IRUK Waste Planning
& Consultancy Ltd

Environmental Setting and Site Design Report

Nansmerrow Farm

Waste Recovery Permit Application

Written By

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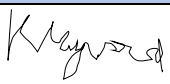
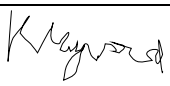
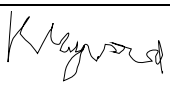
Quality Control

Revision No.	Date Revised	Description of changes	Authored By	Sign Off	Approved By	Sign Off
1.0	22/06/23	Original draft for permit application	Kasia Haywood		Luke Bridges	
2.0	25/07/23	Updates based on findings from Hydrogeological Risk Assessment	Kasia Haywood		Luke Bridges	
3.0	28/07/23	Amendments based on client feedback	Kasia Haywood		Luke Bridges	

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Appendix A – Site Drawings

Appendix B – Earth Lined Slurry Lagoon Report

Appendix C – Hydrogeological Risk Assessment

1. Introduction

1.1 Overview

1.1.1 MTS Environmental Ltd have been commissioned by IRUK Waste Planning & Consultancy Ltd to produce an Environmental Setting and Site Design (ESSD) Report. This report supports the permit application submitted to the Environment Agency (application reference: EPR/KB3506UU/A001) for Nansmerrow Farm.

1.1.2 The Operator of the site is Mr Paul George of Nansmerrow Farm. The facility is located at Nansmerrow Farm, Tresillian, Truro, Cornwall, TR2 4AP.

1.1.3 The proposed activity is a deposit for recovery operation to construct an earth bunded slurry lagoon under an approved planning permission (Reference: PA20/09290). The planning permission allows the construction of a slurry store associated with a recently approved new dairy building.

1.1.4 The permit application will allow for import of waste soils to fulfil the requirements of the planning permission. The lagoon will be constructed by the importation of waste soils and sub soils described under waste code 17 05 04 - soils and stones, with the haul tracks and access points being constructed with importation of demolition hardcore under waste codes 17 01 01, 17 01 02, 17 01 03 and 17 01 07.

1.1.5 The land is currently used as a family-owned specialist dairy farm, the land is mainly let to grass for grazing or conserved as clamp silage or maize growing for silage. Milking takes place in a modern milking shed which occupies the land adjacent to the proposed slurry lagoon. The cattle shed has capacity for 74 cattle but has been granted planning permission to extend the building to accommodate 136 livestock for milking. Included in the planning permission is the proposed new slurry lagoon which is required for both the additional cattle and the shortfall of storage in the existing operation. The location of the proposed slurry lagoon is inside the farm boundary and is currently used as grazing land.

1.1.6 The site has been granted planning permission to extend the cattle building to accommodate 136 livestock for milking (an increase of 62 cattle). Included in the planning permission is the proposed new slurry lagoon which is required for both the additional cattle and the shortfall of storage in the existing operation. This demonstrates a need for this deposit for recovery which will have a specific purpose.

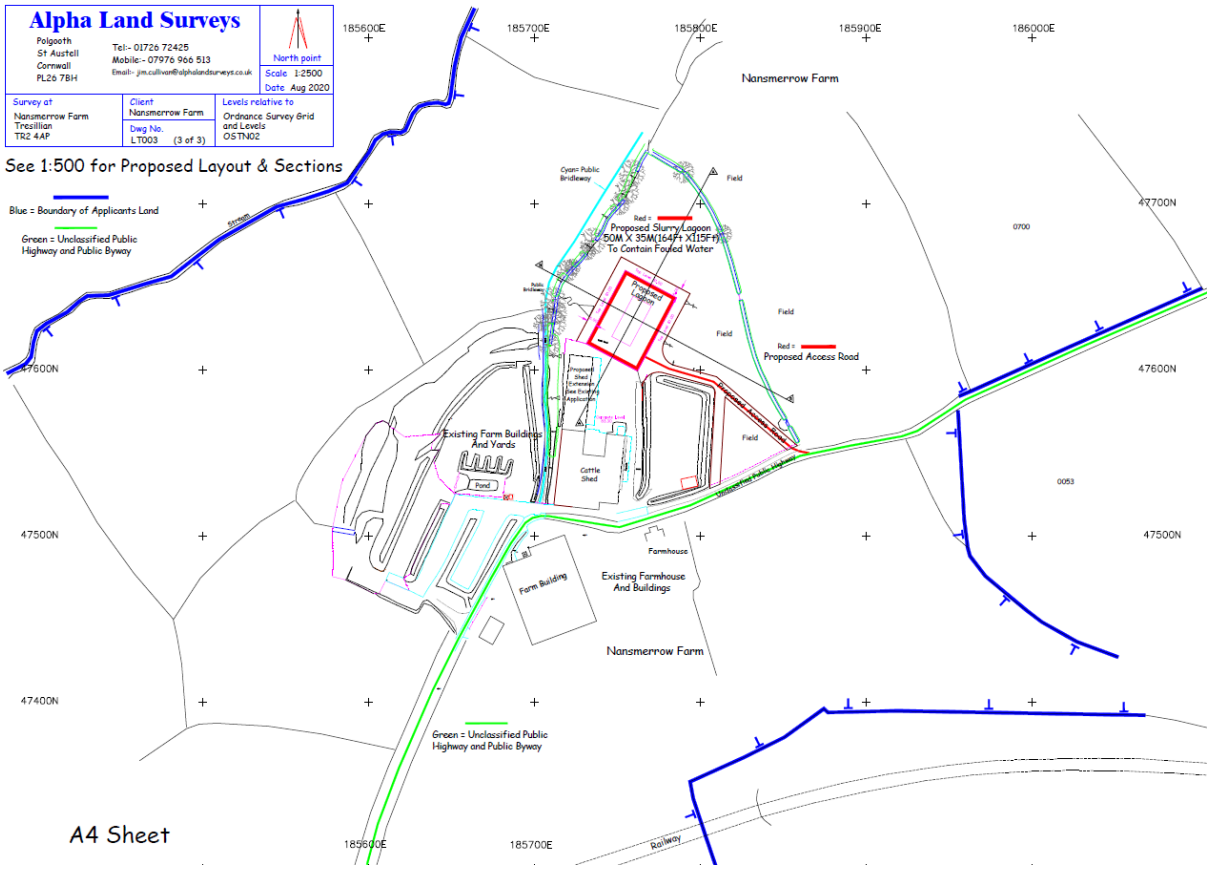
2. Site Details

2.1 Site Location

2.1.1 The site is located ~2km north east of Truro at Nansmerrow Farm, Tresillian, Truro, Cornwall, TR2 4AP. The approximate grid reference to the centre of the site is SW 85727 47573.

2.1.2 The site location plan is shown in Figure 1 below and included in Appendix A along with further site drawings.

Figure 1 – Site Location Plan



2.1.3 The site is accessed off the A390 and has a direct access road which consists of an unclassified public highway.

2.1.4 Vehicular access and all other access will lead from the Unclassified Public Highway directly to the proposed site via existing access points. However, a new stone surfaced farm track will be installed to cross the current grass field to enable to removal of the slurry for carting to the surrounding fields, as identified on the Block and Location Plans submitted with the application (included in Appendix A).

2.2 Site Classification

2.2.1 The site is a deposit for recovery managed under a waste recovery activity environmental permit.

2.2.2 Currently the site and local area land is used predominantly for agricultural purposes. Most of the local buildings appear to be farms.

2.3 Site Boundary

2.3.1 The site boundary is outlined in red on Figure 1 with the blue line indicating the land in ownership of the applicant.

2.3.2 The site security consists of established hedges, fences and entrance gates. The entrance gates will be closed and locked during out of hours' time and whenever the site is unmanned.

2.3.3 No public access will be permitted on site without prior arrangement.

2.3.4 There are no former waste management activity boundaries within 1km of the site.

2.4 Site Context and Receptors

2.4.1 The site is located as part of a large dairy farm owned by Mr Paul George. The application site is an area of agricultural pasture land, agricultural yard and hard standing, in close proximity to farm buildings that are used for the housing of dairy cattle.

2.4.2 MTS Environmental have undertaken an assessment of the site context to identify all receptors within a 1000m range from the site. Receptors are shown on Figure 2 with the red circle indicating the 1000m threshold area. Table 1 shows all the receptors, respective distance from the centre of the site and direction from the site.

2.4.3 Nineteen receptors have been identified and listed in Table 1, five of which are considered high sensitivity receptors based on their nature and vicinity to the site (highlighted bold in Table 1): Trenans Caravan (Receptor 1), Tresournes (Receptor 3), Polperrow Farm (Receptor 4), Trevella Stream (Receptor 11) and the Public Byway (Receptor 16). The remaining receptors are low sensitivity receptors.

Table 1 – Receptors identified within 1000m of Nansmerrow Farm

Receptor	Distance from site (m)	Direction
Residential		
Trenans Caravan	205m	East
Venton Berron	805m	East
Tresournes	440m	East
Polperrow Farm	390m	South
Woodlands Farm	730m	West
Bodrean Manor (Grade II Listed Building)	825m	North West
The Coach House	950m	North West
Milltown Cottage	910m	North
Cottages	740m	North
Pencoose Pantry	510m	North East
Designated Land and Waterways		
Trevella Stream	240m	North West
Waterbody	830m	South East
Ancient Woodland	920m	North
Priority Habitat Inventory (PHI) – Deciduous Woodland	Multiple with closest at 170m	All directions
PHI – Traditional Orchards	730m and 770m	West and North
Public Rights of Way		
Public Byway	0m	On site
Public Footpath	375m and 990m	North and East
Infrastructure/utilities		
Unclassified Public Highway	760m	East
The Cornish Main Line (train)	250m	South

2.4.4 These receptors will not be affected by the recovery operation through the mitigation and pollution control measures set out in Section 4 of this report.

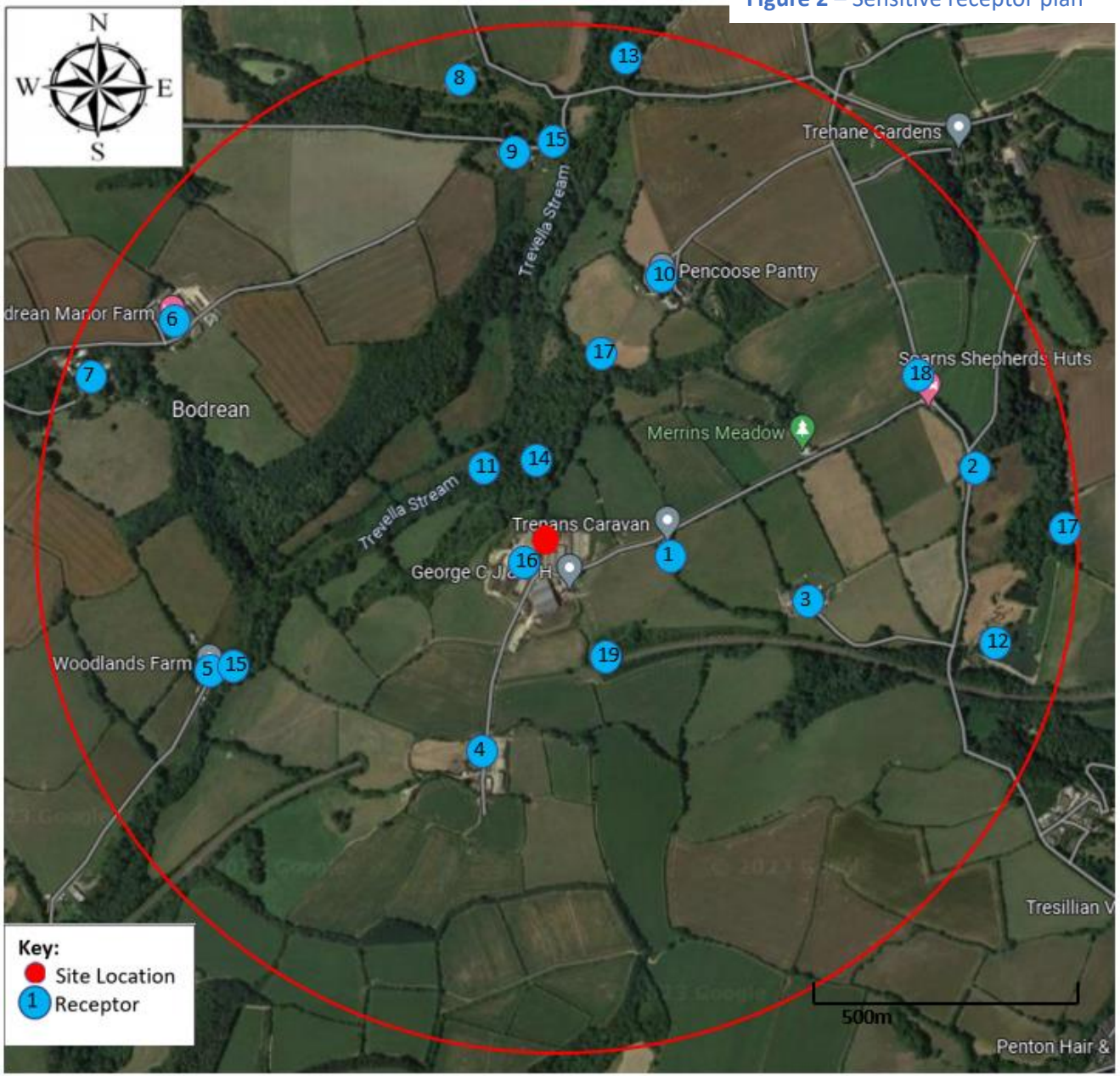
2.4.5 Polperrow Farm (Receptor 4) is owned by the applicants so impacts here are minimised and will not have any negative impacts on the public here as there are no other residents.

2.4.6 The public byway (Receptor 16) on site will be maintained and accessible to the public throughout the scheduled works, fencing will be put up to protect it if required.

2.4.7 It is believed that Trenans Caravan (Receptor 1) is a holiday let so will not be occupied 100% of the time and with only temporary residents so impacts on them are minimised and only short term.

2.4.8 Tresournes (Receptor 3) will be protected by any negative impacts from the site through the mitigation measures implemented and the distance from the site.

Figure 2 – Sensitive receptor plan



ID	Receptor
Residential	
1	Trenans Caravan
2	Venton Berron
3	Tresournes
4	Polperrow Farm
5	Woodlands Farm
6	Bodrean Manor
7	The Coach House
8	Milltown Cottage
9	Cottages
10	Pencoose Pantry
Designated Land and Waterways	
11	Trevella Stream
12	Waterbody
13	Ancient Woodland
14	Priority Habitat Inventory (PHI) – Deciduous Woodland
15	PHI – Traditional Orchards
Public Rights of Way	
16	Public Byway
17	Public Footpath
Infrastructure/utilities	
18	Unclassified Public Highway
19	The Cornish Main Line (train)

2.4.9 The local bedrock geology is Portscatho formation – sandstone and argillaceous rocks, interbedded with no superficial deposits on site. The soilscape is freely draining slightly acid loamy soils (soilscape 6).

2.4.10 There are no BGS borehole records within 1km of the site however, five trial pits were excavated on site to a maximum depth of just over 3 m to support a feasibility study for the proposed slurry lagoon. These show a consistent sequence at each location of topsoil (clay loam, 0.3 to 0.4 m thick) over yellow clay (0.4 to 2 m thick) over shale (full thickness unproven). This is detailed in the Earth Lined Slurry Lagoon Report included in Appendix B.

2.4.11 The site is not located within a groundwater Source Protection Zone but is located within a Nitrate Vulnerable Zone (2017 Designations). It is also within an area of high groundwater vulnerability.

2.4.12 The site lies on a bedrock Secondary A Aquifer which comprises permeable layers that can support local water supplies, and may form an important source of base flow to rivers. More detailed information on the aquifer designation can be found in the Hydrogeological Risk Assessment in Appendix C.

2.4.13 The site is located within flood zone 1 so has a low probability of flooding from rivers and the sea (<0.1% annual flood probability of fluvial flooding). The flood risk assessment tool on the gov.uk website also states that this site has a very low risk of flooding from surface water.

2.4.14 The site is outside the Cornwall Area of Outstanding Natural Beauty (AONB).

2.4.15 There are no live discharge or abstraction consents within 1km of the site according to EA records. Nansmerrow Farm holds an unlicensed groundwater abstraction (<20 m3/day), on record at Cornwall County Council (CCC), for domestic purposes.

2.5 Impact of Climate Change

2.5.1 Operations at the site will be adapted to account for the impact of climate change by:

- Monitoring weather and ceasing operations in extreme conditions
- Using dust suppression during extreme hot/dry weather periods
- Monitoring the levels of the nearby watercourse and ceasing operations during any flood events
- Using recycled material instead of raw materials so that the recovery operation does not contribute to further climate change
- Conducting a hydrogeological assessment and environmental risk assessment of the site to identify any risks and implement mitigation against climate change
- Robust waste acceptance procedures to minimise risk of receiving non-compliant loads
- Exploring options for water harvesting and storage at the site for use in onsite processes
- Monitoring vegetation surrounding the site during spells of hot and dry weather
- Existing drainage systems inspected and maintained
- Enhancing housekeeping and cleaning measures to ensure particulates on external surfaces are minimised
- Assessing the condition of the ground to determine if there is a need for additional support

3. Compliance

3.1 Groundwater

3.1.1 The site lies within the Trevella Stream catchment area.

3.1.2 There is no groundwater level information available for the site, however the five trial pits excavated on site to depths of 3 metres did not encounter groundwater.

3.1.3 It is considered likely that the groundwater table will be mirroring the topography of the land based on local elevations of springs. Therefore, groundwater is likely to be travelling north/north-westerly beneath the Site and discharging to the Trevella Stream.

3.1.4 The depth of the groundwater is below the depth of the lagoon so it will not obstruct natural groundwater flows.

3.2 Surface Water

3.2.1 The site surface water will percolate naturally into ground as the site is not artificially drained. Permitted waste types are inert so will not introduce any contamination to controlled waters. Non-conforming loads will not be accepted on site.

3.2.2 Surface runoff will follow the direction of slope and is therefore expected to flow to the north, into the valley of the Trevella Stream.

3.2.3 Activities are not permitted within 200m of a watercourse or to be deposited sub-water table.

3.2.4 The written management system should identify and minimise risks of pollution, including those arising from operations, maintenance, accidents, incidents and non-conformances.

3.2.5 All liquids stored on site shall be provided with secondary containment to prevent spills.

3.2.6 Any point source discharges of contaminated water to controlled waters are not permitted.

3.2.7 Risk from leachate and contaminated rainwater run-off from waste is limited by waste acceptance rules and limits to permitted waste types. Good onsite management practices must be detailed in the management system for controlling and containing water and leachate generated on the site.

4. Pollution Control Measures

4.1 General

4.1.1 The site security consists of established hedges, fences and entrance gates. The entrance gates will be closed and locked during out of hours' time and whenever the site is unmanned.

4.1.2 No public access will be permitted on site without prior arrangement.

4.1.3 Groundwater at the location of the proposed slurry lagoon would be below the depths of the lagoon. If necessary, small amounts of groundwater can be intercepted by a shallow drain to suitable perforated drainage pipes located under or outside of the lagoon impermeable layers.

4.1.4 The access road (unclassified public highway) has an impermeable concrete surface, and a new stone surfaced farm track is to be installed to cross the current grass field to enable removal of slurry for carting to the surrounding fields. The remaining site surface is agricultural made ground.

4.1.5 Only inert materials are permitted on site and any non-conforming loads are not accepted on site, so a quarantine area is not required. Strict waste acceptance procedures are followed on site. Inert materials do not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter that it comes into contact with, in a way likely to cause environmental pollution or harm to human health.

4.1.6 Fuel and oil will be contained in compliance with oil storage regulations. The fuel tanks will be contained within a bund capable of containing 110% of the maximum volume of the tank. This bund will enclose all the pipework and infrastructure associated with the tank. The fuel store will be locked to prevent unauthorised access to prevent leaks and theft.

4.2 Basal and Side Slope Engineering

4.2.1 Section drawings of the slurry lagoon are included in Appendix A and show cross sections of the proposed development.

4.2.2 A detailed Earth Lined Slurry Lagoon Report has been produced and is included in Appendix B.

4.2.3 The earth lined lagoon construction will include:

- The outsides of the embankments must be at least 10 metres from open drains and watercourses.
- Relocate any drains
- Remove topsoil from the site, including the area of the embankments
- Remove and temporarily store the impermeable clay layer on or near to the site
- Excavate to final lagoon depth over the base and bank areas, allowing additional depth for an impermeable soil liner to be built up on the lagoon base
- Provide a proper key for embankment construction
- Using suitable impermeable soil-fill, place and compact in uniform layers using mechanical plant
- Provide a permanent safety fence, at least 1.3 metres high and of un-climbable construction

4.2.4 There is sufficient impermeable soil to be used as a liner on site.

4.2.5 The slurry lagoon will be designed and constructed in accordance with the CIRIA reports C759: Livestock manure and silage storage infrastructure for agriculture.

4.2.6 The main engineering requirements for the material used to construct the banks of the lagoon are compaction and binding which is crucial to the supporting structural integrity for retaining the pressure of the liquid slurry.

4.2.7 The lagoon has been designed to use naturally occurring local soils and sub soils as they fulfil the engineering requirements of scheme and would be better suited to the location.

4.3 Surface Water Management

4.3.1 The site surface water naturally drains to the northeast towards the adjacent field. The nearest watercourse is Trevella Stream located 240m to the north west of the centre of the site. The site only accepts inert waste, so no surface water management features are required, it has been assessed as low risk in the environmental risk assessment.

4.3.2 The spill response procedure will be followed in the event of a spill or leak at the site which could pose a risk to surface water.

4.3.3 The Hydrogeological Risk Assessment concluded that:

'The only receptors are expected to be the groundwater within the underlying Portscatho Formation Secondary A aquifer and surface water in the nearby Trevella Stream. Significant amounts of attenuation and dilution of the already low leachate contaminant concentrations are expected within the unsaturated zone, along the groundwater pathway, and within surface water flow in the Trevella Stream. As a result, hydrogeological risks are assessed to be very low and no further measures to reduce risk are considered necessary.'

4.4 Amenity

4.4.1 It is concluded through the environmental risk assessment that amenity of local residents, habitat sites or sites of cultural heritage won't be negatively impacted by the site activity.

4.4.2 To minimise the impacts of dust and particulates on local receptors, the following mitigation is in place:

- Tracks and hall roads must be dampened down using the water bowser at regular intervals
- Weather conditions to be recorded on the Daily Site Report
- Processing to be stopped in extreme windy conditions and recorded
- Speed limit to be reduced
- Load heights and speed of loading to be reduced
- Stockpiles to be dampened down

4.5 Post Closure Controls

4.5.1 The site will not close as it will continue to be managed as a dairy farm, however once the site has been suitably recovered to satisfy the Waste Recovery Plan and planning permission, the Operator will contact the Environment Agency to inform them. The Operator will submit a surrender of the permit application to the Environment Agency for duly making.

4.5.2 Any waste remaining on site will be inspected by the Technically Competent Manager, who will produce plans for its quick and safe removal off site.

4.5.3 All waste, plant and machinery will be removed from site.

4.5.4 A site investigation will be conducted to determine the quality of the ground condition on site following all operations and that recovery has been achieved.

4.5.5 The proposed after-use of the site is a continuation of the current use as a dairy farm with a larger herd that the slurry lagoon will accommodate. The scheme has a specific purpose serving as a crucial part of the dairy expansion.

4.5.6 With the increase in head of cattle from dairy the by-product volume of slurry needs to be stored for use as a natural fertiliser on the farm. Even setting aside the expansion of the dairy operation, there is an existing shortfall of slurry storage which this recovery operation shall satisfy.

4.5.7 The sites surface and groundwater management will remain as the existing systems post-closure/recovery.

4.5.8 No historic mining is recorded on site according to the Envirocheck report in the Hydrogeological Risk Assessment. Therefore there is no risk of hidden shafts causing subsistence.

4.5.9 The likelihood of mining related subsidence, differential settlement and structural failure is very low as no mining will take place in the activities. The slurry lagoon has been professionally designed to meet the technical requirements for the operation. The lagoon will be constructed in accordance with the engineered design and the granted planning permission.

4.5.10 The completion criteria that must be achieved before applying to surrender the permit are:

- Waste is physically and chemically stable – a ground investigation has been conducted by a qualified engineer that concludes the slurry lagoon has been engineered correctly and is safe to use
- The topography of the site has been assessed and levels are in line with the site design and drawings
- The Waste Recovery Plan has been satisfied and the correct total tonnage imported to site
- A sufficient liner has been constructed for the slurry lagoon following the engineered design
- Planting on the lagoon banks has been undertaken in line with the planning permission
- All waste brought onto site has been recorded and records kept

5. Monitoring

5.1 Weather Monitoring

5.1.1 General

5.1.1.1 Visual monitoring of weather will be conducted daily during site operations, this includes inspections at the access track and public roads, and downwind of operations.

5.1.1.2 Daily weather monitoring findings, including wind conditions, are recorded on the Daily Operational Report Form included in the site Environmental Management System.

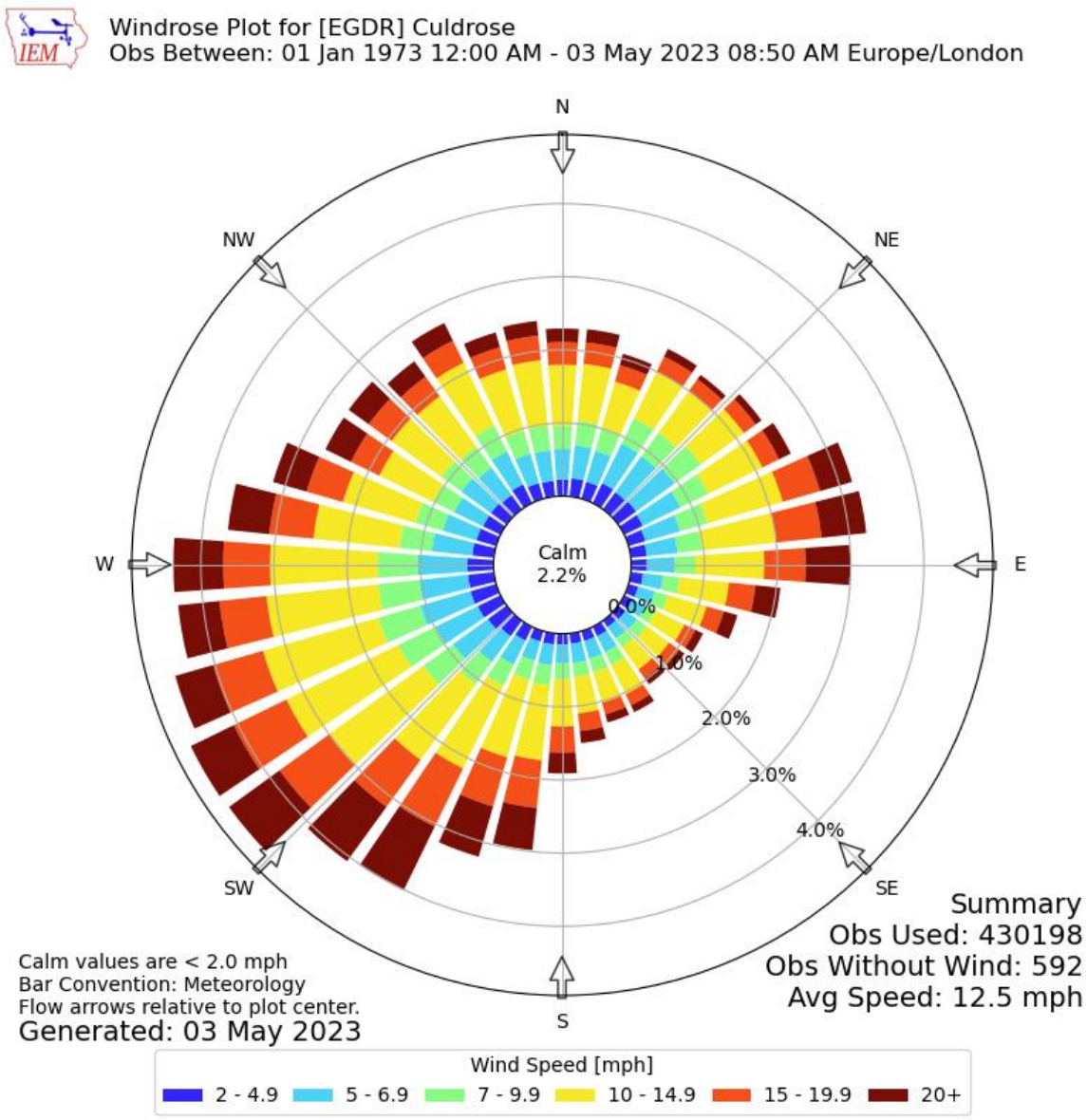
5.1.1.3 The Site Manager is responsible for weather monitoring.

5.1.1.4 If required, meteorological information will be obtained from the local Met Office station.

5.1.2 Prevailing Wind

5.1.2.1 An assessment of wind data has been conducted. Wind rose data from Culdrose weather station show that the prevailing wind is on average only 5.6 m/s (12.5 mph) (between a gentle and moderate breeze on the Beaufort Scale) to the North East (see Figure 3). Winds of >5m/s in this direction occur ~3% of the time, which is considered infrequent. Winds from all directions are above 5 m/s so should be noted but they occur less than 3% of the time so are considered infrequent.

Figure 3 - Wind rose showing the average wind data at Culdrose Meteorological station (source: Iowa Environmental Mesonet)



5.1.2.2 Winds with speeds exceeding >5m/s from the direction of the dust source that occur more than 20% of the time are considered to increase the likelihood of dust being raised and blown from the site. Therefore, winds are not expected to increase dust raising significantly at the site. The data for Culdrose weather station does not define the percentage of that period which is dry. This assessment assumes a worst-case scenario of all winds >5m/s occurring on dry days.

5.1.2.3 Culdrose meteorological weather station is located 28.7km from Nansmerrow Farm and has a similar topography to those at the site. It is similarly surrounded by agricultural land. Therefore, this wind rose data is comparable to that of the site. This station is closer to the coast than the application site, so it is assumed that the wind levels recorded here are higher than that of the site. Based on this, it can be assumed that this wind data is a worst-case scenario.

5.1.3 Rainfall

5.1.3.1 Table 2 shows the rain data for the site. The average number of days per month with greater than 1mm rainfall is quite consistent in winter and summer months.

5.1.3.2 0.2 mm rainfall a day is considered sufficient to effectively suppress wind-blown emissions, however analysing days with greater than 1 mm rainfall is considered to be a more robust approach. Using the climatic rainfall data, it is likely that for 43.33% of the year dust will be suppressed due to meteorological conditions.

Table 2 – Climatic rainfall Data from 1991 - 2020 at St Mawgan meteorological station (source: metoffice.gov.uk)

Month	Rainfall (mm)	Days of rainfall ≥1 mm (days)	Proportion of the month with days of ≥1mm rainfall (%)
January	109.0	16.35	52.74
February	83.19	13.31	47.54
March	68.78	12.38	39.94
April	65.67	11.08	36.93
May	58.39	9.83	31.71
June	63.05	10.10	33.67
July	71.46	11.39	36.74
August	71.30	12.07	38.94
September	77.16	11.52	38.40
October	108.04	15.23	49.13
November	127.66	17.76	59.20
December	115.69	17.06	55.03
Annual	1019.39	158.08	43.33

5.1.3.3 St Mawgan meteorological weather station is located 16.6km from Nansmerrow Farm and has a similar topography to those at the site. Therefore, this rainfall data is comparable to that of the site. It should be highlighted that the weather station is closer to the north coast whereas the site is closer to the south coast which may affect rainfall. It was chosen as it is the nearest weather station with available data.

5.2 Gas Monitoring

5.2.1 The site is not proposed to be a landfill and there are no EA records of historical landfill activity within 1km of the site so gas monitoring is not required.

5.2.2 Only inert materials are to be placed on site to build the slurry lagoon. The lagoon has been designed to use naturally occurring local soils and sub soils which meet the specification and introduce no contamination. As the imported materials are clean naturally occurring there is no requirement for gas monitoring on site.

5.3 Groundwater Monitoring

5.3.1 No groundwater monitoring is required on site as only inert materials are to be imported with strict waste acceptance procedures.

5.3.2 The hydrogeological risk assessment concludes that hydrogeological risks are very low and no further measures to reduce risk are considered necessary.

5.4 Surface Water Monitoring

5.4.1 No surface water monitoring is required on site as only inert materials are to be imported with strict waste acceptance procedures.

5.4.2 The hydrogeological risk assessment concludes that hydrogeological risks are very low and no further measures to reduce risk are considered necessary.

5.5 Amenity Monitoring

5.5.1 A Daily Operational Report Form will be completed on site during site operations to confirm that control measures are effective.

5.5.2 If any issues are observed then it will be recorded in the site diary and corrective action will be implemented to resolve the issue.

5.5.3 A complaint form will be available for those who are affected by the operations. If necessary, a meeting shall be carried out with complainants if amenity is seriously impact.

5.5.4 The site will have a publicly visible sign at the entrance with contact details for the Operator so neighbouring businesses or local residents can make contact if they have any complaints/issues at any time.

5.5.5 The applicant has owned and run the site for many years so has an existing presence within the community and has built good existing relationships with neighbours. This has been achieved through having an open-door approach so that any neighbours can visit the site and talk to site staff. Any issues can be discussed, and the applicant will change procedures if appropriate to address the issue. This approach will be continued on the proposed operation.

6. Conclusion

6.1.1 Land at Nansmerrow Farm requires a deposit for recovery activity in order to engineer and construct a new slurry lagoon to fulfil the requirements of the larger dairy herd following planning permission.

6.1.2 This ESSD report sets out control measures implemented on site that ensure site operations will have no negative impacts on the local environment or human health.

6.1.3 In addition to the other permit application documents submitted to the Environment Agency, this provides a comprehensive assessment of the site to prove compliance.

6.1.4 Pollution control measures and monitoring have been detailed to reduce risks; this is evidenced further by the Environmental Risk Assessment.

6.1.5 The application site at Nansmerrow Farm and the wider community will largely benefit from this recovery operation.

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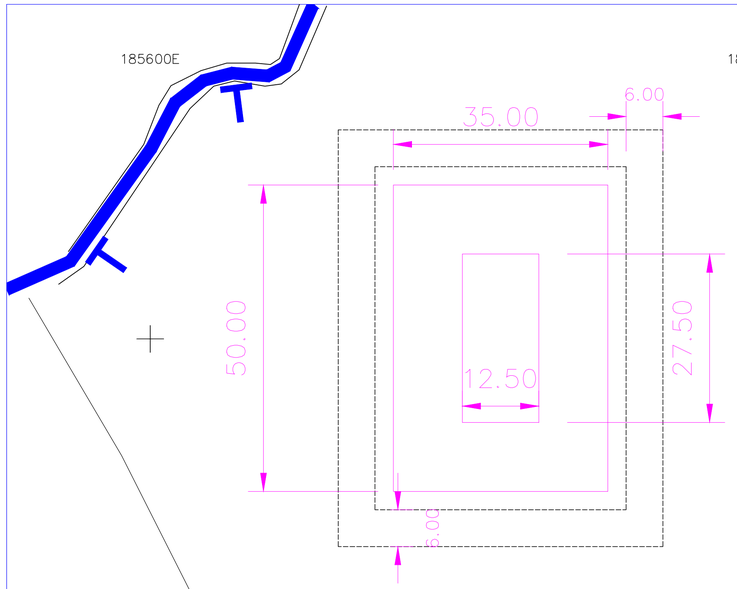
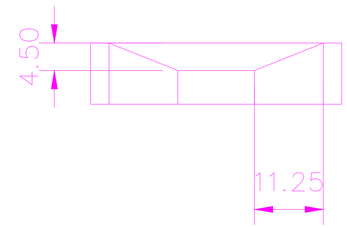


Plan of Lagoon

Volume of material to form Embankment
is Approximate 20,000 Cubic Meters
with Bulking Factor this would increase



Section of Lagoon

Cyan= Public Bridleway

Public Bridleway

Field

Lagoon

Top Level 81.00

Min Slopes 1in2
26 degrees

6.00

Base 76.50

Earth Bund

Proposed Access Yard 82.50

Scrub Hedge on wall 2.50ht

Earth & Stone Wall 0.30ht

Earth & Stone Wall 1.10ht

Top of tree Level 84.70

Top of tree Level 81.00

Proposed Shed Extension See Existing Application

Proposed F.L 83.30

Concrete Level 83.30

Concrete

Cattle Shed

Ridge 90.62

Ridge 90.39

Ridge 90.59

Grass

Stone Chippings

Proposed Access Road

Existing Private Track

Elect Fence

Trough

Trough

Scrub Hedge on Bank Ave. 3.50ht

Existing Farm Buildings
And Yards

Pond

Open Sided Barn

Roof LEVEL 88.51

Ridge 91.43

Farmhouse

Unclassified Public Highway

Proposed Layout

0 10 20 30 40 50 60 70 80 90 100

Scale bar (meters)

Symbols and Linetypes

- Manhole types
- Gully/drain
- Lamppost
- Telegraph Pole
- Electric Pole
- Gas Cover
- Water Cover
- Electric Cover
- Telephone Cover
- Traverse Station
- Sign
- Posts
- Stay
- Mkr or Roof level
- Canopy/Hedge
- Overhead wire
- Building
- Wall
- Kerb
- Edge
- Track
- Bank
- Steps
- Fence
- Deciduous
- Palm
- Evergreen
- Bush

Alpha Land Surveys

Polgooth
St Austell
Cornwall
PL26 7BH

Tel:- 01726 72425
Mobile:- 07976 966 513
Email:- jimcullivan@ yahoo.co.uk

North point

Scale 1:500

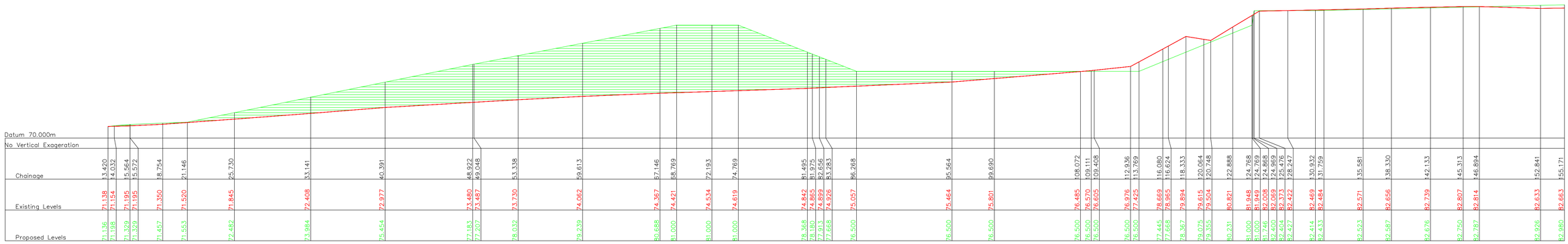
Date Aug 2020

Survey at
Proposed Regular Lagoon
Nansmerrow Farm
Tresillian
TR2 4AP

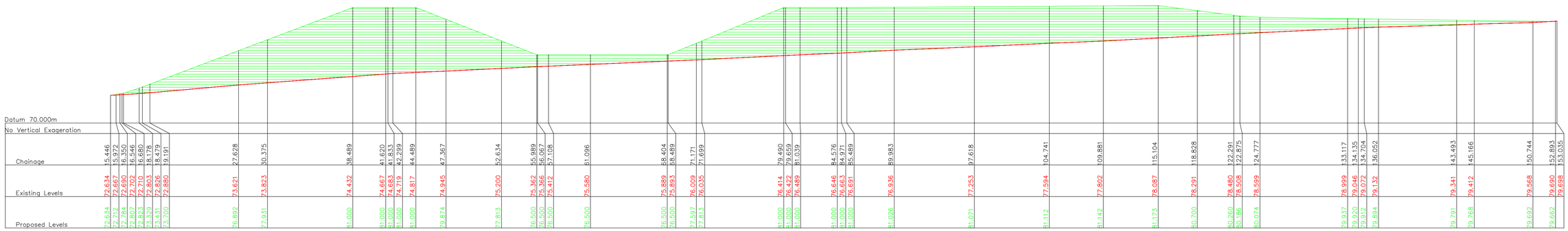
Client
Nansmerrow Farm

Dwg No.
LT001 (1 of 3)

Levels relative to
Ordnance Datum
OS TN 15
Level and Grid



Section A–A



Section B–B

Alpha Land Surveys

Polgooth
St Austell
Cornwall
PL26 7BH

Tel:- 01726 72425
Mobile:- 07976 966 513
Email:- jimcullivan@ yahoo.co.uk

North point

Scale 1:200

Date Aug 2020

Survey at
Proposed Regular Lagoon
Nansmerrow Farm
Tresillian
TR2 4AP

Client
Lodge and Thomas

Dwg No.
LT002 (2 of 3)

Levels relative to
Ordnance Survey Grid
and Levels
OSTN02

0 5 10 15 20

Scale bar (meters)

Symbols and Linetypes

- Manhole types
- Gully/drain
- Lamppost
- Telegraph Pole
- Electric Pole
- Gas Cover
- Water Cover
- Electric Cover
- Telephone Cover
- Traverse Station
- Sign
- Posts
- Stay
- Mkr or Roof level
- Canopy/Hedge
- Overhead wire
- Building
- Wall
- Kerb
- Edge
- Track
- Bank
- Steps
- Fence
- Deciduous
- Palm
- Evergreen
- Bush

Alpha Land Surveys

Polgooth
St Austell
Cornwall
PL26 7BH

Tel:- 01726 72425
Mobile:- 07976 966 513
Email:- jim.cullivan@alphalandsurveys.co.uk

North point

Scale 1:2500
Date Aug 2020

Survey at	Client	Levels relative to
Nansmerrow Farm Tresillian TR2 4AP	Nansmerrow Farm Dwg No. LT003 (3 of 3)	Ordnance Survey Grid and Levels OSTN02

See 1:500 for Proposed Layout & Sections

Blue = Boundary of Applicants Land

Green = Unclassified Public Highway and Public Byway

Red = Proposed Slurry Lagoon 50M X 35M(164Ft X115Ft) To Contain Fouled Water

Red = Proposed Access Road

Cyan= Public Bridleway

Public Bridleway

Stream

Proposed Lagoon

Top Level 85.00

Proposed Shed Extension See Existing Application

Concrete Level 83.30

Proposed Access Road

Existing Farm Buildings And Yards

Pond

Cattle Shed

Unclassified Public Highway

Farm Building

Farmhouse

Existing Farmhouse And Buildings

Nansmerrow Farm

Field

Field

Field

Field

0700

0053

Railway

185600E

185700E

185800E

185900E

186000E

47700N

47600N

47500N

47400N

A4 Sheet