

# Grimethorpe, Barnsley

Soil Management Strategy





**TETRA TECH**

**Tetra Tech**  
11 York Street,  
2nd Floor,  
Manchester,  
M2 2AW  
0161 872 3223

**[tetrattech.com](https://www.tetrattech.com)**

# Soil Management Strategy

784-B034815.SMS.1

6<sup>th</sup> October 2023

## PRESENTED TO

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**Oakland Golf and Leisure UK Ltd**  
37 Warren Street  
London  
W1T 6AD

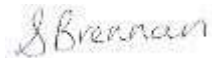
## PRESENTED BY

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**Tetra Tech Ltd**  
11 York Street,  
2nd Floor,  
Manchester,  
M2 2AW

**0161 872 3223**  
tetratecheurope.com

Prepared by:



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**Sara Brennan** MSc BSc (Hon)  
MIENVSc  
**Associate**

**October**  
**2023**

Reviewed/Authorised by:



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**Andrew Moore** BSc MSc FGS  
CGeol MICE CEng SiLC QP  
**Technical Director**

**October**  
**2023**

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## DRAWINGS

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B034815 TTE-00-XX-DR-U-0001-02 Site Location Plan

B034815 TTE-00-XX-DR-U-0002-02 Site Boundary Plan

Drawing No. 901.02A/ Existing Site Levels dated 14th September 2023 by Weller Designs Ltd.

Drawing No. 901.03A/Grading Plan dated 14th September 2023 by Weller Designs Ltd.

Drawing No. 901.05A/Cross sections dated 14th September 2023 by Weller Designs Ltd.

## APPENDICES

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<b>APPENDIX A – REPORT CONDITIONS</b>	<b>.....</b>
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# 1 INTRODUCTION

## 1.1 INSTRUCTION

Tetra Tech Ltd (Tetra Tech) was commissioned by Oakland Golf and Leisure UK Ltd (the Client) to undertake a Soil Management Strategy for the site at Grimethorpe, Barnsley (known hereafter as “the site”).

The location of the site is shown on B034815-TTE-00-XX-DR-U-0001-02 (Site Location Plan) and B034815-TTE-00-XX-DR-U-0002-02 Site Boundary Plan.

## 1.2 BRIEF

The brief was to provide a Soil Management Strategy report to support the proposed import of materials for the site under an Environmental Permit.

This document is to outline the procedures and requirements for materials import to the site and to be adopted to undertake the proposed works.

The report includes a summary of the environmental setting, details of expected requirements of the Environmental Permit to permanently deposit waste on land as a recovery activity, procedures for the importation of inert waste materials and general requirements for the earthworks.

## 1.3 DEVELOPMENT PROPOSALS

The proposed development is to improve the site by reprofiling site contours so that it is suitable to include new tree plantations and enhanced biodiversity. The restoration of the site will be achieved through the importation of 430,300m<sup>3</sup> of soils and inert materials under an Environment Agency (EA) Permit as a permanent deposit waste on land as a recovery activity.

A Grading Plan is included in the Drawings which shows the designed final landform.

## 1.4 REFERENCES

Ground information for the site has been sourced from the two reports available for the site as below:

- Geo-Environmental Desk Study Assessment for Grimethorpe, Barnsley prepared by Tetra Tech on behalf of Oakland Golf and Leisure UK Ltd Report Reference: B034815.DS.1 Date: October 2023
- Coal Mining Risk Assessment for Grimethorpe, Barnsley prepared by Tetra Tech on behalf of Oakland Golf and Leisure UK Ltd Report Reference: B034815.CMRA.0 Date: October 2023

## 1.5 LIMITATIONS

The recommendations and opinions expressed in this report are based on information obtained as part of the desk study or provided by others. Information provided from other sources is taken in good faith and Tetra Tech cannot guarantee its accuracy.

This report is subject to the report conditions presented in Appendix A.

The information contained in this report is intended for the use of the Client (Oakland Golf and Leisure UK Ltd) and Tetra Tech can take no responsibility for the use of this information by any third party or for uses other than that described in this report or detailed within the terms of our engagement.

## 2 SITE INFORMATION

Background information for the site is summarised below:

**Table 2-1 – Site Details**

Item	Detail
Site Address	Land West of Engine Lane, Upper Cudworth, Barnsley S72 7BN.
Site Location	The site area is located approximately 10km northeast of Barnsley
National Grid Coordinates	SE 39944 08562
Area	Approximately 12.54 hectares
Description	<p>The site comprises an area of unused land to the west off Ferry Moor Lane and is predominantly grass covered with an abundance of trees and vegetation. There is a small network of ditches and evidence of excavations which now contain standing water on the site.</p> <p>Overhead cables and a pylon are present within 50m of the northeastern site boundary running in a north/south direction.</p>
Site History	<p>The site comprised agricultural fields from the earliest maps 1854. The Dearne Valley rail line crosses the northeast corner of the site from 1904, it appears to be no longer present after 2001. By 1966 operations from the nearby Grimethorpe colliery began to expand into the south and east of the site initially with sludge beds and then with tanks, coal conveyor belts and an associated Works located in the east side of the site from 1988. Possible opencast and backfill deposits of colliery spoil are shown in the north and south west of the site from 1966.</p> <p>The 1999 aerial photograph appears to show the footprint of the works and various area of earthworks across the site, by 2009 the site is grassed over with some areas of dense vegetation similar to the site conditions today except that a wind turbine is present in the south of the site from 2016.</p>

### 2.1 SITE GEOLOGY

Published British Geological Society (BGS) mapping (1:50,000 geological map series, Sheet 87) indicates Made Ground is present on-site. Two variations of Made Ground are identified on this site, Made Ground (Undivided) and Infilled Ground. The Made Ground (undivided) has been identified to cover the majority of the site. The infilled ground mainly covers an area from the central to the north-east of the site.

Superficial deposits are indicated as present on site, however the coverage is sparse. Alluvium is identified in the far North-East mainly over Ferry Moor Lane section of the site. Described as 'a general term for clay, silt, sand and gravel. The site is indicated as being underlain by the Pennine Middle Coal Measures Formation comprising Sandstone and Mudstone.

The Highgate Coal Seam and Shafton Coal Seam are identified as outcropping on site.

## 2.2 HYDROGEOLOGY

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There are superficial deposits of Alluvium noted to be on the far North-East of the site. Groundsure has identified these superficial deposits as a Secondary A aquifer, described as permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.

The bedrock under the site is also classified as a Secondary A aquifer, described as permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.

## 2.3 COAL MINING

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A Consultants Mining Report provided by the Coal Authority for the site details the following historical features from coal mining at the site:

- Highgate Coal Seam and Shafton Coal are recorded as outcropping onsite.
- Opencast workings are recorded on the site, potentially undertaken in Highgate Coal Seam and Shafton Coal seam. There is a risk of excessive total settlement and differential settlement associated with backfill area.
- Underground mining of 8 no. coal seam took place beneath the site at a depth from 36m to 373m. The shallow mining undertaken in Shafton Coal Seam (36m to 64m) was undertaken at a depth which is considered to potentially present a risk to site. Although more than 17m of competent bedrock overlies the seam and it may be sufficient to mitigate any collapse there is a still a risk of instability due to shallow workings within 40m of ground surface.
- There are 2 No. identified mine shafts within the site.
- Two recorded faults on site, which could act as a potential pathway for mine gas.
- No records of mine gas emissions within 500m however, combustible coal seams, Shafton Coal, Barnsley Coal, Parkgate Coal are present beneath site.

There are 5 no. Coal Mining subsidence recorded within 50m of the site boundary.

Features that could cause instability in the ground are present at the site as a result of coal mining legacy however, the proposed development does not include any structures and is limited to placing fill material to achieve a profile mainly for tree planting. As such, the risk to the development posed by the coal mining legacy is considered to be generally low but higher in the locations of former shafts.

## 2.4 LANDFILLING

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There are no records of historical landfilling at the site although historical plans indicate potential deposits of colliery spoil.

## 3 WASTE MANAGEMENT

### 3.1 WASTE TYPES

The waste codes to be taken by this site are to be agreed with the Environment Agency as suitable for use as general fill material (Environment Agency Guidance: Waste Recovery Plans and Permits, October 2016). The proposed waste types are detailed in Table 3.1 below:-

**Table 3-1 – Permitted Waste Types**

EWC Code	Description
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOILS FROM CONTAMINATED SITES)
<b>17 01</b>	<b>Concrete, bricks, tiles and ceramics</b>
17 01 01	Concrete
17 01 02	Bricks
17 01 03	Tiles and ceramics
17 01 07	Mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
<b>17 05</b>	<b>Soil (including excavated soil from contaminated sites) soil and dredging spoil</b>
17 05 04*	Soil and stones other than those mentioned in 17 05 03
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES INCLUDING SEPARATELY COLLECTED FRACTIONS)
20 02 02	Soil and stones only from garden and parks waste; excluding topsoil and peat

NB: The origin of the wastes must be known and they will have low contents (<5% by mass per load of other types of materials (like metals, plastics, soil, organics, wood, rubber, etc.).

\* This specifically excludes excavated soil from contaminated sites

### 3.2 WASTE ACCEPTANCE PROCEDURES

Wastes will only be accepted onto the site if they comply with the list of wastes included in the permit. All vehicles delivering waste will be licensed waste carriers and each delivery must be accompanied by a relevant Waste Transfer Note, consistent with fulfilling the company's responsibilities under the provisions of the Duty of Care.

#### Basic Characterisation (Level 1)

Basic characterisation will ensure that the waste is suitable for acceptance at the regulated facility. The information to be supplied at this stage includes:-

- Source and origin of the waste;
- Information on the process producing the waste;
- Appearance of the waste, e.g. physical form; and
- The List of Wastes (England) Regulations 2005 code.

The inert wastes will be accepted at the site without testing, provided that there is confirmation that they are single stream loads from known reliable sources and that they are accompanied by the required information.

Loads that contain wastes from multiple streams may be accepted together, provided they are from the same source, comply with the waste types specified in the permit and are accompanied by the required information.

### On Site Verification

Each load of waste delivered to the site shall be, where possible, visually inspected before unloading. Each load will be inspected after unloading. These inspections will ensure that the waste conforms to the description compiled as part of the basic characterisation.

If there is uncertainty regarding the acceptance of waste at the site, testing may be required. No wastes will be accepted onto the site if there is uncertainty as to its source, conformance with the conditions in the environmental permit and/or its suitability for the intended use.

Routine testing will be undertaken to confirm that the above procedures are adequate for controlling the nature of the incoming waste streams. This testing will be against the limits for inert waste landfill waste acceptance criteria (WAC) unless other limits are agreed as part of the Environmental Permit with the EA and based on risk assessment. One sample per 5,000m<sup>3</sup> of the waste code will be taken and sent to a laboratory for analysis. The laboratory results will be reviewed, and any breaches will be reported to the Environment Agency. A record will be kept of all WAC testing that is undertaken.

All site staff will be made aware of the waste acceptance procedures and will be trained in the procedures with dealing with non-conformances. The Site Manager will be responsible for ensuring that the procedures are implemented appropriately.

## 3.3 UNAUTHORISED AND REJECTED WASTES

Any loads or part loads identified as unacceptable upon discharge of the load shall be reloaded into the container and isolated whilst the Environment Agency are contacted by telephone. The most appropriate course of action shall then be agreed with the Environment Agency.

Any load or part load identified as unacceptable upon discharge of the load when the haulier has exited the site shall be isolated or quarantined on the site. The Environment Agency shall be kept informed of the subsequent course of action.

The following details of the rejected waste will be kept on site:-

- Time and date of incident;
- Haulier and vehicle registration number;
- Customer;
- Waste type; and
- Reason for rejection.

For small quantities of paper, plastic, wood and metal, a skip or similar container will be located near the operational area for the operator to dispose of such materials. The skip will be removed from site once full and taken to a permitted facility for disposal or recovery where appropriate.

Records will be kept of all rejected loads and these will be made available to the Environment Agency.

## 3.4 EARTHWORKS SPECIFICATION

The works should be in general accordance with BS6031:2009, Code of Practice for Earthworks.

In general, the Earthworks Specification should provide details on:

- The site and the form of earthworks proposed;
- Any special hazards or requirements;
- The materials that may be used and what should be excluded;

- The performance of those materials when placed;
- The strategy to be adopted if materials fail to conform to required criteria; and,
- How to manage environmental challenges arising from the works.

### 3.5 RECORDS

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Any material that is delivered should be accompanied by Transfer Documentation which should be checked prior to unloading the material. If a load arrives on-site with either missing or incomplete Transfer Documentation, then entry to the site should be refused.

Completed Transfer Documentation should include the following information as a minimum:

- Description of the material being transferred;
- Volume of the material contained within the load;
- Details of the source site of the material, including the site address and the name of the person / company supplying the material;
- Details of haulage company who are transferring the material.
- Details of the receiver site (i.e. Redditch Golf Club), including the site address and the name of the company receiving the material; and,
- The date and time of the material transfer.;

The Transfer Documents should be signed, following receipt of the material, by the driver of the haulage vehicle and by the person receiving the material.

Copies of the signed Transfer Documentation should be retained on-site during the works, with copies included within the Verification Report.

### 3.6 TECHNICAL COMPETENCE

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The site will be supervised by an individual who possesses the required level of technical competence (Certificate of Technical Competence (COTC)).

## 4 COVER SOILS

### 4.1 COVER SOIL DESIGN

The final use of the area as a recreational and natural environment may require import of materials suitable as a surface growing medium. Final specification of topsoil depth and quality will be provided by a landscape architect. Typically, the required profile of soils to support a healthy, well drained landscape is:

- 150mm Topsoil
- 300mm Subsoil

Soil currently on site will be retained to form this capping material but in the event that it is not enough volume, import of clean subsoil and topsoil is required to form a 450mm thick surface layer.

A cover soil layer to prevent harm to human health of future users is not required because the structural fill proposed is inert in nature.

### 4.2 COVER SOIL TESTING

Imported soils will be sourced from sites with no previous records of potentially contaminative development. The soil will be required to be tested on a frequency as set out in Table 4.1 below.

**Table 4-1 – Frequency of sampling/testing of imported Topsoil and Subsoil**

Types of Material	Frequency	Test Suite
Topsoil and subsoil	Minimum 3 per source and 1 per 250m <sup>3</sup> thereafter	Standard metals/metalloids (As, Cd, Cr, CrVI, Cu, Hg, Ni, Pb, Se, Zn), PAH (16 USEPA Suite) and Asbestos screen

Verification testing will be undertaken with a maximum laboratory turnaround of 7 working days.

All imported fill/soils will undergo a visual/olfactory inspection by the Contractor to ensure:

- The material is free from obvious contamination and odours;
- Is free from unsuitable material e.g. brick ties, timber, glass; and,
- There are no signs of asbestos containing materials (ACM)

### 4.3 COVER SOIL VERIFICATION

The depth of each type of material used within the cover layer will be verified during construction by a measuring staff held in front of the layer and a series of photos taken as it is being progressively laid down showing achieved minimum depth and included in the Verification Report.

The topsoil can be installed and the depth checked by undertaking hand pits and measuring depth after installation. Measurement of the verification locations and photographs with a visible measuring tape should be undertaken to demonstrate the minimum depth has been achieved and included in the Verification Report.

Photographs of installation of the soil should be taken to form a record and held by the Contractor with the other site information.

## 5 VERIFICATION REPORTING

Following completion of the works at Grimethorpe, a Verification Report will be produced to provide an audit trail to show that permitted materials have been accepted and deposited.

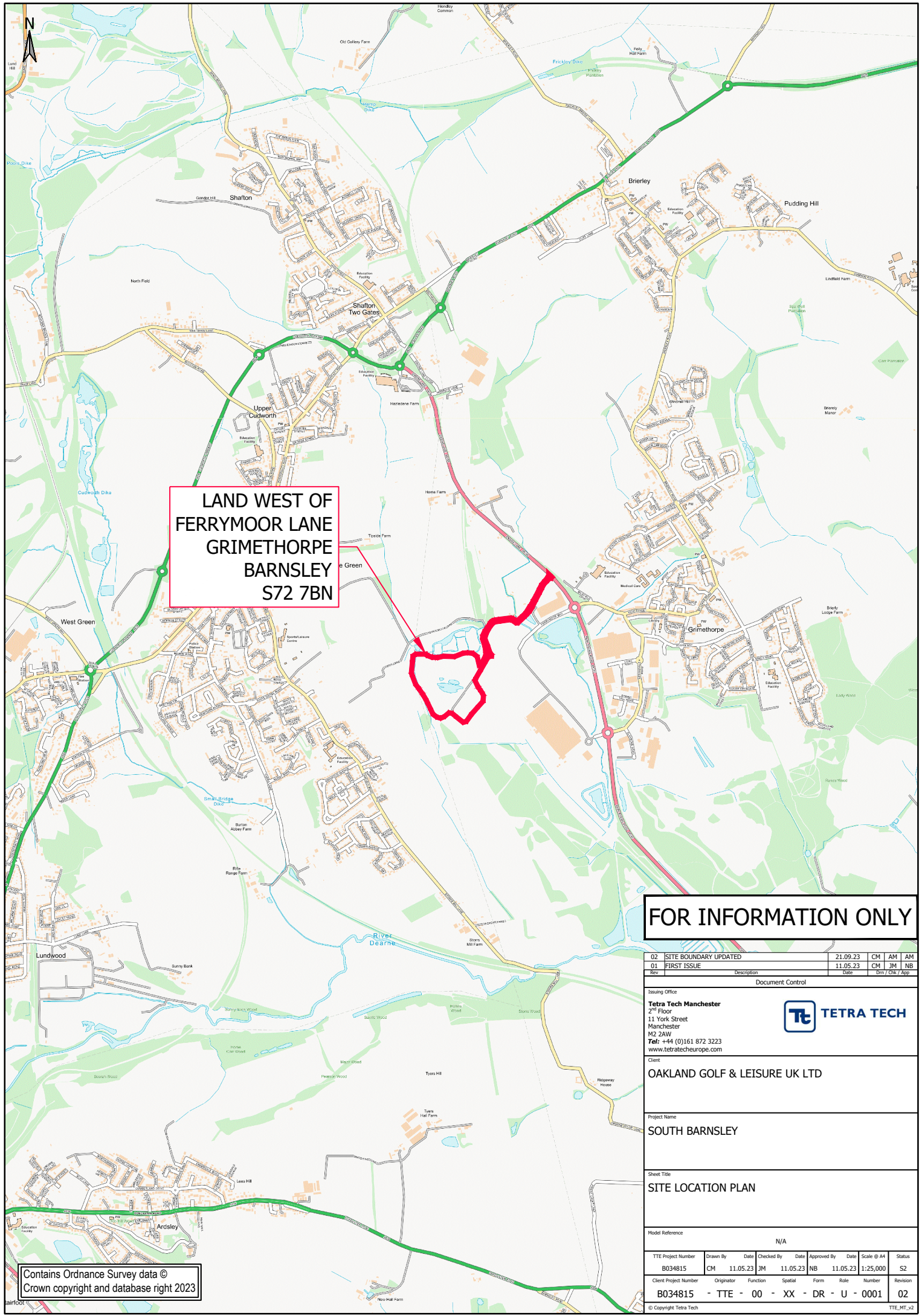
The following information should be included within the Verification Report:

- Appropriate site plans;
- Description of the project;
- Reference to site investigation data (if undertaken);
- Reference to risk assessments (including qualitative risk assessments);
- Reference to the Environmental Permit and associated tracking system, including alterations made and why;
- Suitable for use criteria;
- Laboratory analysis results;
- Reference to waste transfer documentation, including return loads;
- Signed delivery tickets (possibly as an annex or alternatively there must be a clear reference out to them);
- Record of contingency arrangement(s) that had to be implemented;
- Record of quantity of materials used; and
- Copies of reporting by the Technically Competent Person(s).

Once completed, the Verification Report should be submitted to the EA as part of the surrender of the Permit.

All site records should be retained for a minimum two years after the completion of the works.

## DRAWINGS



**LAND WEST OF  
FERRYMOOR LANE  
GRIMETHORPE  
BARNSELY  
S72 7BN**

**FOR INFORMATION ONLY**

02	SITE BOUNDARY UPDATED	21.09.23	CM	AM	AM
01	FIRST ISSUE	11.05.23	CM	JM	NB
Rev	Description	Date	Int	CHK	App

Document Control  
 Issuing Office  
**Tetra Tech Manchester**  
 2<sup>nd</sup> Floor  
 11, York Street  
 Manchester  
 M2 2AW  
 Tel: +44 (0)161 872 3223  
 www.tetratechurope.com



Client  
**OAKLAND GOLF & LEISURE UK LTD**

Project Name  
**SOUTH BARNSELY**

Sheet Title  
**SITE LOCATION PLAN**

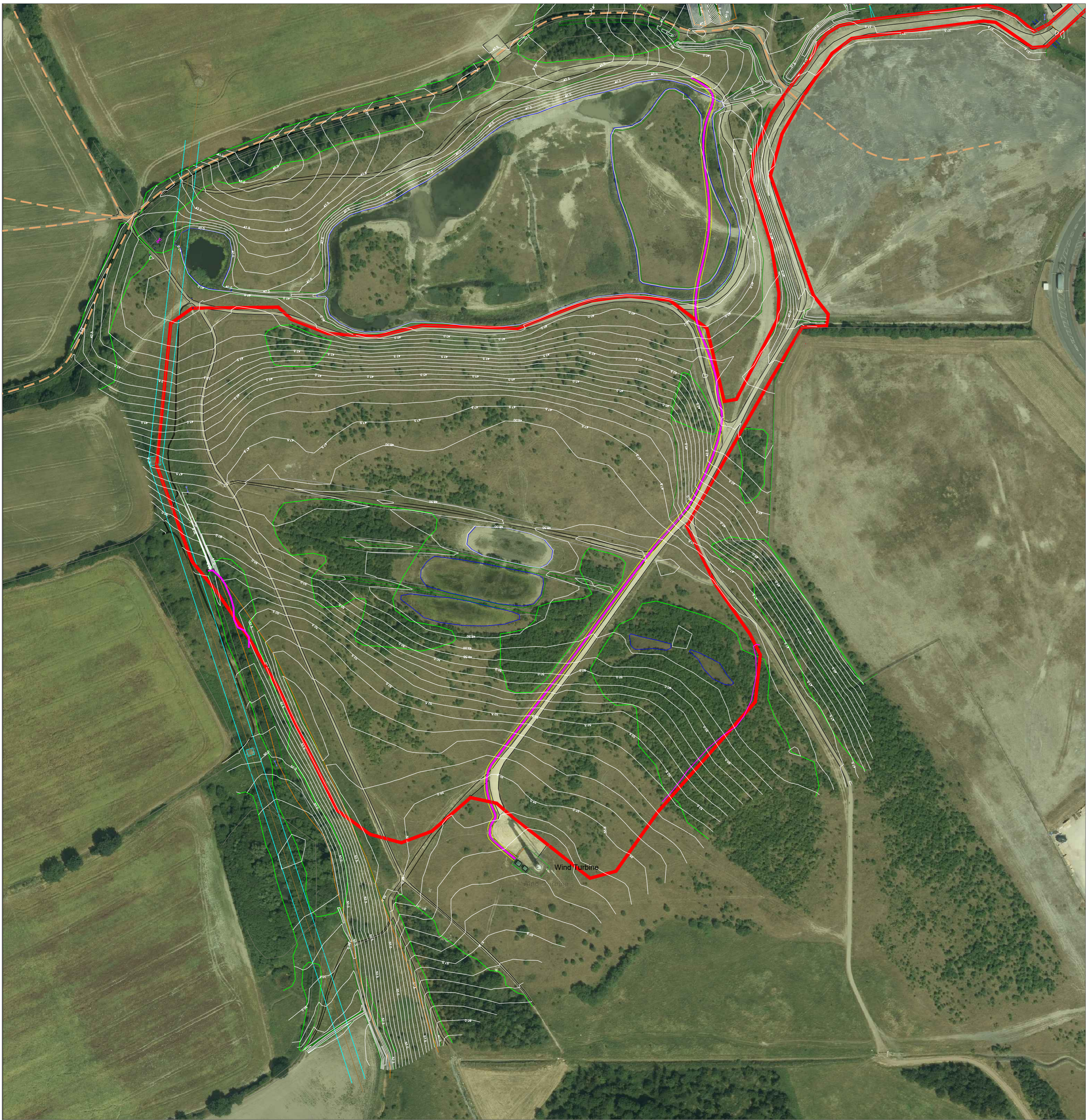
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Client Project Number	Originator	Function	Spatial	Form	Role	Number	Revision	
B034815	TTE	00	XX	DR	U	0001	02	

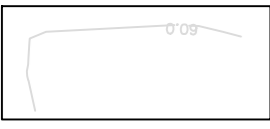

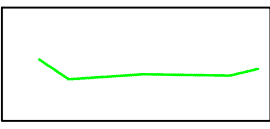

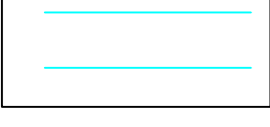
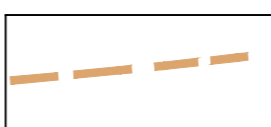

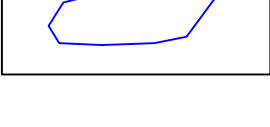
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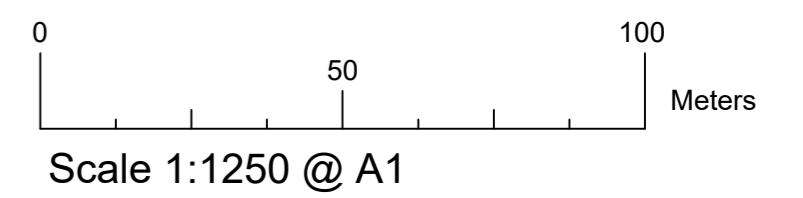


# Agricultural Restoration & Landscape Enhancement Scheme



**Key:**

- |  |  |   |   |
|--|--|---|---|
|  | Existing Contours (1m Metre Intervals) |  | Underground Powerline plus Wayleave         |
|  | Existing Scrub Vegetation              |  | Application Boundary (See Also Plan 901.05) |
|  | Overhead Powerlines                    |  | Existing Public Rights Of Way               |
|  | Existing Tracks                        |   |   |
|  | Existing Wet / Dry Areas               |   |   |



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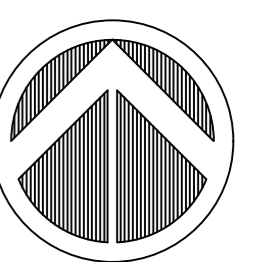
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Project Name: Grimethorpe

Date: 14th September 2023

Drawing Name: Existing Site Survey

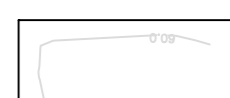
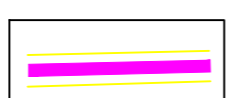
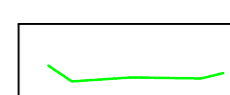

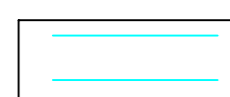

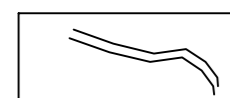




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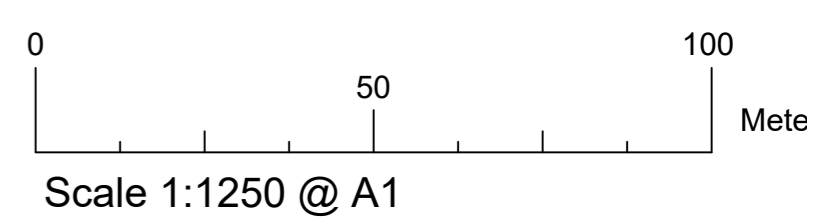


# Agricultural Restoration & Landscape Enhancement Scheme



Key:

- |   |  |   |   |
|---|--|---|---|
|  | Existing Contours (1m Metre Intervals) |  | Underground Powerline plus Wayleave         |
|  | Existing Scrub Vegetation              |  | Application Boundary (See Also Plan 901.05) |
|  | Overhead Powerlines                    |  | Proposed Contours (1m Intervals)            |
|  | Existing Tracks                        |  | Proposed Amenity Grass                      |
|  | Existing Wet / Dry Areas               |  | Proposed Permissive Public Access Paths     |
|  | Existing Public Rights Of Way          |   |   |



Drawn By: GW

Revision.: A - 14/09/23 - adjustment to red line

Scale: 1: 1250 @ A1

Drawing No: 901.03 Rev A

Project Name: Grimethorpe

Date: 14th September 2023

Drawing Name: Grading Plan

Checked By BW

