



**LADYCROSS PLANTATION CARAVAN PARK
PUMP STATION TECHNICAL DOCUMENT**

NYMNPA

05/12/2023

PROJECT: LADYCROSS PLANTATION CARAVAN PARK

Prepared for:

Ladycross Plantation
Egton,
Whitby,
YO21 1UA

Prepared by:

Advantage Pumping Solutions
122 Londesborough Street
Hull
HU3 1DR

Date:

10th October 2023



**LADYCROSS PLANTATION CARAVAN PARK
PUMP STATION TECHNICAL DOCUMENT**

Amendment Record

Issue No.	Date	By	Ch'd	Description
A01	27/09/23	LC	SH	Original Issue for Comment / Approval
A02	10/10/23	SH	CS	Septicity Calculation Added
A03	19/10/23	LC	SH	Population Total Amended



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Contents

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 - B) Pumping Station Drawings**



LADYCROSS PLANTATION CARAVAN PARK PUMP STATION TECHNICAL DOCUMENT

1. Specification

Our proposal is based on equipment complying with the Building Regulations and to a safe and serviceable standard for maintenance and operations.

2. Hazardous Area Classification

We have not classified the pumping station as a hazardous area.

3. Design Inflow and Proposed Discharge

We have based our calculations on the pumping station serving the following;

- 148 caravans
- 48 lodges
- 2 amenity blocks
- 1 shop
- 1 house
- 1 office

4. Rising Main

Our design is based on utilising a 1000m long, 63mm OD MDPE pipe with an internal diameter of 50mm for the foul water pumping station.

As the rising main is of a simple profile and presented no previous issues, surge analysis will not be required.

Dry Weather Flow (dwf) = PG + E + I

Where; P = Population (@ 2.4 / dwelling)
G = Consumption rate (160 l/hd/day)
E = Industrial & Commercial (0 l/sec)
I = Infiltration (10%)

$$(201 \text{ dwellings} \times 2.4) \times 160 + 0 + 10\% = 84,902.4 \text{ l/day} \\ = 0.98 \text{ l/sec}$$

Based on the rising main retaining a volume of approximately 2,000 litres and the pumping station wet well retaining 1,000 litres, giving a total system volume of 3,000 litres.

$$\text{Time in System} = \frac{\text{Volume}}{\text{Flow}} = \frac{3,000}{0.98} = 3,061 \text{ secs} = 51 \text{ mins}$$

Based on the calculation above, the flows should clear the system within 1 hour during normal operation which is below the recognised figure of 6 hours where septicity would be considered an issue. As such we do not propose to equip the pumping station with chemical dosing.



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5. Pump Duty and Selections

From the levels detailed in the site drainage plan and taking a mid-point between the pump start and stop level we propose the selection of a Flygt pump fitted with a macerator impeller and 1.9kW motor. The existing supply operates 2No. MP3068HT's. The supply is single phase, but should be adequate for the new pumps.

6. Pumping Station Layout

The Pumps, pipework and valves would be installed within a GRP chambers to the layout as shown on the Advantage drawing, appended to this document.

The system will be fitted with PVC non-return valves and a PVC isolation wedge gate valves on the common discharge pipework.

Advantage would terminate a short distance outside the wet well in a 90mm compression fitting from where provision of the rising main and connecting it to the pump station pipework would be the responsibility of others.



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7. Flow Meter / Flow Monitoring

We do not propose to equip the pumping station with a flow meter unless otherwise specified by the client.

8. Power and Control Cabling

Power and control cabling will be wired directly back to the control panel via 100mm cable ducts which will be sealed with RISE fire retardant duct sealant (or similar approved).

9. Control Equipment

Automatic level control would be provided via 4no level control float switches all wired back to a single-compartment control panel installed within a GRP Kiosk 1200mm wide x 1250mm high x 450mm deep which has space for the meter.

10. Telemetry Equipment

Advantage Pumping Solutions can supply and install a GSM alert unit to provide alerts on system/pump faults via a SIM card.

11. Access Covers

Single unit galvanised mild steel lids will be required for the pumping station provided with a clear opening of 1000mm x 800mm.

12. Lifting Equipment

We propose that no permanent lifting equipment is to be fitted to the system and the use of portable equipment will be utilised.

13. Penstock

The pumping station will not be provided with a means of isolation as standard. An isolation penstock can be fitted if required.

14. Ladders / Access

No form of access into the wet well via a ladder or either will not be installed.

15. Wet Well Ventilation

Not required wet well would be ventilated via upstream sewer if required.

16. Appendices

- A. Hydraulic Calculations and Pump Selections
- B. Pumping Station Drawings



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**Appendix 18.A
Hydraulic Calculations and Pump Selections**

Foul Water Specification Sheet

Product:	Advantage PPS18-50 R80H TWIN
Pumped Liquid:	Foul Water
Total Head:	TBC
Pumped Rising Main:	Approx 1,000m of 63mm OD PE pipework
Total Tank Capacity:	35,000 litres
Tank Size:	2.5 dia x 8.0m long
Tank Material:	GRP tank
Pumps:	Heavy duty None standard Flygt
System Voltage:	230V
Pumped Flow Rate:	2 l/sec
Pump Configuration:	Duty / Standby
Mounting Arrangement:	Guide rail mounted
Lifting Chain:	3 metres of galvanised chain per pump
Internal Pipework:	2" Upvc
Outlet Connection:	63mm OD PE Pipework Compression Fitting
Control Panel:	Twin pump panel, DOL starting, mild steel coated panel
Control Method:	Float switch control
Control Panel Distance from Wet Well:	5 metres
Inlet 1 Depth Below Lid:	Approx 1m
Inlet 1 Pipe Type/Orientation:	150mm

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Pump Technical Specification

MP 3085 HT 1~249

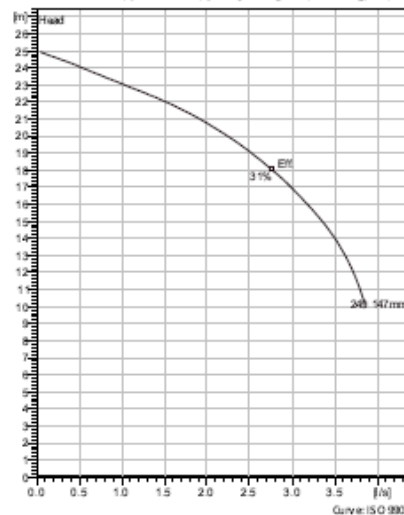
Semi-open multi-channel impellers with integral grinder/cutter in single volute casing for liquids containing solids and fibres.



Technical specification



Curves according to: Water, pure Water, pure [100%], 4 °C, 999.9 kg/m³, 1.5692 mm²/s



Nominal (mean) data shown. Under- and over-performance from this data should be expected due to standard manufacturing tolerances. Please consult your local Flygt representative for performance guarantees.

Configuration

Motor number	Installation type
M3085.172 1S-09-2 GL-W	P - Semi permanent, Wet
1.9 KW	
Impeller diameter	Discharge diameter
147 mm	40 mm

Pump information

Impeller diameter
147 mm
Discharge diameter
40 mm
Inlet diameter
40 mm
Maximum operating speed
2915 rpm
Number of blades
6

Material

Impeller
Grey cast iron
Stator housing material
Grey cast iron

Max. fluid temperature
40 °C

Project	Xylect-21166677	Created by	Steven Hewitt
Block		Created on	9/20/2023
		Last update	9/20/2023



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MP 3085 HT 1~ 249

Performance curve

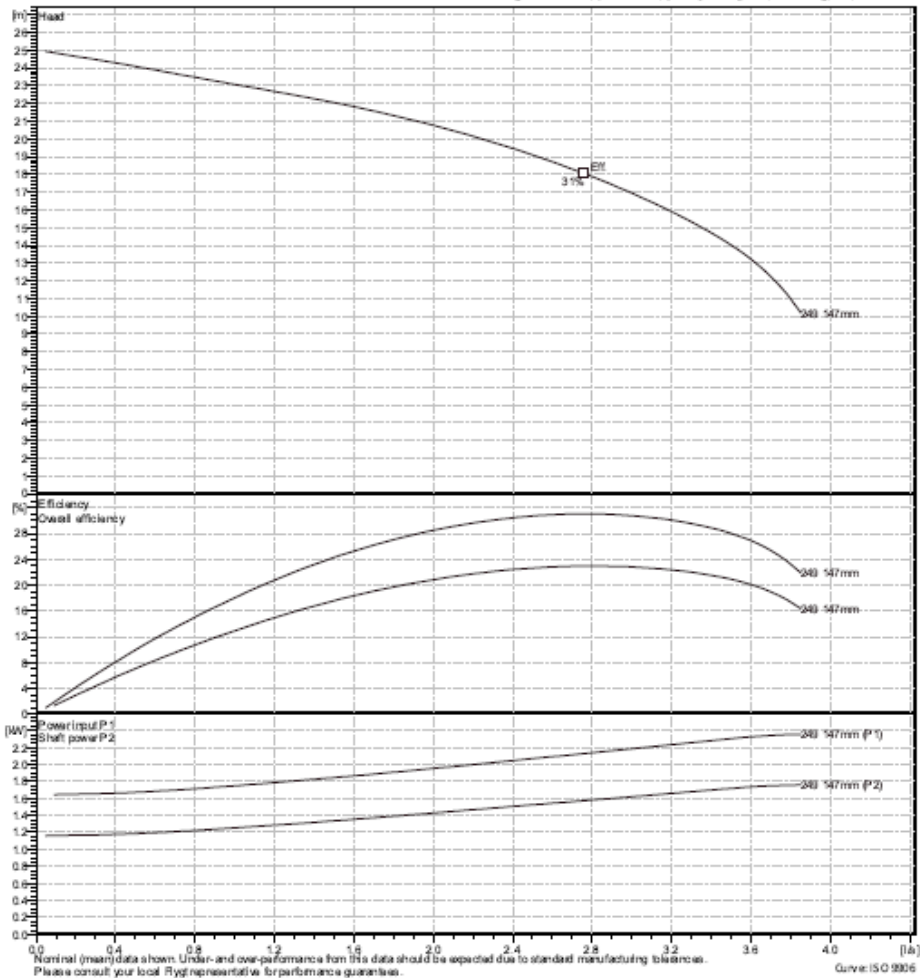
Duty point



Flow

Head

Curves according to: Water, pure Water, pure [100%], 4 °C, 999.9 kg/m³, 1.5652 mm²/s



Xylem: 21166677

Steven Hewitt

Created on 9/20/2023 Last update 9/20/2023

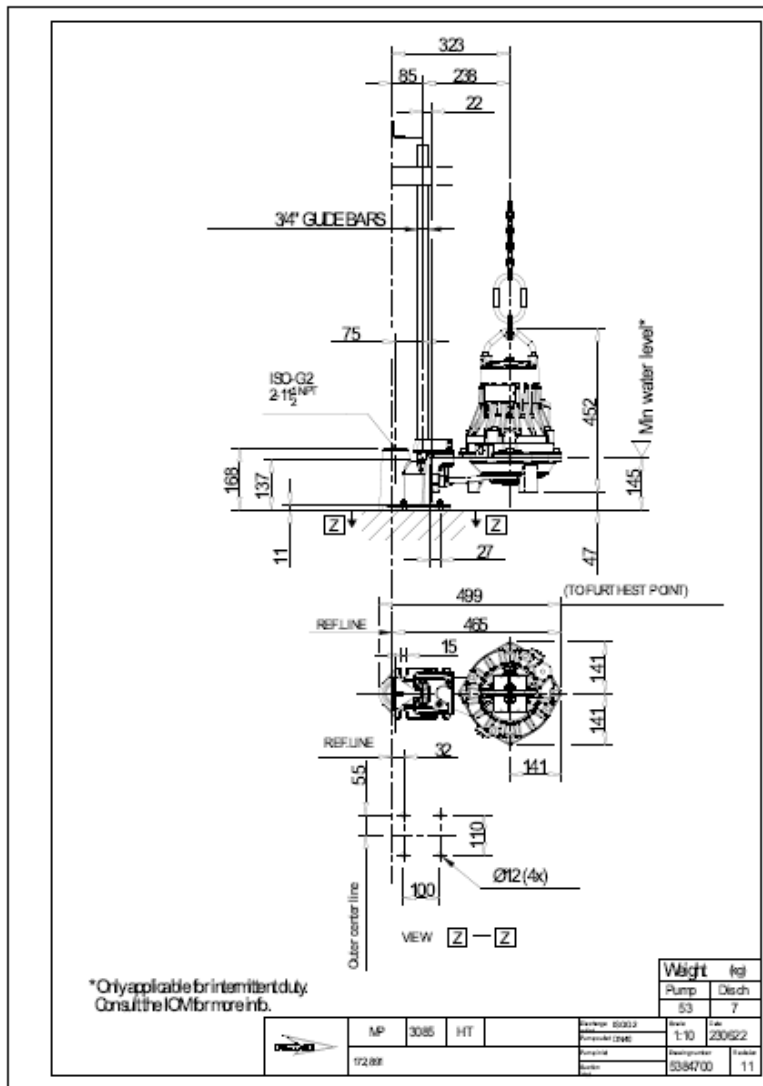


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Pump Dimensional Drawing

MP 3085 HT 1~ 249

Dimensional drawing



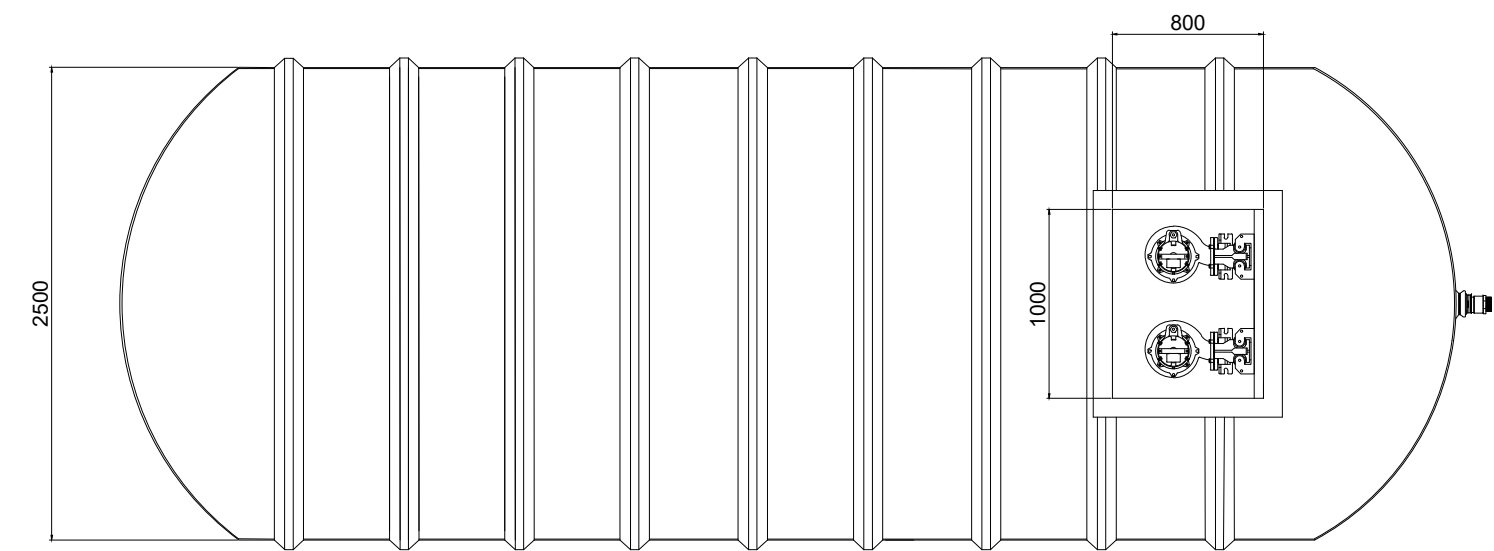
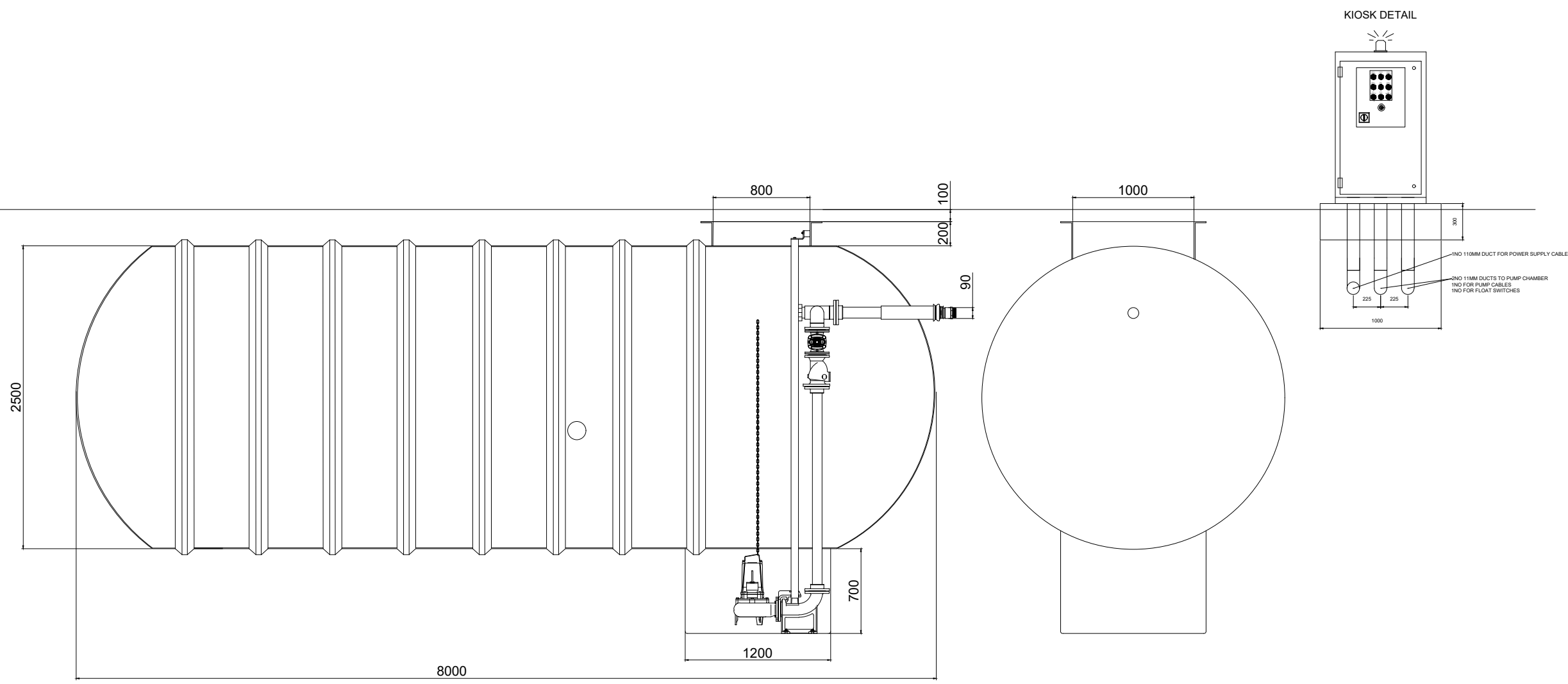
Project: Xylect: 21166677 Created by: Steven Hewitt
 Block: Created on: 9/20/2023 Last update: 9/20/2023



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PUMP STATION TECHNICAL DOCUMENT**

**Appendix 18.B
Pumping Station Drawings**

NOTES:
All Dimensions Are In Millimeters (Except Where Otherwise Stated).



REV	DESCRIPTION	BY	CHKD	DATE
A01	FOR APPROVAL	LC	SH	13/09/2023



CLIENT: LADYCROSS PLANTATION

PROJECT: LADYCROSS PLANTATION CARAVAN PARK

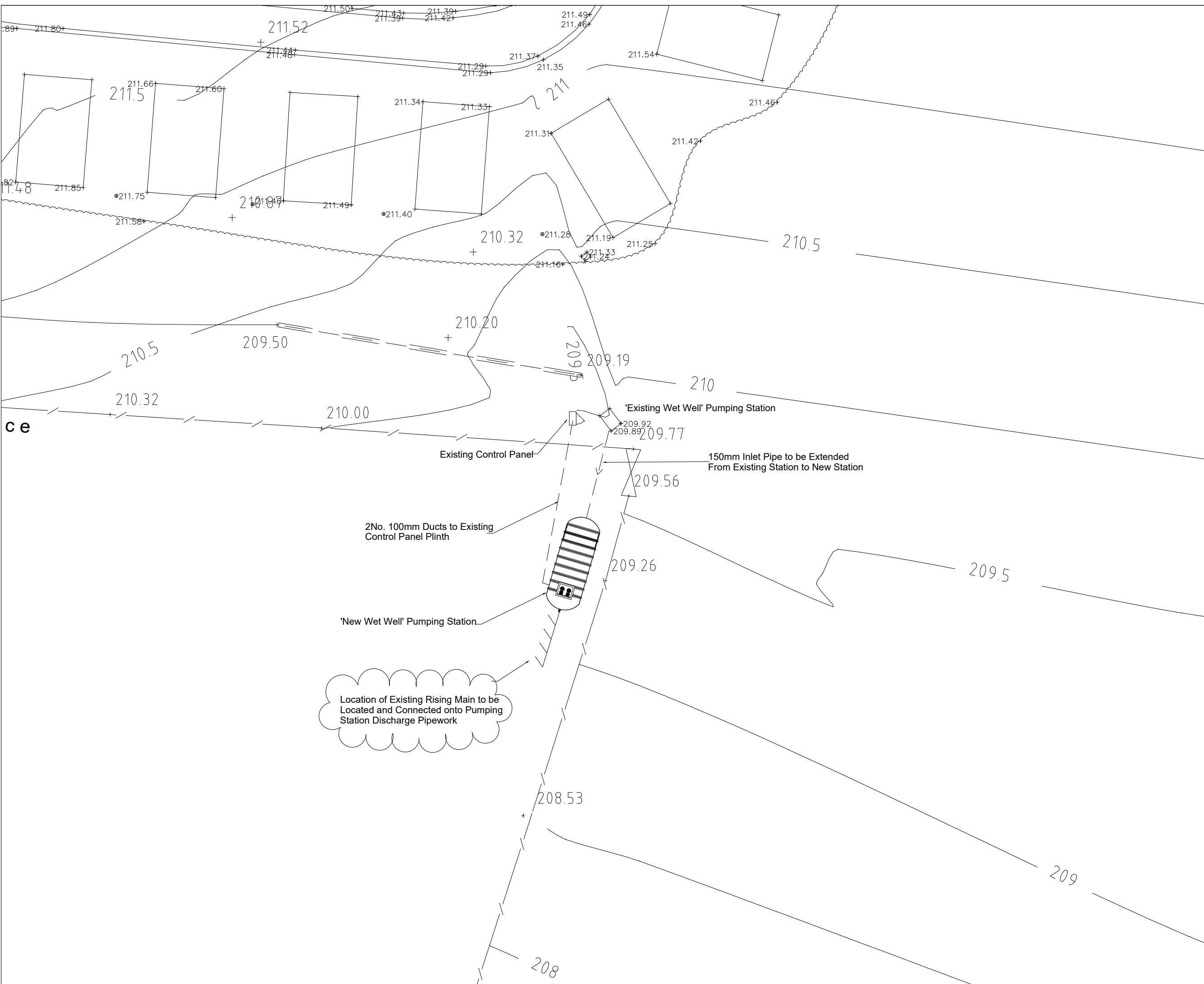
DRAWING TITLE: PUMP STATION GENERAL ARRANGEMENT

SCALE: 1:40	DRAWN: LC	CHECKED: SH	DATE: 13/09/2023
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DRAWING NUMBER: XXXXX-GA-0002	REVISION: A01
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NOTES:
All Dimensions Are In Millimeters (Except Where Otherwise Stated).



A01	FOR APPROVAL	LC	SH	27/09/2023
REV	DESCRIPTION	BY	CHKD	DATE



CLIENT:
LADYCROSS PLANTATION

PROJECT:
LADYCROSS PLANTATION CARAVAN PARK

DRAWING TITLE:
PUMP STATION
PROPOSED SITE LAYOUT

SCALE: 1:250	DRAWN: LC	CHECKED: SH	DATE: 27/09/2023
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DRAWING NUMBER: XXXXX-GA-1001	REVISION: A01
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**Whitcher Wildlife Ltd.
Ecological Consultants.**



**LADYCROSS PLANTATION HOLIDAY
LODGES.**

OS REF: NZ 817 080.

**BIODIVERSITY AND ENHANCEMENTS
MANAGEMENT PLAN.**

Ref No: 231048 / 1.

Date: 20th November 2023.

Cliff Edge, Cliff Road, Darfield, Barnsley, S73 9HR.

www.whitcher-wildlife.co.uk
Company No. 4401613.

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1. INTRODUCTION.

1.1. It is proposed to restructure the layout of approved plans for a holiday park set in a woodland near Egton, Whitby.

1.2. Condition 12 of the planning consent states that a Biodiversity Enhancements Management Plan (BEMP) is submitted to the local planning authority and approved in writing.

1.3. Condition 12 advises: -

No work shall commence to clear the site in preparation for the development hereby permitted until a Biodiversity Enhancement Management Plan has been submitted and approved by the Local Planning Authority.

This plan shall provide in depth detail as to how the habitats will be created, and a Habitat Monitoring and Management Plan, which shall provide information on how the habitats will be managed and monitored for the next 30years. The approved BEMP shall be implemented and maintained in accordance with the approved details.

1.4. This document has been prepared to satisfy that planning condition. The aims and objectives of this document is to ensure that the desired number of habitat biodiversity units are achieved and are maintained for the next thirty years.

2. SUMMARY OF FINDINGS.

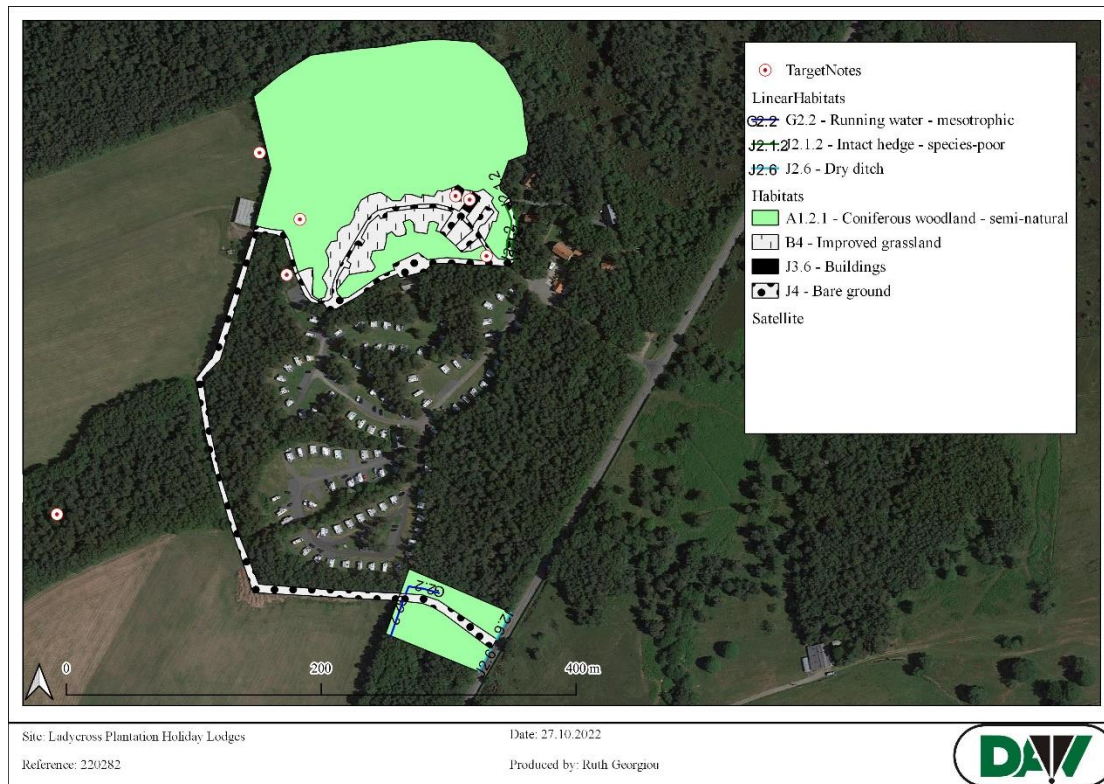
2.1. The aerial map below shows the location of the application site, circled in red, and the surrounding area.



2.2. The application site comprises an area of woodland, part of the caravan park with existing caravan/holiday lodge plots and a proposed access route.

2.3. Various site surveys, including a full preliminary ecological appraisal, have been carried out of the site by Whitcher Wildlife Ltd. Below is an overview of the findings of that survey.

2.4. The habitats in the application area were found to be predominantly coniferous woodland with bare ground and some improved grassland. There are also a small number of buildings on the site. The map below shows the habitats across the application area.



2.5. The data search results for the site show that the application area lies within the North Yorkshire Moors National Park. The proposals will have no negative impact on this designation.

2.6. The habitats on the site are all locally common habitats with locally common species. The woodland habitats are assessed to be of the highest ecological value. The proposed works will involve construction of holiday lodges in the woodland setting, with the woodland setting being a key attraction. The impacts will be restricted to clearing vegetation that lies directly within the footprint of each lodge and any access to the lodges. The lodges will also be spaced to ensure that it maintains a woodland feel throughout. The lodges will be constructed from wood and will have natural external colours to blend in with the surrounding habitats. With precautionary measures in place throughout the development phase and long-term measures in place to minimise disturbance, it is assessed that the impact on the woodland habitats will be low.

2.7. There is a flowing watercourse that flows alongside and under the proposed access route. This is an existing vehicle access and the proposed use of this will be of no more impact to the watercourse than it currently stands. There will be no impact on the watercourse.

2.8. Biodiversity calculations were carried out using the Biodiversity Metric 3.0 of the habitats that lie within the development footprint, including the access route to the proposed static caravan plots. The baseline on the site was calculated at 26.24 Habitat Biodiversity Units (Bu) and 0.05 Hedgerow Bu as shown in the tables below.

Habitat Type	Extent (ha)	Distinctiveness	Condition Assessment	Biodiversity units
Other Scot's Pine woodland (Area of untouched woodland to be developed with holiday lodges)	2.59	Medium	Moderate	23.83
Other Scot's Pine woodland (Areas of woodland that have previously been retained throughout the exiting area of the caravan park)	0.19	Medium	Poor	0.87
Modified grassland (Improved grassland around existing area of caravan park within application boundary)	0.67	Low	Poor	1.54
Developed land; sealed surface (Hard standing and buildings within the existing caravan park that lies in application boundary)	0.91	V.Low	N/A - Other	0.00
Developed land; sealed surface (Existing track to be used for access)	0.21	V.Low	N/A - Other	0.00
Total	4.57			26.24

Hedgerow Type	Extent (km)	Distinctiveness	Condition Assessment	Biodiversity units
Hedge Ornamental Non Native	0.02	V. Low	Poor	0.02
Hedge Ornamental Non Native	0.03	V. Low	Poor	0.03
Total	0.05			0.06 (total stated in 3.1 metric)

2.9. There will be some loss of coniferous woodland to facilitate the holiday lodges. Overall, this equates to a loss of approximately 14.03 Bu. Both lengths of hedgerow on the site will be retained.

3. BIODIVERSITY AND ENHANCEMENT MANAGEMENT PLAN DETAIL.

3.1. Mitigation will initially be provided by retaining as much of the woodland habitats as possible and only clearing the areas that need to be cleared. The plans have been recently revised to retain even more woodland habitat than previously proposed. This also retains a natural feel to the park for visitors. The areas cleared will either be ‘building’ or hard standing and some short amenity grass will be provided around the lodges similar to the other lodges on the site. In combination with the areas of habitat that will be retained, this will deliver 14.63Bu.

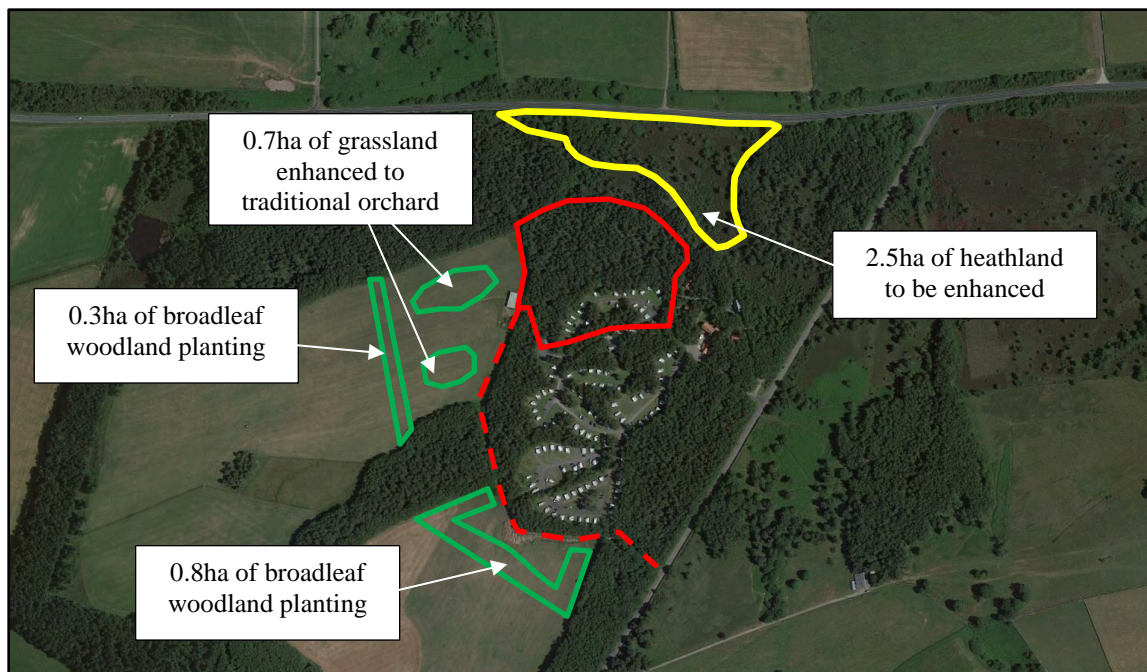
3.2. The BNG table below demonstrates the areas of habitat to be retained and habitats to be created.

Habitat Type	Extent (ha)	Distinctiveness	Condition Assessment	Biodiversity units
Retained habitats:				
Other Scot's Pine woodland	1.46	Medium	Moderate	11.68
Other Scot's Pine woodland	0.19	Medium	Poor	0.76
Modified grassland	0.37	Low	Poor	0.74
Developed land; sealed surface	0.91	V.Low	N/A - Other	0.00
Developed land; sealed surface	0.21	V.Low	N/A - Other	0.00
Created habitats:				
Developed land; sealed surface	0.68	V.Low	N/A - Other	0.00
Modified grassland	0.75	Low	Poor	1.45
Total	4.57			14.63

3.3. In order to generate additional biodiversity units, some additional habitat creation/enhancement will be carried out on some areas of heathland and grassland under the same land ownership.

3.4. These habitats are currently upland heathland and modified grassland and lie close to the proposed development area. These are classed as ‘off-site’ offsetting.

3.5. It is proposed to enhance the heathland area and plant some woodland and traditional orchard habitats on the areas of grassland. The areas are shown in the aerial map below. The area outlined in red is the application site.



3.6. The area of heathland is currently in moderate condition. This is an area mapped on MAGIC maps as a priority habitat ‘upland heathland’ and the area used to be managed by the National Park to maintain the heathland. This area is dominated by bell heather (*Erica cinerea*) with some cross-leaved heather (*Erica tetralix*) and bilberry (*Vaccinium myrtillus*). Common gorse (*Ulex europaeus*) is also growing in some areas.

3.7. The National Park ceased managing this area approximately ten years ago, and as a result the heathland is gradually being swallowed up by the surrounding woodland habitat, and there are numerous scattered trees throughout the area, predominantly Scots pine (*Pinus sylvestris*) and birch (*Betula sp*). This is demonstrated in the photographs below.



3.8. The baseline value of these off-site areas is provided in the table below and collectively have a baseline value of 35.60 Bu.

Habitat Type	Extent (ha)	Distinctiveness	Condition Assessment	Biodiversity units
Modified grassland	0.3	Low	Moderate	1.20
Modified grassland	0.8	Low	Poor	1.60
Upland Heathland	2.5	High	Moderate	30.00
Modified grassland (to be enhanced)	0.7	Low	Moderate	2.80
Total	4.30			35.60

3.9. The planting of higher value habitats in these areas and enhancement of the existing habitat will deliver an additional 8.2Bu.

Habitat Type	Extent (ha)	Distinctiveness	Condition Assessment	Biodiversity units
Enhanced habitats:				
Heathland and shrub - Upland Heathland	2.5	High - High	Moderate - Good	34.93
Grassland - Modified grassland to Traditional orchard	0.7	Low - High	Lower Distinctiveness Habitat - Good	5.05
Created habitats:				
Other woodland; broadleaved	1.1	Medium	Poor	3.82
Total				43.80

3.10. Improved Grassland.

3.10.1. Some amenity grassland will be created in the areas directly around the new lodges. These will be created through a combination of turf and seeding, both of which will be a standard lawn species mix.

3.10.2. Both seeding or laying of turf will be carried out either during the autumn or spring months, onto a suitable depth of topsoil and will be watered on a daily basis until the turf roots into the topsoil.

3.10.3. The grassland will then be mown on a regular basis, every one to two weeks.

3.10.4. Should any damage or erosion occur to the grassland, this will be rectified by either patching up with new turf or seeding.

3.10.5. Minimal management is required for this habitat for the purpose of BNG as it is proposed to be a poor condition habitat.

3.11. Heathland.

3.11.1. The heathland that will undergo enhancement so that it reaches a ‘good’ condition, which will be predominantly through tree management.

3.11.2. In the first instance, the number of trees will initially be reduced so that tree cover is less than 10% of that total area.

3.11.3. Through removing some of the trees, this will also encourage new growth of the dwarf shrub species, creating a wider age range and coverage of those species.

3.11.4. Ongoing management will involve monitoring of the habitat in years 1, 2, 3, 4, 5, 10, 15, 20 and 25. The following will be included in the annual monitoring:

- The appearance of the habitat and species composition will be checked to ensure that the habitat still conforms to the UK Hab definition of upland heathland. If it deviates from the definition, the reasons for this will be identified and will be rectified to ensure that it continues to exist as this habitat.
- Any new tree growth will be recorded, and as soon as tree cover is recorded to hit 10%, this will be reduced through the removal of selected trees. Trees will be selected to retain a good age range of trees.
- The species and cover of dwarf shrubs will also be recorded. Should that percentage cover ever fall outside the bracket of 50% - 75%, a new management strategy will be devised to rectify this, either through shrub removal or removal of other plant species to allow the dwarf shrubs to regenerate.
- The location of any new growth of invasive non-native plant species and shallon (*Gaultheria shallon*) will be recorded and a plan will be put in place to remove these plants in their entirety.
- Cover of any bracken will also be recorded. Should that exceed 5% cover of the area, a portion of the plants will be removed to reduce to less than 5% cover.
- Any signs of disturbance or damaging activities will be recorded and steps will be put in place to rectify these and prevent from re-occurring.

3.12. Traditional Orchard.

3.12.1. 0.7ha of modified grassland will be enhanced by creating areas of traditional orchard that will reach a 'good' condition.

- 3.12.2. This will initially be through the planting of apple, plum and cherry trees. These will be planted at least 7m apart between November and March.
- 3.12.3. An area of approximately 1m² will be cleared at each tree planting location to remove species that may compete with the new tree for water and nutrients.
- 3.12.4. Stakes will be fitted to each tree when planted for support, with tree guards around the trees to prevent damage from animal browsing.
- 3.12.5. The ground below will be mulched to prevent other non-desirable species from growing and taking the nutrients needed by the tree species to thrive.
- 3.12.6. The trees will be watered during dry spells until the trees become established, which is generally after the first year of being planted.
- 3.12.7. The apple trees will be pruned during the winter months to remove any weak, crowded or unhelpful growth. Some light pruning will also be carried out over the summer months to increase the quality of the fruit.
- 3.12.8. The plum and cherry trees will be pruned during the summer between May and September. Any excessive dead or damaged wood will be removed from under the canopy to increase light penetration.
- 3.12.9. Pruning will ensure longevity of the trees, with an aim to create ancient/veteran tree. After five years, any established trees that die or have dead limbs, these will be left in situ to create deadwood.
- 3.12.10. The grassland in the traditional orchards will be seeded with a wildflower seed mix, such as the BFS10(F). This will be seeded across the area according to the suppliers' instructions.
- 3.12.11. The grassland will be cut in rotation, either once or twice annually, early May or between late July and September after the flowering species have gone to seed. Each area of orchard will be split into two, each section will be mown at different times to create a difference in the sward height throughout the grassland. The cuttings will be left to dry, then turned over to allow the seeds to disperse before raking and removing the cuttings before they start to rot down.

3.12.11. The mowing of the grassland will prevent any woody species becoming too established.

3.12.9. No pesticides or fertilisers will be used in the traditional orchards.

3.12.10. Ongoing management will involve monitoring of the habitat in years 1, 2, 3, 4, 5, 10, 15, 20 and 25. The following will be included in the annual monitoring:

- Any dead trees will be recorded and will be replaced as soon as possible.
- The fit of the tree guards will be monitored and replaced when are becoming a tight fit around the tree.
- Any damaged or missing tree guards or stakes will be recorded and replaced as soon as possible.
- The percentage cover of scrub will be recorded. If this is due to exceed 10% ground cover, or will smother more than 5% of the trees, scrub removal will be carried out to reduce this.
- Any signs of damaging activities will be recorded and steps will be put in place to rectify these and prevent from re-occurring.
- An assessment of the grassland will be carried out to ensure that it conforms to the UK Hab definition of 'Other neutral grassland', or a grassland type of higher distinctiveness. If it does not, then recommendations will be made to advise how this can be rectified.
- The location of any new growth of invasive non-native plant species will be recorded and a plan will be put in place to remove these plants in their entirety.
- The cover of undesirable species (as specified in footnote 3 of the condition assessment criteria) will be recorded. If this exceeds 10% a portion of these plants will be removed to reduce their coverage.

3.13. Woodland.

3.13.1. The areas of modified grassland, which currently have a moderate (north field) condition and poor (south field) condition, will be planted with broadleaf woodland 1.1ha collectively of broadleaf woodland habitat. Approximately 650 trees have already been planted throughout these areas to help offset the biodiversity loss on the site. This also gives an excess number of trees planted to those lost. In total, 373 additional trees will be lost in the new layout of this application, on top of what have

already been consented under the live planning consent. With the additional trees to be planted in the woodland habitat on top of the 650 already planted, there will be a large net gain in number of trees delivered on the site.

3.13.2. Species already planted are downy birch, rowan, goat willow, Scots pine, sessile oak, common oak, silver birch, hawthorn, dog rose, hazel and holly. Additional trees of the same species will be planted to increase the area of woodland.

3.13.3. As the condition of woodland is mostly down to natural processes, the target condition for this habitat is 'poor' However, efforts will be made to exceed this regardless.

3.13.4. The woodland trees will be planted between mid-November and mid-March. Once planted, to allow the small trees to survive and establish, tree guards will be installed around each tree and the ground below will be mulched to prevent other non-desirable species from growing and taking the nutrients needed by the tree species to thrive.

3.13.5. After five years, any established trees that die or have dead limbs, these will be left in situ to create deadwood.

3.13.6. Ongoing management will involve monitoring of the habitat in years 1, 2, 3, 4, 5, 10, 15, 20 and 25. The following will be included in the annual monitoring:

- Any dead trees will be recorded and will be replaced imminently.
- The fit of the tree guards will be monitored and replaced when are becoming a tight fit around the tree.
- Any damaged or missing tree guards or stakes will be recorded and replaced imminently.
- The location of any new growth of invasive non-native plant species will be recorded and a plan will be put in place to remove these plants in their entirety.
- The percentage cover of native species will be carried out. If the number of native tree species decreases to below five or if any the canopy cover drops below 80% native species, then a plan will be put in place to rectify this.

- Any signs of damaging activities that are resulting in nutrient enrichment of the soils will be recorded, and steps will be put in place to rectify these and prevent from re-occurring.

Prepared by:	
Ruth Georgiou. BSc, MCIEEM.	Date: 20 th November 2023.

Checked by:	
Derek Whitcher, BSc, MCIEEM, MCMI	Date: 20 th November 2023.

NYMNPA

05/12/2023

Ladycross Caravan Park Arboricultural Method Statement brief to acomapny BA9260AMS_A

The proposal aims to expand the existing Ladycross Caravan park by introducing an additional 36 lodges with access roadway and service run.

Ladycross Caravan park is located within the North Yorkshire Moors National Park and selling point is its idyllic setting within a coniferous woodland. The scheme aims to retain this setting by protecting and retaining as much of the woodland as possible by adopting a dynamic approach in the construction phase to '*work around trees*' as much as feasible. Where losses are unavoidable planting may be completed to enhance the area.

The woodland has not been planted or maintained at equal spacing resulting in some areas of the woodland being sparse making losses and retention numbers challenging. To aid in calculations the site owner of the park has taken great lengths to mark up the lodges and road locations which when combined with sample plots taken has led to the tree losses quoted in in this report, however in its dynamic approach, denser areas of trees will be avoided as the scheme progresses to safeguard the Caravans park idyllic vision and current setting.

Physical sample plots and a site meeting on the 15th Feb 2023 with the landowner led to the forecasted tree removals based which have been determined using the evidence gathering methods below;

Lodge dimensions

The lodge, decking and front garden measures 22m by 7m with an additional 7x7m parking area offset to the side of the front garden as shown to the right. A 2.5 m offset from the lodge and driveway ensures that excavation of the foundations will not harm retained trees with 8 sample plots taken to aid in tree loss numbers.



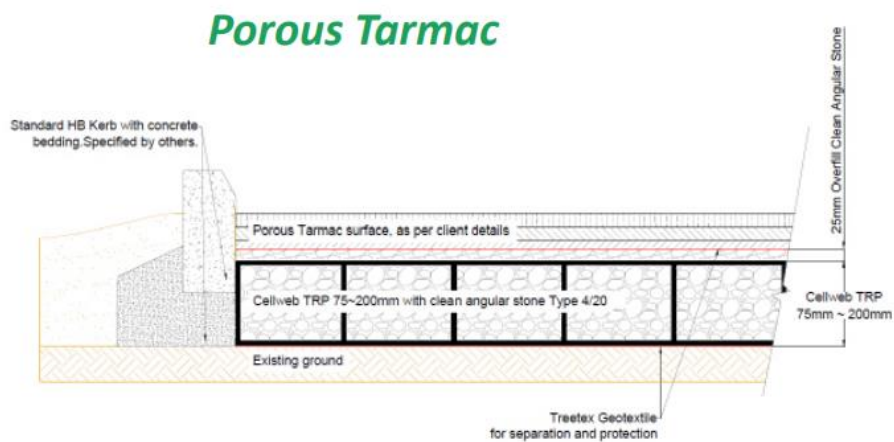
The proposed road.

The proposed highway was marked with survey flags to aid in the calculations of tree losses. The side of the highway that hosts the service strip has an offset distance of 2.5 m to reduce excavations within the RPA's of retained trees. The opposing non-service strip side of the internal road has an offset distance of 1 m to allow vehicle access and to avoid the retained trees' root plates.

Although only partially required, the highway will be constructed above ground level using 100mm Cellweb installed to manufacturer specifications. Due to the site being a woodland, the top layer of organic material i.e. grass/needle cast will be scraped off after the tree removals to utilise the true ground level and aid in the stump removals which will be undertaken by either a tracked stump grinder or coring excavator attachment to ensure only the target stump is removed.

The scraping process will be completed using a toothless bucket on a lightweight excavator on the location of the service run (outside of RPA's). The arisings will be loaded onto a dumper and disposed of elsewhere. The edge of the Cellweb is expected to be close to the existing level of the grass/needle cast/organic matter; therefore, wooden 'sleeper' edging with soil battering at a shallow angle of no more than 300mm horizontally is expected. The roadshows have signage stating 'soft verges/ no parking'.

As the road will be constructed in phases, the 'bare end' will be fenced off to deter from activity within the un protected RPA's of trees.



Utilities and Drainage

A utility plan (drawing number 14491) outlined a detailed drainage plan but fails to safeguard the trees so BA9260_AMS shows an alternative 'artists impression' location (pending engineering approval) which runs directly adjacent to the access road in a service strip to retain trees (see Detail 1 on BA9260AMS). A greater offset of this side of the road allows excavation to be completed outside of the retained RPA's of trees and a physical tree count has been completed to estimate losses. Where the drainage runs through woodland areas its route will be dictated by the path of least trees whilst retaining a 2.5 m offset on both sides of the trench (see Detail 2 on BA9260AMS).

Tree Protection Fencing (TPF)

It is deemed that Type 1 Protection Fencing in line with BS5937:2012 may be excessive and damaging to retained trees; therefore after the tree removal phase a low grade fence such as Hi-viz orange netting or thin diameter marker rope supported on thin diameter road pins may be placed to define the working area and construction exclusion zone. It is understood that the operation will be undertaken by a small workforce over a prolonged period of time therefore, this level of protection may be deemed acceptable and can evolve as the scheme progresses and be replicated per active lodges.

Construction Exclusion Zone (CEZ)

The Caravan Park and facilities will remain open during the construction phase meaning that routine maintenance will be required to be carried out outside of the remit of the proposal but within the CEZ. Such activities may include (but not limited to):

- Litter picking
- Removing dead branches
- Storm damage
- Low level vegetation management
- Routine drainage clearance
- Boundary fence repairs.

Activities such as these are deemed acceptable however will not include tree removal or excavation unless as a result of storm damage or utility repair/service.

Tree Losses to enable the scheme:

Average number of trees removals per plot: 32

28(plots)x 32= 896 trees

Number of trees to remove for road: 252

Number of trees to remove for utilities: 97

The open area x9 plots is estimated to require a worst case of 9 trees per plot= $9 \times 9 = 81$

$896 + 252 + 97 + 81 = 1326$ trees to remove for the scheme based on averages.

The landowner has allowed an extra 10% to be added as an act of good intentions for any damage or immediate windthrow etc

$1326 + 10\% =$ **1458 trees** to be removed to enable the scheme.

The land owner is also prepared to discuss offset replacement planting within the blueline if required.

Phasing and site monitoring of the operations:

Phases of the scheme will be monitored by the project Arborist, and 'site monitoring reports' will be completed after each visit, confirming the operation is being conducted as approved or issuing targets if discrepancies are observed.

Phase 1: Marking out the site's final layout- Road boundaries and plot boundaries with tree removals being marked with marker paint.

Phase 2: Tree felling/stump removal and scraping off the access road.

Phase 3: Tree Protection fencing erected, Cellweb road installed (in sections per active plots) to be used as ground protection to allow the heavier plant to access the plot areas, ground protection laid around the active plots, dormant plots and cellweb road end fenced off.

Phase 4: Lodge foundations/utilise excavated (per section working from Cellweb road)

Phase 5: Lodges assembled/landscaping completion/sign-off.

The phases outlined above are deemed 'Arboriculturally' important and will be monitored at a mixture of either mid-phase or on completion of the phase.

Conclusion

The proposed scheme is likely to enhance the facility as well as the local area by offering accommodation in an attractive woodland setting.

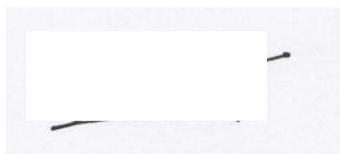
The land owner, throughout the process, has maintained that the woodland setting is vital to the park so tree removals are to be as limited as possible. This stance reflects the proposed dynamic approach to use the woodland's mixed-density composition to the scheme's advantage by avoiding dense areas where possible and exploiting sparser areas.

Where the scheme does involve the removal of trees, the proposal is not visible from the public domain, suggesting visual amenity loss is not a consideration and the as the rest of the Caravan park demonstrates from historic similar successful applications, the park and the woodland can Coexist creating an inviting environment for visitors whilst retaining trees.

Please feel free to contact us if you have any questions regarding the content of this report.

Further advice can be provided upon request. Should you require any further assistance with this matter, please do not hesitate to contact me.

Yours Sincerely



Matt Metcalfe- Lead Surveyor/Consultant/UAS Pilot
FdSc Arboriculture
Arboricultural Association Professional Member
VALID Tree Risk Validator
GVC UAS pilot

APPENDIX – CONSULTANT BRIEF QUALIFICATIONS AND EXPERIENCE

Mr Ian Barnes - Director

RCArbor.A, F.Arbor.A, C.Hort, CEnv, Arboricultural Association Registered Consultant, Fellow Arboricultural Association, Chartered Horticulturalist, Chartered Environmentalist. Professional member Consulting Arborist Society. BSc (Hons), Arboriculture and Urban Forestry, HND Arboriculture. NDHt/Arb, Cert Arb L4 (ABC), ISA TRAQ Qualified, QTRA Licensed

Ian has been in the Horticulture and Arboricultural industry since 1985. He has experience in commercial horticulture, Local Authority, and Highway Authority tree surveying. He has been a commercial Arboricultural climber for 15 years. He ran in partnership a tree and landscape contracting business for over 15 years. He has been a full time Arboricultural consultant since 2007. His main area of works are trees and development (BS5837) and advanced tree assessments using various advanced techniques. He is a qualified tree risk assessor and experienced in trees and subsidence claims. He is a trainer in the UK for Fakopp equipment, Sonic and Electronic tomography, and Dynaroot and Static Tree pulls. He is also director of a hi-tech arborist/ landscape equipment and training company Tree Diagnostics Ltd providing training to arborists in advanced assessments. He undertakes ground-penetrating radar (Tree Radar) scans.

Mrs Sue Barnes- Director

CMLI, F.Arbor.A, C.Hort, CEnv, MBALI Chartered Landscape Architect, Fellow Arboricultural Association, Chartered Horticulturalist, Chartered Environmentalist, Registered Designer BALI. FdSc Arboriculture, NDHt/Arb Professional Member Consulting Arborist Society, Affiliate member RIBA,

Sue has been in the Horticulture / Arboricultural industry since 1986. She has experience in amenity parks and gardens and has been a head gardener for Local Health Authority. In partnership she ran a tree contracting and landscape design and build company for 15 years and also has been a tree and landscape consultant full time since 2007. Her main area of works is detailed commercial planting design, specifications (NBS), tree planting specifications and Arboricultural management, Trees on development sites BS5837 reports and plans. Experienced in trees and subsidence and also legal and planning conditions in regard to trees and landscapes. Sue undertakes ground-penetrating radar (Tree Radar) scans along with assisting with other further investigation works on trees such as tomography scans and assists in dynamic and static tree tests.

Mr Matt Metcalfe – Lead Surveyor/Consultant/UAS Pilot

M.Arbor.A Professional member of the Arboricultural Association, City and Guilds NPTC assessor/ Instructor FdSc Arboriculture, National Diploma in Arboriculture, Level 5 Certificate in Education. VALID tree risk validator GVC Commercial Drone Pilot IOSH Managing Safety in the Workplace

Matt has worked in the Arboricultural Industry since 2000, Firstly, as a climbing arborist in both the public and private sector. In 2009 Matt started teaching Arboriculture at a land-based college in York and became a City and Guilds NPTC assessor. In 2013 he became a course manager and internal verifier for the level 2 work-based learning-apprenticeships where later he became a senior course manager overseeing the management of other arboricultural courses. In 2018 he became a fulltime consulting arborist and provides advanced tree assessment training, undertakes BS5837 tree surveys, Arboricultural safety audits and is a trained tree risk assessor/validator. He undertakes ground-penetrating radar (Tree Radar) scans along with other further assessments on trees such as tomography, dynamic tree testing and static tree pulls. In 2021 he undertook the A2CoC and GVC Drone licences and carries out drone surveys of trees which also includes 2D and 3D mapping of sites. Also, in 2021 mat completed IOSH Managing safety in the workplace.

Mr Trevor Grigg – Consulting Arborist

Technical member of the Arboricultural Association, Cert Arb L4 (ABC) NC Horticulture (Arboriculture) Lantra Professional Tree Inspector QTRA Licensed

Since 2004, Trevor has been involved in Arboriculture firstly as a climbing arborist, then as an Arboricultural Officer for a local authority. He has gained experience of working with a wide range of clients, from residential tree owners to schools, Parish Councils and Highways departments providing a variety of tasks and requests such as risk assessments, management plans and replanting schemes. Trevor joined Barnes Associates in 2021 with a view to widening his experience of trees in relation to developments and further investigations of trees using the specialist equipment available.

Mr John Evans – Consulting Arborist

Technical member of the Arboricultural Association, Forestry and Arboriculture Level 3

For the past six years, John has been a climbing arborist, firstly working freelance for utility and domestic clients, then joining Darlington Borough Council. Whilst working for the council, he continued his professional development and working below and observing Darlington's Tree Officer. John was very excited to move into a role with Barnes Associates to continue his development, learning how to use the advanced tree surveying equipment and developing into BS5837 report writing.

Mr Benjamin Stoker - Project Coordinator/ Arb Surveyor/A2CoC UAS Pilot

Technical member of the Arboricultural Association Forestry and Arboriculture Level 3 FdSc Arboriculture (ongoing) Lantra Basic Tree Inspector

Ben started with Barnes Associates as a student placement whilst studying for his level 3 in Arboriculture and currently completing his foundation degree in Arboriculture. With a background originally in hospitality, his role of project coordinator has developed over the years, supporting clients and helping things run smoothly. His professional development is ongoing with studies for the FdSc in Arboriculture and progressing his career as a surveyor under mentorship from the Barnes Team.

Construction Management Plan

V1.0

Ladycross Plantation Holiday Park

Egton,
Whitby,
North Yorkshire,
YO21 1UA



Client: Mr Kieran Robinson, Ladycross Plantation Holiday Park, Egton, Whitby, North Yorkshire, YO21 1UA

Proposal Description:

Reorganisation of northern section of the existing caravan site to allow for 48 Lodges (increase of seven) and associated access arrangement at Lady Cross Plantation Holiday Park.

Planning Approval Reference: North York Moors National Park Authority [NYM/2022/0568](#)

1.00 Introduction and Background

Lambe Planning and Design have prepared this Construction Management Plan (CMP) in relation to a Planning Approval for Ladycross Holiday Park, (Ref: North York Moors National Park Authority NYM/2022/0568). The CMP has been requested to support the proposal which involves the restructured layout of 41 previously consented Holiday Lodges together with an increase of 7 units – total 48 Holiday Lodges at Ladycross Plantation Holiday Park

Condition no. 16 advises that:

16. No development must commence until a Construction Management Plan has been submitted to and approved in writing by the Local Planning Authority. Construction of the permitted development must be undertaken in accordance with the approved plan.

The Plan must include, but not be limited, to arrangements for the following in respect of each phase of the works:

Restriction on the use of the proposed southern access for construction purposes:

Vehicles entering and exiting the site should be controlled to avoid meeting each other between the public highway and the open field to avoid head to head situations where one vehicle will have to reverse to allow the other one through.

- 1.1. This CMP will address the above Condition that has been detailed in the Decision Notice from NYMNPAA for the proposed Holiday Lodge development at Ladycross Plantation Holiday Park (LP). The CMP will provide information in relation to the above items and the measures that LP will either continue and/or introduce as a result of the proposed construction works.
- 1.2. This proposal relates to several elements which in summary involve the restructuring of the existing and previously consented holiday Lodge pitches and are to enhance and diversify the existing portfolio of Holiday Accommodation available at the Holiday Park. This is to provide a restructured and improved facility for Premium Holiday Lodges and associated landscaping at Ladycross Plantation Holiday Park.
- 1.3. The Holiday Park comprises of Holiday Lodges and Touring Caravan Pitches. It won the Campsite of the Year for North East England 2021-2022. The park is set within 95 acres, with woodland walks, open fields, a children's play area, and amenity toilet and shower facilities. Although the park has a 12 month permitted holiday season, the park is operational / open for holidaymakers for 10.5 months of the year.
- 1.4. The Park is accessed from the existing park drive which leads to the public highway onto Egton Road and the A171. An additional access route forms part of the proposals

granted planning consent. A detailed Transport Assessment has been undertaken by specialist Transport Consultants. The Statement concludes that “The impact of the proposed development on both the local and wider highway network will be negligible”.

1.5. The main vehicular access to the park will continue to be via the existing main entrance off Egton Road. During construction, the development will be Accessed via the existing main holiday park entrance. When necessary Egress will be via the new entrance. i.e. a managed one way system will be in operation.

1.6. Site Proposal

1.7. The proposal will replace the previously consented 41 Lodges and replace them with 48 units over a larger area in an improved lower density, informal relaxed layout, together with environmental improvements. A detailed layout for the park is provided in Appendix 1.

1.8. The scheme has the following construction elements:

[Construction of Holiday Lodge bases and the siting of prefabricated Lodges](#)

1.9. Additional Details

Further details with regard to the development can be found within the supporting information submitted with the planning application.

2.0. Construction Management Action Plan

2.1. All drivers and operatives should be given information and / or a formal induction to inform them of any sensitive issues and Holidaymaker or residents concerns as well as adherence to the CMP.

2.2. Parking Facilities

2.3. Ladycross Plantation Holiday Park is owned and operated by the Applicant and his family who also comprise of the “management team” who will work collaboratively with the contractors and their manager and staff, to ensure that the necessary steps are taken to prevent any unintended vehicle movements. The senior site operative will maintain control on site and all construction related staff will receive induction.

2.4. An area will be designated for construction vehicles that will be cleared signposted and if necessary marked with a separate area designated for construction staff car parking. There will be sufficient contractor parking in the Site with designated walkways on and around site.

2.5. LP will ensure that the vehicles have a sufficient turning area and a designated banksmen will be responsible to monitor and control the vehicle movements in and out of the Site. The parking areas will utilise the existing hard standings / parking areas / main reception arrivals area that will prevent the spread of dirt and mud from the Site.

2.6. The parking areas comprise of a level, open part of the holiday park. Where necessary the site will be secured with a suitable protective fence or similar to ensure that children on the Site will not be able to access the parking and/or construction areas or any materials stored on site.

2.7 Anticipated Number, Frequency and Types of Vehicles

2.8. Due to the simple nature of the ground works and as the Lodges are pre-fabricated structures, the number of vehicles visiting the site during construction would be minimal and is not expected to overload the local traffic network. Most vehicles are expected to be various sized vans and 7.5t to 10t lorries.

2.9. The groundworks contractor / LP will erect relevant road signage within the site access/egress to direct the arrivals and departure of contractors vehicles off Egton Road and within the Site curtilage and will conform to the requirements of Traffic Sign Manual - *Chapter 8 (Traffic Safety Measures and Signs for Road Works and Temporary Situations – Part 1: Design, Department for Transport, 2009)*.

2.10. Based on other similar holiday park building construction projects, the daily traffic numbers are likely to comprise of an occasional HGV, tradesmen small vans, and an excavator (the latter remaining on site for the duration of the work).

2.11. This is a robust assessment of the construction activities and although the level of construction traffic may fluctuate day to day this will not amount to a material increase in traffic levels associated with the project.

2.12. Construction Traffic Routing

2.13. The predominant activity involved with the proposed development is the construction of simple bases for Holiday Lodges and an access drive.

2.14. Construction traffic and deliveries will Access the site via the existing main holiday park entrance off Egton Road. When necessary Egress will be via the new entrance. i.e. a one way system will be in operation e.g. when the park is open / operational / occupied by holidaymakers.

2.15. During construction LP will ensure that the vehicular and pedestrian/cycle routes are segregated and kept clear at all times. Any areas that are damaged in any way by the construction traffic will be reinstated to match the existing construction, with similar materials and to the same standards.

2.16. Loading, Unloading and Storage of Plant and Materials

2.17. Delivery drivers will be made aware of any necessary traffic restrictions on and around the Site and delivery vehicle engines should be turned off whilst waiting to unload.

2.18. All vehicles will be loaded and unloaded within the Park and off the public highway. Procedures will be put in place to prevent delivery vehicles from queuing outside the Site boundary wherever possible. Principally, this will be undertaken by managing timed arrivals via contractors and suppliers notifying the Main Contractor or Park (LP) in advance.

2.19. Designated personnel will be on site to receive deliveries, and where necessary direct vehicles on and off site and act as banksman.

2.20. Any site waste will be disposed of at the appropriate off-site facilities.

2.21. Waste will be collected on a regular basis to keep the holiday park in the best possible shape / condition while not disturbing the holidaymakers.

2.22. An area on the Site will be designated for the segregation of building and construction materials. The segregated materials can then be transported to the waste facility either by the

contractor's own vehicle or via skip bins from a Waste Contractor. Segregation of building and construction waste reduces disposal costs and assists the community in achievement of a sustainable environment.

2.23. Any hazardous fuel and chemicals will be stored in a secure site compound in the appropriate tanks and containers with the appropriate bund shielding and/or the appropriate safety distances on paved areas as necessary.

2.24. The contractors will endeavour to reduce the quantity of hazardous fuel and chemicals that will be stored on site and to ensure that all construction activities involving fuel/chemicals are minimised or filled up off-site prior to use.

2.25. Any onsite plant will be secured to prevent vandalism and plant and equipment left overnight will be immobilised.

2.26. The contractor will be encouraged to order the correct quantity of materials to arrive when they are needed to reduce the quantity on site, storage time and risk of damage and theft.

2.27. Establishing what form materials will be delivered in, will allow for the appropriate unloading plant to be arranged and space set aside prior to delivery.

2.28. Select packaging materials for deliveries that can assist effective/secure storage and movement of materials on site will be an important measure during the construction process.

2.29. Construction staff will most likely be from a mix of local contractors who would be encouraged to utilise shared transport to the Site.

2.30. It should also be noted that LP will appoint a competent contractor who will comply with statutory regulations, guidelines and requirements of this CMP.

3.00. Wheel Washing Facilities

3.01. Wheel washing facilities will be maintained near to the access/egress point of the Site. The wheel washing facilities will be frequently maintained, and roads will be kept free from mud wherever possible.

3.02. If necessary a Road Sweeper will be employed where site construction traffic has been found to have left considerable amounts of debris/dirt/dust on the Holiday Park roads or public roads.

4.00. Measures to Control the Emission of Dust and Dirt

4.01. Dust from the construction will be minimised by keeping the cutting/grinding of any materials on site to a minimum. Where cutting or grinding is unavoidable, equipment and techniques to minimise dust will be used. All clearing activities will be 'damped down' using water suppression. Loaded lorries and skips will be covered with netting/sheeting and the wheels of all vehicles/plant leaving site will be checked and if necessary cleaned so that mud is not spread onto the surrounding roads.

5.00. Hours of Working

5.01. Construction works (including deliveries to or from the Site) may be carried out during the following hours :-

07:00am to 19:00pm

5.02. Please note between the hours of 07:00am and 08:00am there shall be no works carried out at the Site that result in significant levels of noise (e.g. the use of noisy equipment).

5.03. Site deliveries will be restricted to between operational hours, and times that will have been agreed in advance where necessary with allocated time slots.

6.00. Details of Proposed External Lighting

6.01. It is not envisaged that temporary floodlights and /or tower lights will be necessary as works will be limited to daylight hours.

7.00. Protection of Existing Trees and Hedges

7.01. Any trees or hedges to be removed will be taken down outside the bird nesting season.

7.02. The tree constraints plan should be referred to for advice and prior to commencing with the construction works on the Site to ensure that all valuable trees are protected and are not damaged in any way.

8.00. Noise & Vibration

8.01. There are several safeguards which exist to minimize the effects of construction noise and vibration, including (but not limited to):

8.02. The various EC Directives and UK Statutory Instruments that limit noise and vibration emissions from construction plant.

8.03. The guidance contained in British Standard 5228:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites.

8.04. The powers that exist for Local Planning Authorities, under the relevant sections of the current version of the Control of Pollution Act, to control environmental noise and vibration on construction sites.

8.05. The construction works will comply with the guidance outlined in British Standard 5228:2009+A1:2014 Part 1: Noise and Part 2: Vibration.

8.06. The following generic measures are given to illustrate the range of best practice techniques available. The adoption of Best Practicable Means, as defined by COPA, is usually the most effective means of controlling noise from construction sites. In addition, the following measures should be considered where appropriate:

8.07. The following generic mitigation measures for vibration should be considered where practical.

- Strategic phasing of construction works to minimise potential impacts.
- Any compressors, etc., used on site should be silenced and fitted with acoustic enclosures or sound reduced models used.
- All pneumatic tools should be fitted with silencers/mufflers.
- Equipment and vehicles should be shut down when not in use.

- Static and semi-static equipment should be sited as far as reasonably practical from sensitive receptors as possible with localised screening employed as necessary.
- Burning equipment would be used in preference to cold cutting where possible.
- Cutting operations or other noisy tasks will be minimised through off-site fabrication where practical. Localised screening of noisy operations should be employed at all times.
- Delivery vehicles should be routed to minimise disturbance to nearby residents and delivers should be programmed to arrive during the least sensitive times of day.
- Delivery vehicles should be prohibited from waiting with the site with their engines running.
- Care should be taken when unloading vehicles to avoid creating unnecessary noise.
- All plant items should be properly maintained and operated according to the manufactures' recommendations.
- Personnel will be instructed on best practice mitigation measures to reduce noise and vibration as part of the site induction training.
- Strict controls on the sequencing of works and providing noise protection would be developed on an activity by activity basis.
- Potential problems concerning construction noise can sometimes be avoided by taking a considerate and neighbourly approach to relations with nearby residents.
- Construction works should not be undertaken outside of any hours agreed with the Local Planning Authority.
- If necessary, the provision of cut-off trenches can be regarded as equivalent to noise barriers, in that they interrupt the direct transmission path of vibrations between the source and the receiver. However, there are serious limitations to the efficacy of trenches. For maximum effect the trench should be as close to the source or receiver as possible.

The trench should be of suitable dimensions to mitigate vibration adequately. Specialist advice should be sought to determine the appropriate dimensions of any trenching.

Operatives should be familiar with the relevant conditions of the planning permission and the site operated within the guidelines of any condition. Where practical difficulties arise, discussion with the Local Planning Authority should be sought as soon as these become apparent to agree a solution.

8.08. If necessary, a system for notifying residents of any particularly noisy activities, or activities which may lead to high levels of vibration, should be devised and followed.

8.09. A 'point of contact' should be made available for residents to contact with concerns regarding noise and vibration with a complaints register maintained for reference.

10.00. Summary

The measures detailed within this statement shall be adhered to at all times throughout the construction period of the project at Ladycross Plantation Holiday Park, in the interests of highway safety and holiday park occupants.

11.00. Conclusion

11.01. It is considered that the proposed routing for construction traffic is acceptable and will not impact upon any local residents nor the safe and free flow of traffic on the local highway network.

11.02. LP will appoint a suitably qualified contractor who will have to comply with all the statutory regulations, guidelines and requirements of this CMP.

11.03. Providing the contractors follow the CMP and instructions prior to undertaking the journeys to the construction site and the movements are managed by the Contractor/LP, as they have previously done at LP, there should be no detrimental impact on the surrounding community or Ladycross Plantation Holiday Park.

11.04. Banksmen and escort vehicles will be employed, if necessary, to assist in manoeuvring any larger vehicles along Egton Road and the general highway network to the Site to ensure safe access. Where any conflict is likely to exist between larger vehicles, arrivals and departures will be managed to ensure that vehicular movements are not hindered either on or off site.

11.05. The predicted level of construction traffic and the operational traffic movements are that infrequent and low that it is highly unlikely that vehicles will conflict on journeys to and from the Site.

11.06. To conclude, the volume and vehicle specifications will be strictly managed by the contractor and LP to ensure highway safety is addressed and no significant issues will be caused to local traffic.

Jonathan Moore Lambe 12th September 2023 ©copyright

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PTO Appendix

Appendix 1. Site Layout Plan

