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Construction Traffic Management Plan

Rev 0

Job No. 27951

Proposed AD Plant
Land at Streetly Hall Farm
Webb's Road
West Wickham
Cambridgeshire
CB21 4RP

Client: Streetly Hall Estate

August 2023

pdc

civil / structural / environmental / surveying

REPORT CONTROL SHEET

Client: Streetly Hall Estate **Job No.:** 27951

Project Name: Proposed AD Plant
Land at Streetly Hall Farm
Webb's Road
West Wickham
Cambridgeshire
CB21 4RP

Issue		
Rev 0	August 2023	**Report Prepared by:** Jasmine Ayton Planning Coordinator
		Report Reviewed & Authorised by: Oliver Jones B.Sc (Hons), IEng MIET, EngTech MICE, GCInstCES, AMIMechE Director – Projects

CONDITIONS OF INVESTIGATION & REPORTING

This report and its findings should be considered in relation to the terms of the brief and objectives agreed between Plandescil Ltd and the Client.

Plandescil Ltd are only able to work with information available at the time when this report was produced in accordance with current best practice.

The details contained in this report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested and that such information is accurate. Information obtained by Plandescil Ltd has not been independently verified by Plandescil Ltd, unless otherwise stated in the report.

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1.0 INTRODUCTION

1.1 Background Information

The Applicant, Streetly Hall Estate, is seeking planning permission for the construction of an Anaerobic Digestion (AD) Plant at Streetly Hall Farm, Webb's Road, West Wickham, Cambridgeshire, CB21 4RP.

The application site is outlined in red on Plandescil Ltd Drawing No. 27951/150 – Site Location Plan in the **Drawings Appendix** (extract below). It is currently an arable crop field located on the Applicant's agricultural unit, adjacent to their main farm buildings. The immediate land surrounding the application site which forms part of the Applicant's agricultural unit is also outlined in blue.

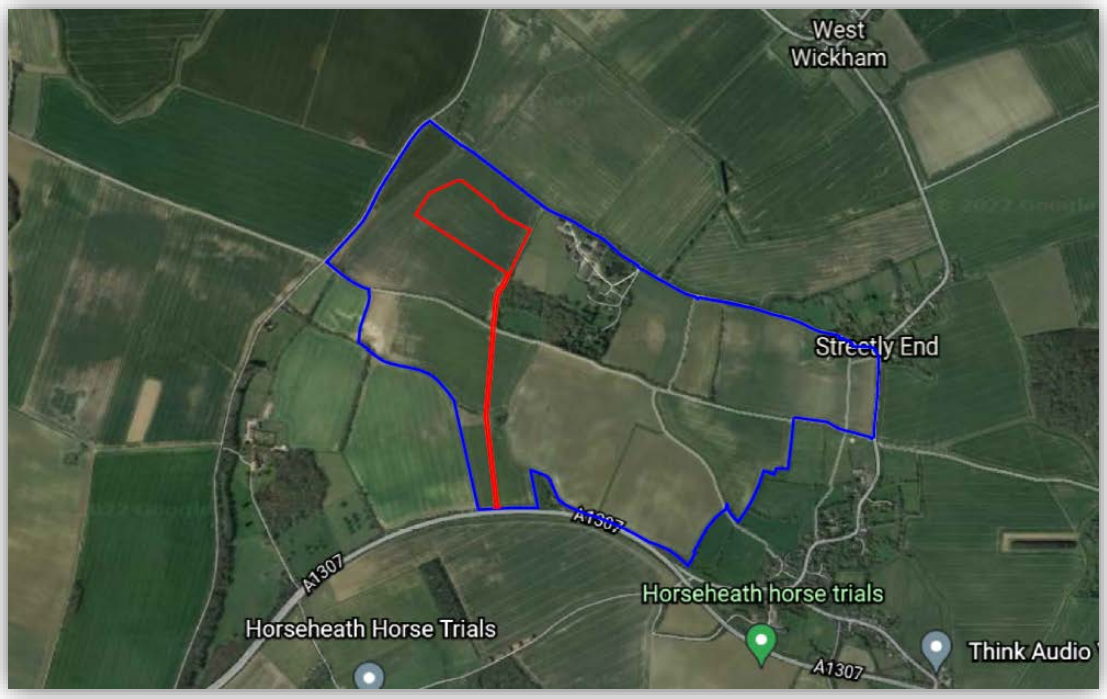


Image 1.1 Existing site

1.2 Proposal

The Applicant is applying to Cambridgeshire County Council for the erection of an Anaerobic Digestion (AD) Plant which aims to produce and collect gas through the breakdown of organic material for use as a renewable energy source. The proposed site layout of the AD Plant is shown on Plandescil Ltd Drawing No. 27951/007 – Proposed Site Plan in the **Drawings Appendix.**

1.3 Objectives

Plandescil Ltd. have been employed by Streetly Hall Estate (herein referred to as the Applicant) to produce this Construction Traffic Management Plan (CTMP) in support of the planning application for the proposed development. If approved, this CTMP will be revised for construction purposes and any planning condition consideration with the chosen Contractor and reissued. The Applicant will ensure the construction process follows the procedures set out in this CTMP.

This CTMP should be read in conjunction with all other documents and drawings accompanying the planning application, in particular the Construction Environment Management Plan (CEMP). It has been developed to provide a traffic management framework needed for the planning and implementation of the proposed construction activities.

This Construction Traffic Management Plan (CTMP) relates to the timings of construction traffic during the build phase including construction traffic routing, construction worker parking, construction site access and environmental considerations.

2.0 DESCRIPTION OF THE WORKS

The works comprise of the construction of an AD Plant, including the following items:

- Silage Clamps (2No. 94.75m x 13.48m)
- Silage Clamps (2No. 94.75m x 11.32m)
- Feed Hopper (2No.)
- Fermenter (3No. 30mØ)
- Post Fermenter (1No. 30mØ)
- Pre-Storage Tank (1No. 9mØ)
- Filling Station
- Ferric Chloride Tank
- Pasteurisation
- Containment Bund
- External Desulphurisation
- Gas Flare
- Gas Technology
- LV Board + Emergency Generator
- GEU
- CHP
- Buffer Tank
- Power to Heat Module
- CO2 Tanks
- CO2 Recovering System
- Gas Upgrading System
- Propane Tanks
- Weighbridge Office
- Weighbridge
- Digestate Storage Lagoon (15,260m³)
- Surface Water Lagoon (1,100m³)
- Dirty Lagoon (805m³)
- Intake & Process Building
- (36.00m x 80.00m)
- Straw Barn (20.00m x 50.00m)
- Bund Gate (2No.)
- Bund Ramp (2No.)
- Condensate Pit
- Car Parking Spaces (5No.)
- Technical Building

The project will be completed in a single phase and the main Construction Activities are:

- Site set up
- Access roads
- Topsoil stripping
- Bulk earthworks and site preparation
- Installation of foundations, drainage and utilities
- Lagoon construction
- Containment area and concrete apron construction
- Tank associated works
- Mechanical installation
- Construction of independent bases and structures
- Installation of gas upgrading equipment
- Construction of feed stock storage
- Seeding and boundary treatments

- Testing and commissioning
- Grid connection
- Finishes

3.0 SITE ACCESS

The Applicant is proposing to construct a new access onto the A1307 (50mph) in the location identified on the Google Maps screenshot below as part of this planning application. If approved, this will be the first item constructed as part of the project and will become both the construction and operational access.

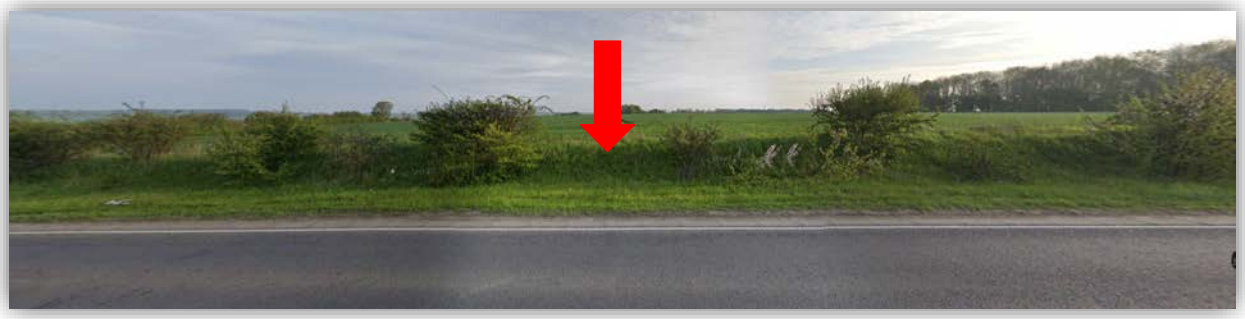


Image 3.1 A1307 access location

Prior to the construction of the A1307 access, the site is still accessible via internal private trackways within the Applicant's landholding to allow construction of the access.

The A1307 will be the main distributor road for construction traffic, however as no contractor has been appointed to date, we are unable to confirm the sources and destinations of the construction materials and workers. Once agreed, the confirmed access route will be signposted clearly and at regular intervals to direct all construction traffic to the site.

The access design is shown on Plandescil Ltd Drawing No. 27951/033 – Proposed Highways Entrance & Details – Option 2 in the **Drawings Appendix** (extract below). This includes a slip road off the A1307 to minimise site traffic impacting movement on the A1307.

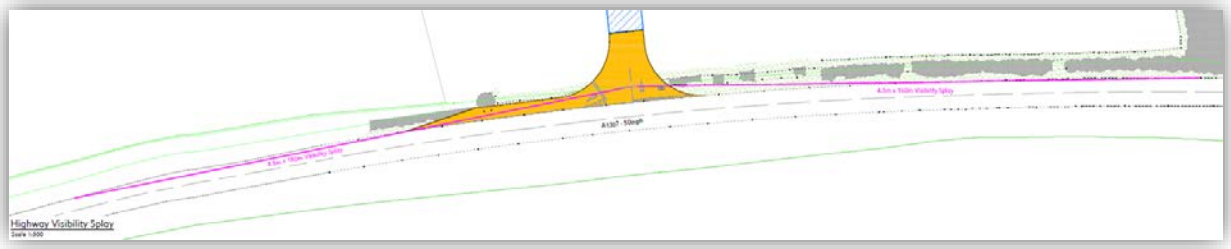


Image 3.2 A1307 access design

Further information on the proposed access is included in the Transport Statement accompanying this application.

Access to the site itself will be controlled by an access control barrier and a CCTV camera tower for safety and security. The barrier will be located at the entrance to the main site and not near the proposed junction onto the A1307, therefore there is no risk of construction traffic queuing on the A1307. The barrier and CCTV camera tower are identified on Plandescil Ltd Drawing No. 27951/SK20 in the **Drawings Appendix** (extract below).

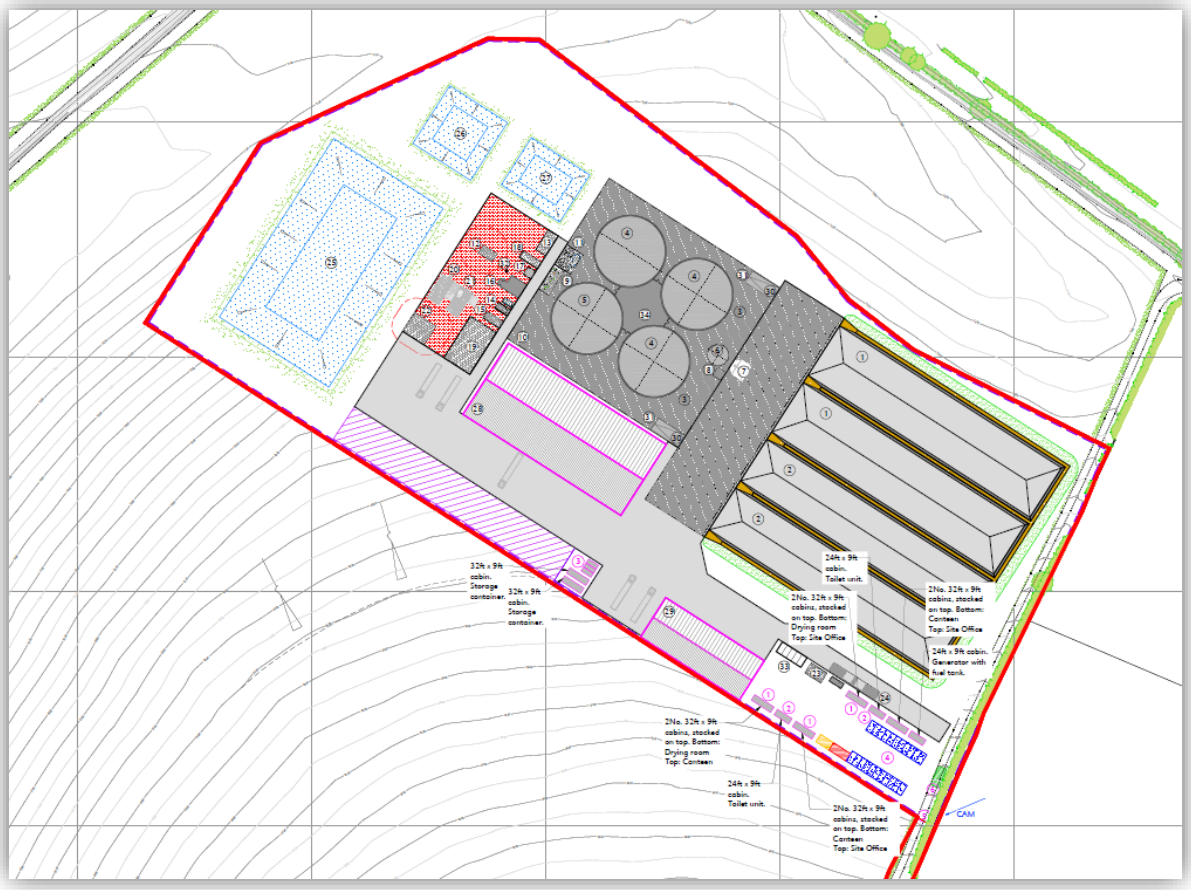


Image 3.3 contractor site set-up

4.0 TYPES OF CONSTRUCTION TRAFFIC

The bulk of materials being delivered to the site will be transported using articulated HGVs including full-length articulated lorries. The largest vehicle used will conform to maximum legal sizing for HGVs in the UK. Rigid HGVs will also be involved in the delivery and supply of materials with the remaining traffic type being light vans and passenger cars.

There are currently no abnormal loads anticipated to arrive at the Site during the construction period. In the event such a payload is required, it would be undertaken in accordance with the Highway Authority guidelines and with proper notification given.

5.0 HGV LOADING/UNLOADING

To ensure safe movements and loading/unloading within the site, the material storage area will be separated from other vehicles and the main contractor compound. In addition, appropriately trained, qualified and certified banksmen will be employed on the site during the construction.

6.0 SITE OPERATIVE PARKING

Construction staff will arrive at the site in passenger cars or light vans and no HGVs or larger vehicles will be used to directly transport staff to the site. Between 5No. and 18No. vehicles are anticipated access the site each day for construction staff movements.

Sufficient areas for car and van parking are identified on Plandescil Ltd Drawing No. 27951/SK20 with 22No. spaces provided. The contractor parking area will be of sufficient size to accommodate all expected construction staff parking requirements in addition to parking for any visitors to the site.

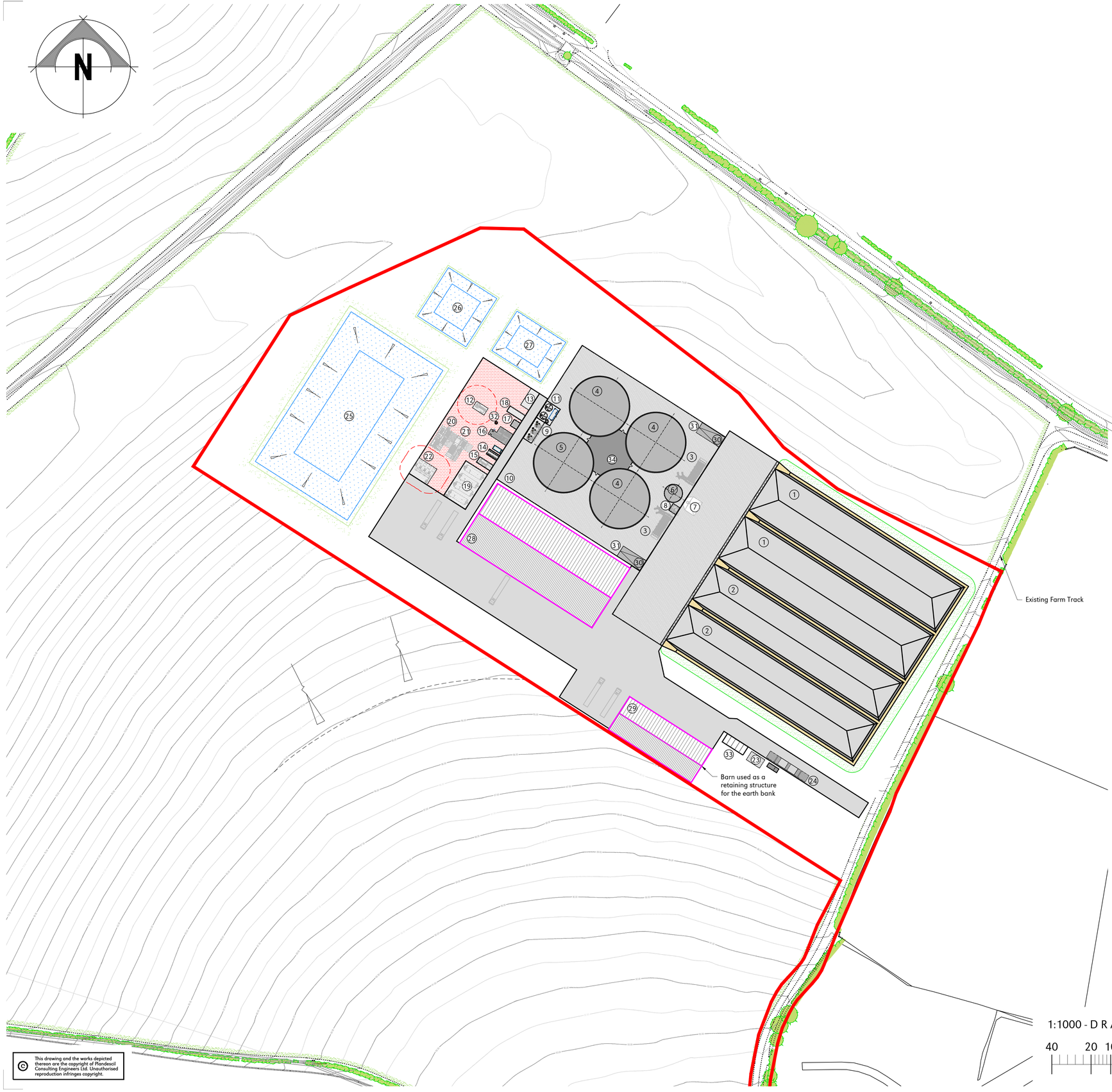
All conctractor parking will be on site and not on the existing highway network.

7.0 CONSTRUCTION TRAFFIC MOVEMENTS

Based upon previous AD Plant projects, we have set out the anticipated transport movements in **Appendix A** which are broken down by activity and week. Until a contractor is appointed post-planning, these cannot be confirmed but are a relatively accurate representation of AD Plant projects.

DRAWINGS APPENDIX

CONTENTS



GENERAL NOTES:

1. All dimensions noted are in meters unless stated otherwise.
2. All levels to be above Ordnance Survey Datum defined levels (A.O.Dm) unless noted otherwise.
3. Do not scale from this drawing, if dimensions are not clear ask.
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5. Plandescil Ltd. to be immediately notified of any suspected omissions or discrepancies.
6. This drawing is to be read in conjunction with all other relevant documents relating to the project.
7. Layout based on received drawing from Bioconstruct. plant layout_Streetly Hall AD_WS_230522

PLANT KEY

1. Silage Clamps (2No. 94.75m x 13.48m)
2. Silage Clamps (2No. 94.75m x 11.32m)
3. Feed Hopper (2No.)
4. Fermenter (3No. 30mØ)
5. Post Fermenter (1No. 30mØ)
6. Pre-Storage Tank (1No. 9mØ)
7. Filling Station
8. Ferric Chloride Tank
9. Pasteurisation
10. Containment Bund
11. External Desulphurisation
12. Gas Flare
13. Gas Technology
14. LV Board + Emergency Generator
15. GEU
16. CHP
17. Buffer Tank
18. Power to Heat Module
19. CO2 Tanks
20. CO2 Recovering System
21. Gas Upgrading System
22. Propane Tanks
23. Weighbridge Office
24. Weighbridge
25. Digestate Storage Lagoon (15,260m³)
26. Surface Water Lagoon (1,100m³)
27. Dirty Lagoon (805m³)
28. Intake & Process Building - Straw Briquetting & Feedhopper (36.00m x 80.00m)
29. Straw Barn (20.00m x 50.00m)
30. Bund Gate (2No.)
31. Bund Ramp (2No.)
32. Condensate Pit
33. Car Parking Spaces (5No.)
34. Technical Building

GENERAL KEY:

- Proposed Site Boundary (75,556m²/7.5556ha)
- Proposed Concrete
- Proposed D.f.T Type 1
- Proposed Asphalt Surfacing
- Grassed Area
- Proposed Gravel Surface
- Proposed Building

FOR PLANNING

Rev	Date	Rev By	Chkd	Description
K	14-08-23	JA	OAJ	Area of Flooding Removed
J	27-07-23	MJP	OAJ	Amendments To Redline Boundary
H	21-07-23	MJP	OAJ	Proposed Site Levels Added
G	07-07-23	MJP	OAJ	Amendments To Redline Boundary
F	06-07-23	MJP	OAJ	Amendments Based on Client Comments
E	29-06-23	MJP	OAJ	Amendments to Site Layout Based on Received Drawing
D	14-12-22	MJP	OAJ	Amendments to Redline Boundary
C	06-12-22	MJP	OAJ	Site Layout Amended
B	03-11-22	JWD	OAJ	Amendments to Redline Boundary
A	21-10-22	MJP	OAJ	Proposed Site Levels Added
0	21-09-22	-	OAJ	First Issue

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civil / structural / environmental / surveying

Client

Streetly Hall Estate

Project

Streetly Hall Estate,
West Wickham,
CB21 4RP

Drawing Title

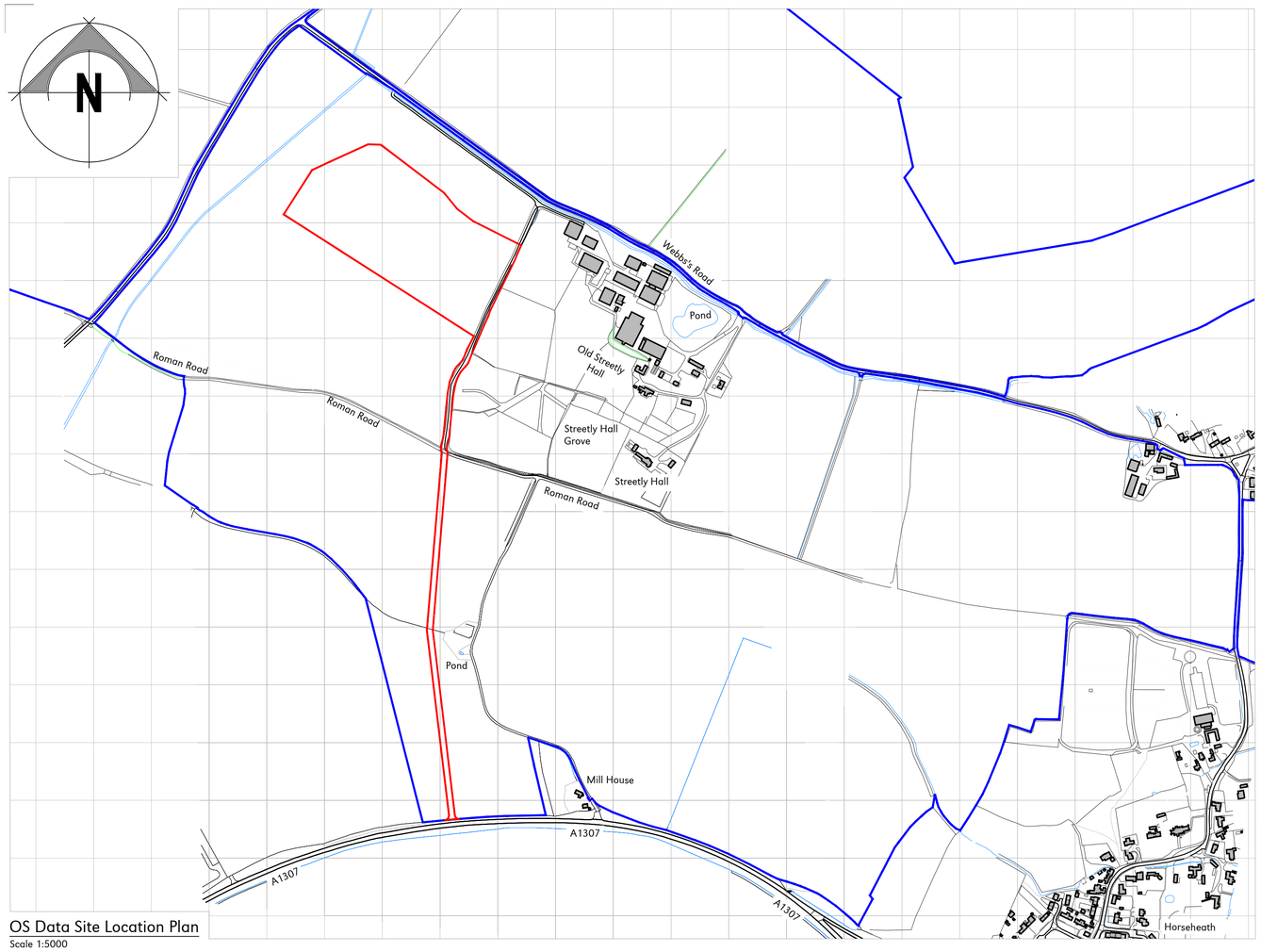
Proposed Site Layout

1:1000 - DRAWING SCALE REFERENCE (m)

40 20 10 0 20 40 60 80 100

Scale U.N.O.	Date	Drawn By
1:1000 (A1)	September 2022	MJP

Drawing No. 27951/007 Rev K



OS Data Site Location Plan

Scale 1:5000

Site Location Plan 1

Not To Scale

Site Location Plan 2

Not To Scale

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LEGEND:

Proposed Red Line Boundary (75,556m²/7.5556ha)

Ownership Boundary (1,497,201.10m²/149.720110ha)

FOR PLANNING

Rev	Date	Rev By	Chkd	Description
F	27-07-23	MJP	OAJ	Site Boundary Amended
E	13-07-23	MJP	OAJ	Site Boundary Amended
D	14-12-22	MJP	OAJ	Site Boundary Amended
C	20-10-22	RJG	OAJ	Site Boundary Amended
B	14-10-22	RJG	OAJ	Site Boundary Amended
A	07-10-22	RJG	OAJ	Site Boundary Amended
0	01-01-22	-	OAJ	First Issue

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Client

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Project

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West Wickham,
CB21 4RP

Drawing Title

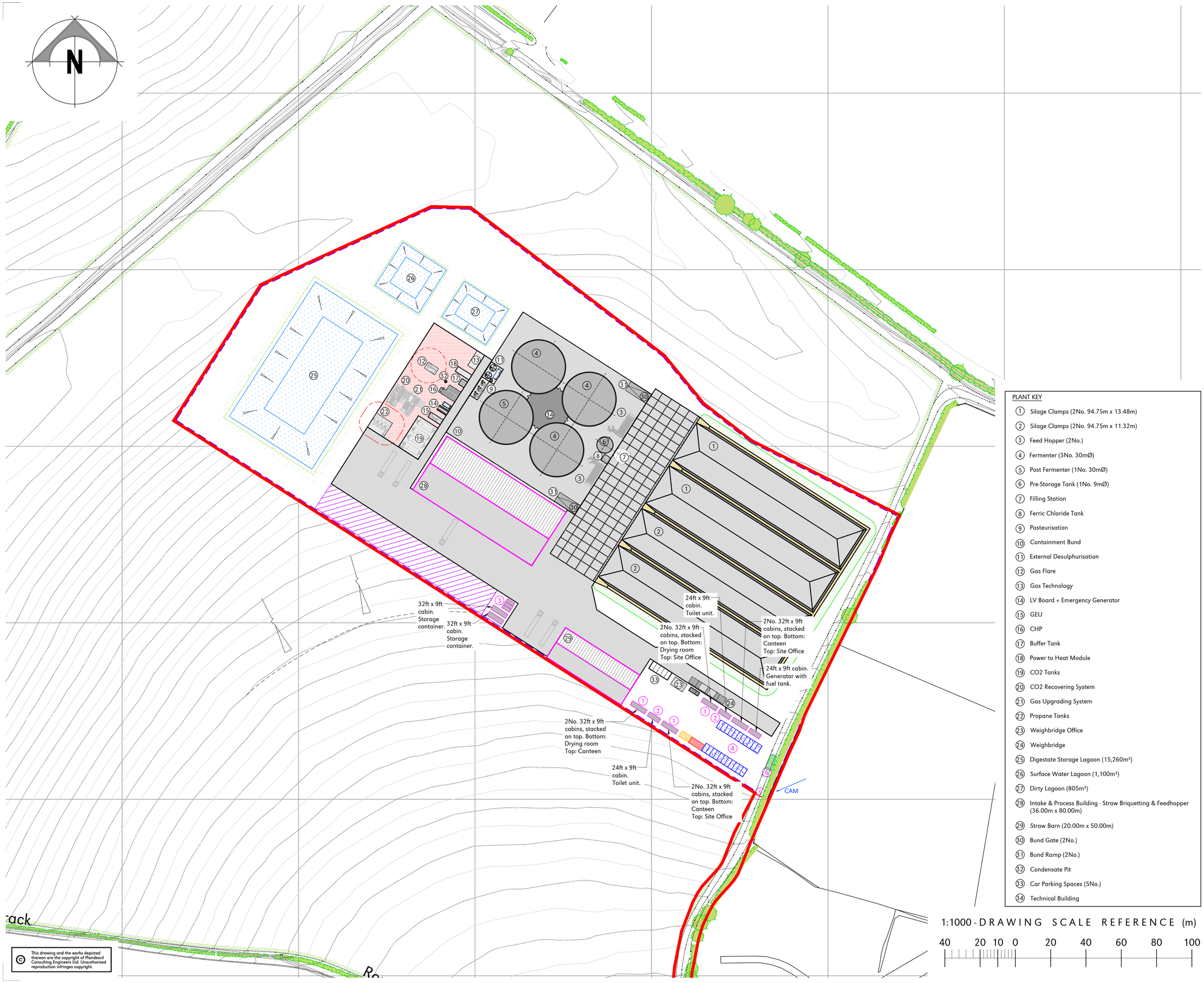
Site Location Plan

1:5000 - DRAWING SCALE REFERENCE (m)

200 100 50 0 100 200 300 400 500

Scale	U.N.O.	Date	Drawn By
As Noted (A1)		February 2022	JLB

Drawing No.	Rev
27951/150	F



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Proposed Site Set Up Legend

- Car Parking Spaces (22No.)
- Wheel Wash Facility
- Fire Point (Temporary)
- Smoking Area (Temporary)
- Unloading Area (Temporary)
- CAM — Camera Points Tower
- Site Security Fencing (Temporary)

Proposed Site Set Up Key

1. 32ft x 9ft Cabin (6No.)
2. 24ft x 9ft Cabin (3No.)
3. 12 yard Skip (3No.)
4. Car Parking Spaces (22No.)
5. Access Control Barrier
6. Wheel Wash Facility

GENERAL KEY:

- Proposed Site Boundary (75,556m²/7.5556ha)
- Proposed Concrete
- Proposed D.f.T Type 1
- Proposed Asphalt Surfacing
- Grassed Area
- Area of Potential Flooding
- Proposed Gravel Surface
- Proposed Building

PLANT KEY

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34. Technical Building

1:1000 - DRAWING SCALE REFERENCE (m)

40 20 10 0 20 40 60 80 100

FOR PLANNING

Rev	Date	Rev By	Chkd	Description
A	17-08-23	JA	OAJ	Area of Flooding Removed
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Project

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CB21 4RP

Drawing Title

Proposed Contractor Site Set Up

Scale	U.N.O.	Date	Drawn By
1:1000 (A1)		August 2023	TDS

Drawing No. 27951/SK20 Rev A

APPENDIX A

ANTICIPATED CONSTRUCTION TRANSPORT MOVEMENTS

Week No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Weekly Anticipated Van/Car Movements	5	5	8	8	8	8	12	12	12	12	12	12	12	14	14	14	16	16	18	18	18
Activity																					
Preliminaries	7	7																			
Site Set Up			6	7	10	12	5	4	2												
Earthworks / Site Preparation		12	16	12	112	112	112	82	88	86	86	7	10	6	55	25					
Tank Area									3	10	20	32	121	115	128	129	139	102	66	52	36
Technical Building														8	2	2	2	12	2	2	
Mechanical and Electrical																4	8	9	7	6	10
Silage Clamps																2	4	3	4	15	32
Bases & Structures for Equipment																					1
Leachate and Foul Drainage																				3	6
Storm Water Drainage																					
Ducting and Trenching																					
External Apron Areas																					
Access Road																					
Weekly Anticipated HGV Movements	7	19	22	19	122	124	117	86	93	96	106	39	131	129	185	162	153	126	79	78	85

Week No.	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
Weekly Anticipated Van/Car Movements	18	18	18	18	18	18	16	16	16	16	16	16	16	14	14	14	14	12	12	12	12
Activity																					
Preliminaries																					
Site Set Up																					
Earthworks / Site Preparation																					
Tank Area	28																				
Technical Building																					
Mechanical and Electrical	8	6	6	4	5	6	4	4	4	4	1	1	1	1	4	4	4	4	22	9	15
Silage Clamps			18			84															
Bases & Structures for Equipment			7	9	8	10	12														
Leachate and Foul Drainage		5	4	4																	
Storm Water Drainage			2	3	5	7	5	12	11	9	6										
Ducting and Trenching							4	2	2	2											
External Apron Areas																			1	1	1
Access Road																					
Weekly Anticipated HGV Movements	36	11	37	20	18	107	25	18	17	15	7	1	1	1	4	4	4	4	23	10	16

Week No.	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
Weekly Anticipated Van/Car Movements	12	12	12	12	12	12	10	10	10	10	10	10	10	8	8	8	8	8	8	8
Activity																				
Preliminaries																	2	5	5	3
Site Set Up																				
Earthworks / Site Preparation																				
Tank Area																				
Technical Building																				
Mechanical and Electrical	11	1	1	1	1	3	1	4	4	3	3	3	10	104		120				
Silage Clamps																				
Bases & Structures for Equipment																				
Leachate and Foul Drainage																				
Storm Water Drainage																				
Ducting and Trenching																				
External Apron Areas	1	1	1	4								16		45						
Access Road					3							12		22						
Weekly Anticipated HGV Movements	12	2	2	5	4	3	1	4	4	3	3	31	10	171		120	2	5	5	3

**a single movement = 1No. vehicle accessing and egressing site*

civil engineering and building

- Industrial, Commercial, Agricultural and Domestic building design
- Foundation Design and ground improvements
- Highway Engineering including PDS/Civil 3D
- Retaining walls
- Sheet Piling
- Infrastructure planning and design
- Design of sustainable drainage system (SUDS)
- Soakaway design
- Architectural design of industrial buildings
- Planning and building regulation applications
- 3D conceptual models
- Renewable Energy Civil Engineering design and project management
- Anaerobic Digestion and Waste to Energy Project design and detail

environmental engineering

- Contaminated Land investigations (intrusive & non-intrusive)
- Land remediation verification
- Environmental impact assessments (EIA)
- Flood Risk Assessments
- Water supply, treatment, storage and distribution
- Foul and surface water & effluent/leachate drainage design
- Drainage network modelling
- 1D & 2D flood modelling
- Hydraulic river modelling
- Flood Alleviation
- Breach & overtopping analysis
- Reservoir flood inundation modelling
- Consent to discharge applications
- Landscaping design
- Tree surveys
- Environmental Permits

structural engineering

- Structural calculations for Commercial, Agricultural and Domestic building design
- Structural design using steel, stainless & carbon steel, concrete, timber, alloys and masonry
- Maritime and Hydraulic structures
- Structural surveys and structural suitability surveys
- Structural failure studies
- Subsidence claims
- Temporary works design
- 3D Finite Element Analysis
- Structural monitoring
- Structural enhancement/ remedial work
- Historic building advice
- 3D Revit & Level 2 BIM structural design & modelling

surveying land and buildings

- Geomatic / topographical site surveys
- Building, Road, and Earthworks Setting out
- Engineering Setting out
- Establish precise site survey control
- 3D digital terrain modelling
- Volumetric analysis
- Site area computations
- Flood risk surveys using GPS active network
- Measured building floor plans and elevation surveys
- Land transfer plans to Land Registry requirements
- Drainage network surveys
- Assistance/Expert witness in land boundary disputes
- Deterioration monitoring
- Preparation of asset plans
- As built record surveys

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