOLE #1 - Chemring Countermeasures Limited	414200	136900	Groundwater	General Use Relating To Secondary Category	55	Chalk

*Groundwater Flow and Groundwater Quality*

- 4.9 The Site is above the water table. The BGS hydrogeological map (IGS, 1979<sup>11</sup>) suggests that the groundwater level beneath the driving range to historically be approximately 60mAOD (Figure 2.4), although this approximate depth is supported by local borehole records (provided in the accompanying HRA).
- 4.10 These boreholes record rest water levels of between 63 and 69mbgl. The most recently drilled boreholes recorded rest water levels of 69.3mbgl in SU13NW25 (March 1989), 63mbgl in borehole SU13NE44 (October 1999), and 63mbgl in SU13NW38 (November 1998). Borehole SU13NE6 recorded a rest water level of 61mbgl in January 1942 and SU13NE5 69.6mbgl in October 1949. SU13NE44 and SU13NE5 relate to the golf club and as such are considered to be representative of local groundwater levels. The data suggests that there are no significant changes to groundwater levels over time and that the data is appropriate for the present time.
- 4.11 The regional groundwater flow direction has been estimated from the published hydrogeological map (IGS, 1979). It is assumed to be broadly to the south or south east. An estimated hydraulic gradient of 0.002 has been calculated based on the 50 and 60mAOD contours.

*Man-made subsurface pathways*

- 4.12 There are no man-made subsurface pathways on Site.

*Receptors and compliance points*

*Groundwater*

- 4.13 Assuming that the lowest elevation of the driving range is 122mAOD assuming the data from October 1999 represents a low water level, being at the start of the wet part of the water year. Allowing for an approximate average annual variation of 6m per annum the unsaturated zone is therefore expected to be a minimum of 57m and for much of the year this will be greater.

*Surface Water*

- 4.14 Distance to surface water features means that there are no sensitive receptors identified which are likely to be impacted.

*Amenity*

- 4.15 Potential risks are from dust emissions and mud, which will be addressed within the Site's Environmental Management System. Appropriate mitigation measures will be implemented, where required, to avoid impact on sensitive receptors.

## 5 Pollution Control Measures

- 5.1 There are no specific pollution control measures required beyond those set out in the Management system for the site to include the waste acceptance measures. Their implementation will ensure only acceptable material is used for the works on site.
- 5.2 The application is supported by a Hydrogeological Risk Assessment which has considered to risk of the waste types proposed. Due to the proposed permitted waste streams to be imported and importation controls to be applied, it is assessed that the fill material will pose a low risk to the controlled water environment.
- 5.3 Landfill gas generation is not considered a specific risk as the materials used will be inert and of low organic content. Therefore, no monitoring for gas is required or proposed.
- 5.4 The final land use if not at risk of stability issues, the design has been approved under planning and devised from site survey work done to establish what was required with the minimum volume to achieve a better and safer driving range.
- 5.5 The improved land will continue to be managed as part of the wider golf club when it is complete. No post closure controls under the Permit have been identified.
- 5.6 The final profile will be shaped to promote surface run-off and prevent the pooling of water.

## **6 Site Condition Report**

6.1 A Site Condition Report (SCR) accompanies this application.