Rheda Park – Phase 2, Frizington, Cumbria

Ecology Construction Environmental Management Plan (CEMP)

KCS Agriculture Ltd

February 2024

Ecus Ltd

Report to: KCS Agriculture Ltd

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V0.1	TL	1st draft	15/01/2024
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V1.0	TL	First Issue	26/01/2024
V2.0	TL	Second Issue following client review	14/02/2024

Contents

1. Introduction

1.1 Purpose and Scope

1.1.1 Ecus Ltd have been appointed to prepare this Ecology Construction Environmental Management Plan (CEMP) for the proposed development at Rheda Park, Frizington, Cumbria (central Ordnance Survey National Grid Reference (OSNGR: NY 02689 16827) hereafter referred to as the 'Site'.

1.1.2 This CEMP has been produced to address Condition 19 of the granted outline planning permission for the development (4/18/2426/0O1). Condition 19 states:

> *'Prior to commencement of development a programme of further ecological survey and an accompanying Ecological Management Plan shall be submitted to and approved in writing by the Local Planning Authority in accordance with the recommendations set out in the Preliminary Ecological Appraisal prepared by WYG, reference A103720, dated June 2017. The survey shall be undertaken as agreed and the findings adhered to. The contents of the management plan shall be adhered during the construction of the scheme.*
>
> *Reason*
>
> *To ensure that adequate protection is given to protected species, in the interests of the environmental protection and in accordance with policy DM25 of the Copeland Local Plan.'*

1.1.3 It is understood the planning officer (Chris Harrison, Cumberland Council – formerly Copeland Borough Council) has confirmed that a CEMP report focused on ecology will satisfy discharging this planning condition.

1.1.4 The CEMP provides the means through which the potential environmental impacts associated with the construction activity will be managed. In summary this plan:

- Identifies the environmental issues associated with the works.
- Outlines the mitigation and management principles for the environmental issues identified. Provides examples, where appropriate, for the specific measures to be delivered by the appointed contractor.
- Describes the monitoring of the key environmental issues.
- Outlines how the requirements of the CEMP should be implemented, for example where appropriate protocols and procedures will need to be established.

1.1.5 This plan must be used in conjunction with any relevant construction phasing and method

documentation including the Construction Management Plan (CMP).

1.2 Aim of CEMP

1.2.1 Successful implementation of this CEMP will help to:

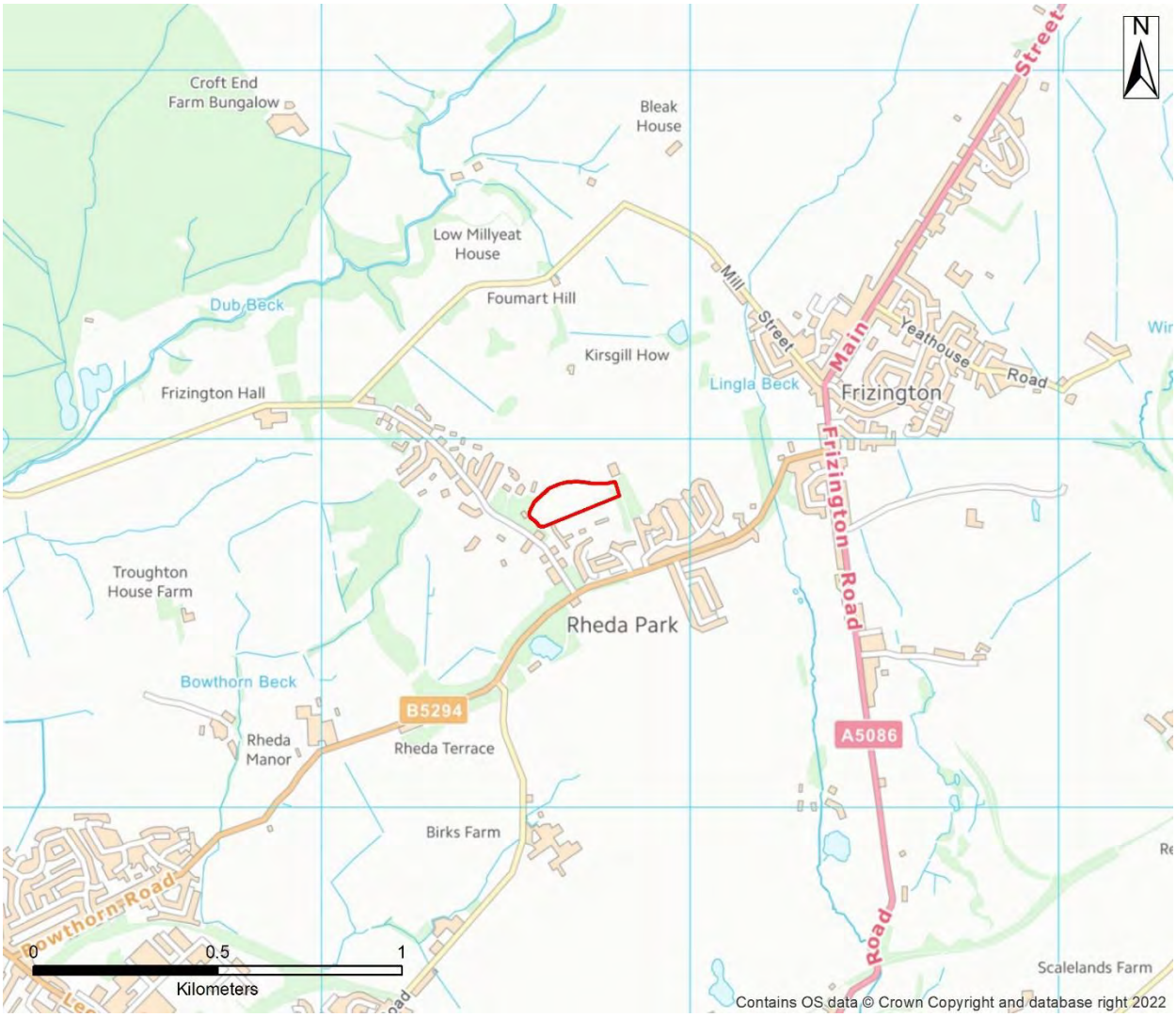
- Limit the environmental impact of the works.
- Ensure a proactive approach to the management of environmental issues with a commitment to continual improvement of the Site's environmental performance.
- Ensure full compliance with environmental legislation, environmental contractual requirements, and other environmental obligations.
- Ensure that all staff are aware of their responsibilities regarding management and improvement of environmental issues.
- Meet the requirements of key stakeholders.

2. Site Location and Context

2.1 Site Location

2.1.1 The Site is located to the north of Meadowcroft Road (B5294) and immediately north of the Phase 1 Rheda park development, on the south west side of Frizington (see Figure 1). The Site is currently an open grazing field, with further arable land to the north, and residential housing to the east south and west.

Figure 1: Site Location



2.1.2 The Site totals approximately 2.09 hectares (ha) and is predominately made up of improved grassland, which is currently grazed with scattered mature trees on the north east boundary and a small pocket on the eastern boundary of the Site, and the Site's boundaries comprise mature hedgerows and mature trees.

2.2 Site Description

2.2.1 The proposals are to erect 22 dwellings, landscaping, public open space, internal access roads, garages, car parking and associated infrastructure.

2.2.2 The works generally comprise:

- Site enabling works including vegetation clearance, establishment of site perimeter, site welfare, stores and loading areas.
- Installation of drainage and utility infrastructure.
- External works including hard and soft landscaped communal areas, including all proposed boundary treatments.

2.2.3 Site Working Hours are to be 07:30am - 18:00pm Monday to Saturday. No work on Sundays and bank holidays.

3. Ecology and Biodiversity Aspects and Control Measures

3.1 Overview

3.1.1 This section of the CEMP identifies the anticipated ecological issues associated with the works and outlines the mitigation and management principles for the environmental issues required for the construction process.

3.2 Site Clearance

3.2.1 Habitats on Site largely comprise improved grassland. Other notable habitats on Site include native species rich hedgerow, scattered trees including some veteran trees. Existing mature tree habitats will also be retained within the proposed development.

3.2.2 It is recommended that any vegetation clearance is undertaken outside of nesting bird season which is between 1st March and 30th September. Further recommendations in relation to nesting birds are provided within Section 3.4.

3.2.3 Suitable tree root buffer areas should be implemented in order to avoid damage to retained trees and woodland, following guidelines set out in BS 5837:2012 Trees in relation to Design, Demolition and Construction.

3.3 Tree Protection

3.3.1 All tree work must be undertaken in accordance with an Site Management Plan as shown in Appendix 3 and recommended measures below.

Preliminary / Pre-commencement Tree Works:

- Carry out works listed in the approved tree report (appendix 4), tree schedule (appendix 5) and tree constraints plan (appendix 6) in advance of any construction activities.
- All tree works are to be carried out to a minimum of the standards within BS3998: 2010 Tree work – Recommendations by a suitably qualified and insured tree work contractor and taking account of the bird nesting season and any other wildlife.
- All arisings are to be chipped on Site and disposed of in accordance with relevant waste disposal legislation.
- Boundary hedges to be clipped annually in accordance with good hedge management principles.

Site Compound Installation:

- Project arboriculturist to be advised of the location of the proposed site compound, including any proposed storage, materials handling areas and preliminary access routes, as shown on site management plan (appendix 3).
- Ensure site compound, proposed storage areas, material handling areas and preliminary access routes do not conflict with retained trees and tree exclusion zones, the project arboriculturist is to advise on works required to minimise the impact on retained trees / hedges to ensure no unnecessary damage occurs.

Erection of Tree Protection Fencing:

- Fencing to be erected along the lines shown on the plan and in accordance with the two specifications shown.
- Signage to be fixed to the protective fencing, one per panel, informing site operatives of the importance of the fencing and the consequences of not adhering to the requirements for tree protection.
- Fencing not to be moved / removed without the advance consent of the project arboriculturist.

Ground Works:

- Excavation works will not be undertaken within the tree protection fencing.
- All excavations close to (within 2 m) of the outer edge of Root Protection Areas to be supervised by the project arboriculturist and any exposed roots pruned to the edge of excavation using sharp tools.
- Fresh, good quality topsoil to be spread against any cut roots or damp hessian sacking laid to cover the cut root ends to prevent desiccation.
- All soil from ground works to be removed using pre-approved haul routes for appropriate disposal or re-use elsewhere.
- Strictly no machines allowed within the tree protection zones; all machines must work away from the protected trees.

Installation of Sewers:

- Working methods are to be agreed in advance, including the lines of proposed excavations, temporary storage of soil materials, handling of pipe works, haul routes and backfilling works to ensure that these do not conflict with tree protection requirements.

Roads / Driveways:

- Main spine road to be constructed first, ensuring that the working area does not risk the integrity of root protection areas/ exclusion zones.

Foundations:

- Where proposed plot foundations are located close to the edge of Root Protection Areas of retained trees, all excavations will be carried out outside of the protective fencing. Machinery must be located outside of any RPA and excavations undertaken working away from the tree(s).
- Any roots exposed during foundation excavations must be pruned back to the edge of the excavation using sharp tools and damp hessian (or similar approved) laid to the edge of the excavation to separate cut root ends from poured concrete.

Domestic Services:

- All domestic services to be prior approved and brought into the Site such that they do not conflict with root protection areas / exclusion zones.

Main Construction Phase:

- During the main construction phase, there must be no breaching of the tree protection fencing. Any damage to the fencing must be reported to the site manager and project arboriculturist immediately and repairs effected without delay.
- There must be no machine or pedestrian access within the fenced off areas at any time without the prior approval of the project arboriculturist.
- There must be no storing or dumping of materials or any kind within fenced off areas, no spilling of liquids within and no lighting of fires within 10 m of the outer branch spread of any retained tree.

Landscape Works:

- Only upon completion of all external construction works for the relevant plot or open space area, can landscaping works commence in accordance with the site phasing plan.
- Prior to the commencement of landscape works, providing that the project arboriculturist is in agreement, tree protection fencing can be removed carefully.
- Topsoil spreading to the rear of plots must be carried out using light machine only with minimal tracking to prevent over-compaction of underlying soils.
- Front gardens to be landscaped in accordance with the approved landscape plan.
- Plot boundary fences, where they are proposed within the root protection areas of retained trees, are to be constructed carefully, ensuring that post-hole excavations are limited to the previously ploughed depth of soil.

3.4 Nesting Birds

3.4.1 It is an offence to kill, injure or take birds; take, damage, or destroy nests or eggs of any wild bird as detailed in the Wildlife and Countryside Act 1981. Bird nesting season takes place between 1st March and 30th September.

3.4.2 It is recommended that all tree and vegetation clearance for the proposed construction should avoid the nesting season detailed above, however, if vegetation clearance works are necessary during this period, or at any time during which breeding on Site is suspected and/or identified, a nesting bird check of the affected area should be conducted by the appointed project ecologist prior to any clearance work occurring. If nesting is then confirmed to not be taking place, the vegetation may be cleared within 24 hours of this check.

3.5 Amphibians and Great Crested Newts

3.5.1 The Great Crested Newt (GCN) is fully protected through its inclusion in Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended) and in Schedule 2 of The Conservation of Habitats and Species Regulations 2017. Under the legislation, it is an offence to intentionally kill, injure or take a GCN as well as intentionally or recklessly disturb GCN or damage, destroy or obstruct access to any place used by the animal for shelter or protection. The legislation applies to GCN in both aquatic and terrestrial habitats and to all life stages.

3.5.2 Whilst the Site or surrounding area is not considered suitable habitat for GCN, presence cannot be completely ruled out.

3.6 Reptiles

3.6.1 Many species of reptile in the UK, such as grass snake and common lizard, are protected legally against killing, injuring, and sale under the Wildlife and Countryside Act 1981 (as amended).

3.6.2 If a reptile is found, work must stop immediately and until the animal has moved away from the works area of its own volition. If this is not possible, contact should be made with the project ecologist.

3.7 Bats

3.7.1 All British bats are protected as European Protected Species (EPS), which are afforded full protection under the Conservation of Habitats and Species Regulation 2010 (as amended), and the Wildlife and Countryside Act 1981 (as amended). Bats are protected from killing and injury, as well as disturbance from their place of rest, as bat roosts are also protected from obstruction and damage.

3.7.2 Habitats on Site may provide suitable habitat for commuting and/or foraging bats. Normal working hours will be during the daytime, however, in winter months some lighting may be necessary. During the winter, bats are less likely to be routinely present in the local area. Any lighting required during construction will be restricted and directed away from retained boundary habitat, for further measures to maintain dark corridors for foraging and/or commuting. Light spill will be avoided in a number of ways, including use of low-level lighting, hoods, and careful selection of lighting in line with advice provided through Bats and Lighting in the UK, Bats and the Built Environment Series, Bat Conservation Trust, and Institute for Lighting Engineers.

3.7.3 In the event a bat is found during works, works must stop and Natural England or a licensed ecologist must be contacted for advice on how to proceed.

3.8 Badgers

3.8.1 Habitats on Site may provide suitable habitat for commuting and / or foraging badgers, the following mitigation measures should be implemented.

- Staff should remain vigilant for any new signs of badger activity on Site.
- All excavations must be filled or covered when unsupervised, especially at night. If this is not possible, a large scaffold plank should be positioned, on one side of the excavation at no more than a 45 degree angle, or alternatively graded or partially graded, to provide a natural escape ramp for any badger that may fall in.
- All excavations should be checked for animals prior to works resuming the following day.
- Any chemicals or other materials will be stored securely in accordance with best practice guidelines and no open pipework should be left outside of working hours to reduce any risk of badgers taking refuge within.
- Any lighting will be used in a sensitive manner to avoid disruption to badgers (and other local wildlife). This includes controlling light spill by using baffles, hoods and shields. The height and direction of lighting should also be considered, with linear habitats being illuminated as little as possible.
- If a suspected badger sett is discovered on Site at any time, works must be halted in the immediate area, and the project ecologist is to be consulted for further advice.

3.9 Hedgehogs

3.9.1 Habitats on Site may provide suitable habitat for commuting and / or foraging Hedgehogs, the following mitigation measure should be implemented.

- Should any deep excavations be left open and unattended during the night for a long period of time, it is recommended that they are covered or have a suitable escape ramp at no more than a 45 degree angle.
- Footfall and storage of materials within the vegetated habitats should be kept to a minimum, so as not to impact any sheltering animals, including hedgehogs.
- Should hedgehogs be discovered on Site at any time during the active period (April to October inclusive), they should be allowed to move away on their own volition or if in danger moved carefully with gloved hands to a sheltered area (e.g. dense scrub).
- If any hedgehogs are encountered between November and March, the animal(s) will be left undisturbed, and covered back up with leaves/brash. If it is not possible to put the animal(s) back where it was found, it will be placed somewhere that offers protection from frost (not somewhere warm), and garden predators, such as cats.

3.10 Invasive Species

3.10.1 No invasive non-native plant species have been identified on the Site to date. If invasive species are encountered during clearance or construction, suitable measures of biosecurity will be taken to prevent the accidental spread of plant material around or off the Site to neighbouring facilities. These will include control measures for the potential eradication of such plants if deemed necessary.

3.10.2 It is recommended that the contractors should receive a toolbox talk outlining the potential presence of invasive species. The toolbox talk will outline the measures to follow if invasive species are identified on Site.

3.11 Relevant Ecological Legislation

3.11.1 All work will be undertaken in accordance with the relevant ecological legislation listed below where applicable:

<u>International Legislation:</u>

- Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971 (hereafter referred to as ‘The Ramsar Convention’).
- Convention on the Conservation of European Wildlife and Natural Habitats 1979 (‘The Bern Convention’).
- UNESCO convention on the protection of the World Cultural and Natural Heritage (1972).

- Regulation (EU) No 1143/2014 on the prevention and management of the introduction and spread of invasive alien species.

National Legislation:

- The conservation of Habitats and Species Regulations 2017 (as amended) and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019.
- The Environment Act 2021.
- The Wildlife and Countryside Act 1981 (as amended).
- Countryside and Rights of Way Act 2000.
- Protection of Badgers Act 1992.
- Hedgerow Regulations 1997.
- Natural Environment and Rural Communities (NERC) Act (2006).
- The National Planning Policy Framework 2 (NPPF, 2021).
- The Environmental Damage (Prevention and Remediation) (England) (Amendments) (EU Exit) Regulations 2019.
- Country Planning (Trees) Regulations 1999.
- The Town and Country Planning (Tree Preservation) (England) Regulations 2012.

3.12 Site Inspections or Audits

3.12.1 The appointed contractor will develop an appropriate procedure for inspections and audits, in accordance with their own HSEQ management processes and operation.

3.12.2 This procedure will take into consideration:

- The environmental importance of the project activity concerned.
- The results of previous environmental management.
- Occurrence of any project environmental non-conformances.
- Concerns raised by the project team or interested parties.

3.12.3 Details of the approach will depend on the requirements of the appointed contractor. The procedure will:

- Cover the key themes identified in this document and any relevant internal management systems.

- Provide a means for actions to be raised, discussed and closed out in accordance with the roles and responsibilities set out in Section 4.2.

4. Environmental Policy, Responsibilities & Communication

4.1 Environmental Policy

4.1.1 The contractor's site noticeboard will display any relevant company environmental policies.

4.2 Responsibilities

Role	Environmental Responsibilities
Project Manager	• Overall responsibility for the works. • Ensure compliance with all relevant legislation and environmental rules. • Ensure that the works are undertaken in accordance with the CEMP and any associated management plans and method statements. • Ensure an appropriate inspection / audit procedure is developed or in place for the appointed contractor (see Section 3.12). • Review the findings of inspections or audits under the procedure, and plan corrective actions when necessary according to the CEMP. • Review and update the CEMP, as required.
Site Manager	• Implement and maintain the CEMP. • Conduct compliance reviews. Undertake regular site inspections (fortnightly), or formal audits, in accordance with the procedure to be developed (see Section 3.12). Supported by others, as appropriate. • Carry out environmental training where required. • Report on the appointed contractor's environmental performance to the Project Manager. • Ensure that sound environmental performance is achieved. • Undertake the day-to-day management of the works ensuring that operations are carried out in accordance with the CEMP.
Specialist Subcontractors	• Undertake specialist activities in accordance with this CEMP, where appropriate.
Operatives	• Undertake tasks in accordance with method statement briefings, toolbox talks, and principles set out in the environmental induction.

4.3 Training

4.3.1 The team will be briefed on the following topics as appropriate:

- Any company Environmental Policy for the appointed contractor.
- General environmental awareness.
- Noise management.

- Dust management.
- Waste management.
- Working near watercourses.
- Ecology/European Protected Species.
- Surface water pollution and control.
- Emissions, carbon and sustainability.
- Spills and emergency response procedures.

4.3.2 Specific training needs will be identified and provided for all personnel involved in work activities that could result in an adverse impact on the environment. The training will include reference to the importance of adhering to the contents of the CEMP and the potential consequences of departure from specified method statements. Environmental training in the form of toolbox talks will also be undertaken on Site, evidence of which (along with all other training) will be maintained on record by the appointed contractor.

Induction

4.3.3 Prior to commencing work on Site, all personnel will undergo a site induction, where the appointed contractor will communicate the environmental objectives, requirements, and responsibilities to the workforce. Environmental site rules will detail site personnel's obligations while on Site. This will introduce accountability for personnel working on the project.

4.3.4 The site induction and training shall cover relevant parts of the following areas to a sufficient level of detail for the workforce:

- Environmental site rules.
- Construction Environmental Management Plan.
- Sensitive receptors including neighbouring residents.
- Dust control measures.
- Noise control measures.
- Biodiversity protection and enhancement.
- Spill kit use and locations.
- Emergency spill procedures.
- Waste management.

- Energy management.

Toolbox talks

4.3.5 Toolbox Talks will be delivered on specific topics relevant to the works and control measures. These may include noise management, dust management, pollution prevention, spill response, etc. as required. Toolbox talks will be delivered to all operatives on Site, and records kept for the duration of the project.

4.3.6 The appointed contractor will establish a regime of toolbox talks such that every employee receives a health, safety and environmental briefing as appropriate, with a target of a minimum of one toolbox talk on an environmental topic per month. Records must be kept of toolbox talks carried out and who attended them.

4.3.7 Requests for new / specific toolbox talks can be made to the Project Manager. An indicative list of appropriate toolbox talks is provided below. More may be added to this list as the project progresses and as issues arise.

- Dust and Air Quality.
- Noise control measures.
- Segregation and Storage of Waste.
- Spill Control.
- Cement and Concrete.
- Washing Down Plant and Machinery.
- Ecology including vegetation clearance, Nesting Birds, Amphibians and Protected Species.

Internal Environmental Communications

4.3.8 Staff will be kept informed of the environmental policy and environmental issues relevant to the CEMP through a range of means, including a combination of meetings and different media. In addition, daily briefings will be held on Site and regular meetings with the client to discuss environmental matters. The aim is to provide sufficient information to raise and maintain awareness of the key environmental issues associated with the works and promote continual improvement.

External Environmental Communications

4.3.9 Relevant external communications will be undertaken with regulators and stakeholders as required. Any monitoring results or issues relating to permitting shall be reported in a timely manner. Should any complaints arise from off-site during the works, they will be managed effectively, and mitigation measures implemented to ensure further complaints do not arise.

Appendix 1: Site Layout

Scale ~ 1:500 at A1 page size. Do not scale off this drawing.

0 5 10 20 50 m

Key

- Existing and consented buildings (no ridgelines shown)
- Proposed dwellings (ridgelines shown)
- Existing and consented vegetation (olive green)
- Supplemental parkland planting
- Proposed vegetation (brighter green)
- Open space grass areas
- Private front garden lawns (rear lawns not coloured here)

Lane
The Courtyard
The Green
The Copse
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Notes
This plan is based on site layout produced by Concept Support Ltd 08.07.2022

Existing and consented vegetation positions are indicative only, based on consented planting plan, topographic survey & georeferenced aerial photo.

revision	date	notes
R 09	03.10.2022	a shadow corrected following client review
R 08	01.10.2022	kerblines adjusted for refuse vehicles
R 07	14.07.2022	minor corrections following client review
R 06	13.07.2022	additional trees
R 05	13.07.2022	removal of stray drafting (sketch) line
R 04	11.11.2021	wall added to plot 11 frontage
R 03	01.11.2021	logos added
R 02	29.10.2021	minor corrections following peer/client review
R 01	27.10.2021	underlying ref layers deleted to reduce filesize
R 00	26.10.2021	Original drawing

drawing number
14

drawing name
Proposed layout

project
North Park, Rheda - Phase 2

client
KCS Agriculture Ltd

Eden Environment Ltd
www.edenenvironment.com

Concept Support Ltd

site evolution limited

Appendix 2: Landscape Plan

Scale ~ 1:500 at A1 page size. Do not scale off this drawing.

0 5 10 20 50 m

Existing mature parkland trees outside the site help to frame the proposed development and provide character setting for it.

Focal point dwelling: stature of house and detailing of it and its garden helps to create a focus to this character area, and a hierarchy of dwelling styles as typically found in Cumbrian villages

Feature statuesque tree with circular seat beneath it forms a focal point when viewed from access road to the south

Proposed off-site group of trees helps to screen views between existing dwelling to the north-east and the proposed dwellings

Hedgerow around perimeter of new tree block helps to enclose the site, extend and enhance green corridors, renew the tree population and screen views between existing dwelling to the north and proposed dwellings

The Green Character Area:
Airy open space at centre and high point of site encircled by range of different styles of dwellings, as found typically around village greens. Frontage detailing such as hedges and estate railings help to create a soft, informal rural appearance

Proposed off-site parkland trees to help frame development in its setting and to ultimately replace existing parkland trees when they die

Proposed off-site planting of parkland trees to reinforce landscape character and soften and screen the proposed development from the north

Bungalow at northernmost part of the site to lower and vary the rooflines as seen from the north, reducing landscape and visual effects

Varied orientation of dwellings along northern boundary creates a less hard edge to built up area than that of Phase 1's straight boundary, and that of existing housing development to the immediate east

Semi-natural hedges between plots within the site, to increase greenery, privacy and screening. Also supporting biodiversity

Dwellings face towards each other for neighbourliness and passive surveillance

Native hedgerow with hedgerow trees frames Phase 2 development and soften and screen views of it from the north.

Existing tree retained within the site

Dwellings face towards each other for neighbourliness and passive surveillance

Focal point dwelling: stature of house, its position at the end of the road, and the detailing of it and its frontage help to create a focus to this character area, and a hierarchy of dwelling styles as typically found in Cumbrian villages.

Tree planting along boundary hedge between properties to break up rooflines and add greenery within the site

Proposed tree planting to rejuvenate existing woodland blocks. Exact positions of proposed trees to be microsited to avoid damage to existing tree roots.

Proposed dwellings carefully positioned and oriented, taking privacy and amenity of existing residents to the west into account

Proposed evergreen hedge (planted in a substantial semi-mature form) and trees provide instant screening and softening of views between existing dwellings and proposed development, and support the character of the immediate area

Walls run between dwellings and garages to create an enclosed courtyard appearance

Clipped hedge and single tree provide year round privacy between properties and support landscape character

Bungalows (lower height) proposed along western edge of development to reduce visual effect for people living to the west of the site

The Courtyard Character Area:
Simple rectangular layout with central courtyard, and obvious hierarchy of dwelling sizes, heights and styles to reflect the character of a courtyard. Simple detailing and uncluttered appearance, with relatively little vegetation within the central space.

Unlike in The Green and The Courtyard character areas, within the soft, natural Copse character area, no single dwelling has a dominant appearance, status or detailing, to suit the informal appearance of this area

Dwellings face towards each other for neighbourliness and passive surveillance

Short rows of traditional Cumbrian trees or shrubs (e.g. clipped hollies or yew) provide year-round privacy to the Farm Courtyard, and support landscape character

The Copse Character Area:
Wooded central space reflects the character to the west, with its high level of tree cover. Informal grass underneath trees and around edges, with native hedgerows to define boundaries all help to create a natural, informal and rural appearance.

Traditional railings mark the boundary between private gardens and public space in a simple uncluttered way

Walls, wall piers, railings and a pair of matching trees together mark the gateway between The Green and The Courtyard

Southern edge of site defined by tree and hedgerow planting which will form part of the consented Phase 1 development. These consented trees will help to backdrop rooflines of the proposed Phase 2 development, as seen from the north

Simple,elegant but unpretentious frontages (grass and traditional railings) reflect the character of front gardens typically found in Cumbrian villages

Soft grass verges, native hedgerows and shrub groups encircle the central Copse, to create a soft, natural appearance within this Character Area

Proposed new dwellings positioned to allow clear views and visual connection between Phase 1 of development and the focal point Green within the centre of Phase 2. Street scene kept uncluttered to allow clear and uninterrupted views.

Matching trees on either side of road, and an informal sitting area mark the gateway between The Green and The Copse

Small sitting areas throughout the site to add greenery and open space, and to foster friendship and neighbourliness

The Green
The Courtyard
The Copse
Lane
Seat
Seats

Key

- Existing and consented buildings (no ridgelines shown)
- Proposed dwellings (ridgelines shown)
- Existing trees
- Consented trees
- Supplemental parkland planting
- Proposed trees
- Proposed hedges and hedgerows
- Proposed shrubs and groundcover
- Open space grass areas
- Private front garden lawns (rear lawns not coloured here)
- Brick walls (see detailed drawings)
- Walls with railing tops (see detailed drawings)
- Steel railings (see detailed drawings)
- Estate railings (see detailed drawings)
- Hit and miss timber fence (see detailed drawings)
- Seats

Notes
This plan is based on a site layout produced by Concept Support Ltd 08.07.2022

Existing and consented vegetation positions are indicative only, based on consented planting plan, topographic survey & georeferenced aerial photo.

revision	date	notes
R 08	12.10.2022	pdf print size corrected
R 07	12.10.2022	Typo corrected
R 06	03.10.2022	kerblines adjusted for refuse vehicles
R 05	14.07.2022	typo corrected following client review
R 04	14.07.2022	revisions following layout amendments
R 03	12.11.2021	removal of stray drafting (sketch) line
R 02	11.11.2021	wall added to frontages at plot 11
R 01	03.11.2021	minor corrections following peer review
R 00	01.11.2021	Original drawing

drawing number
15

drawing name
Landscape Plan

project
North Park, Rheda - Phase 2

client
KCS Agriculture Ltd

Eden Environment Ltd
www.edenenvironment.com

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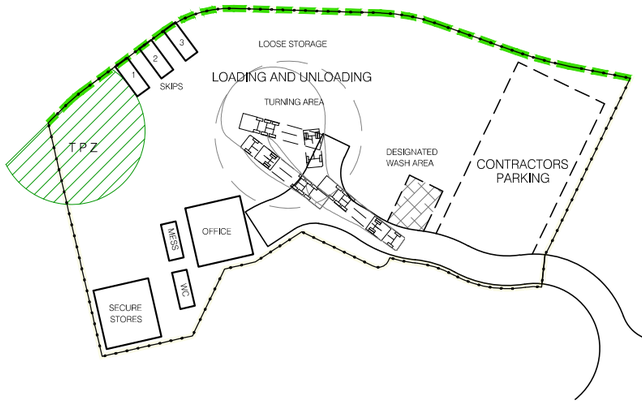
site evolution limited

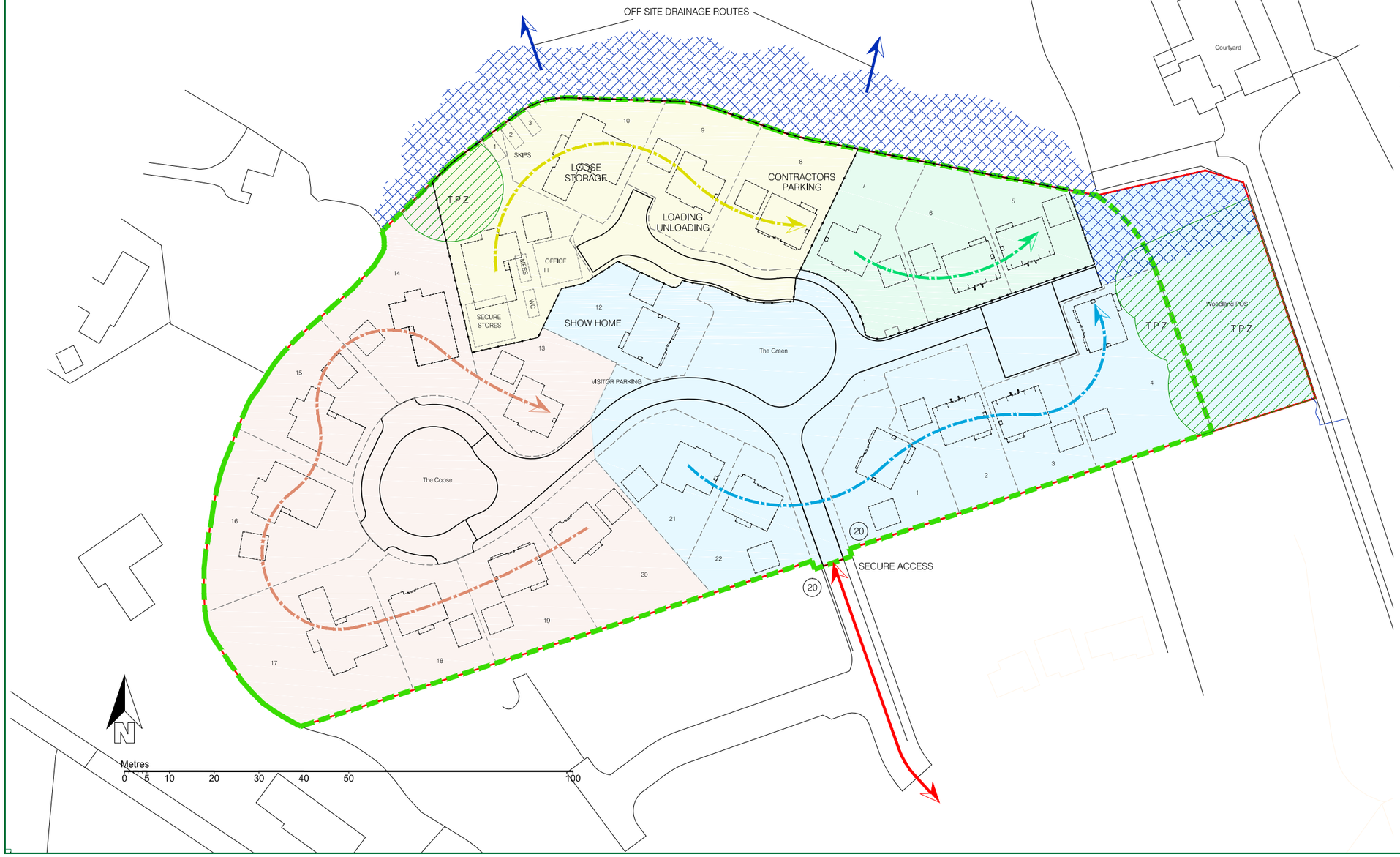
Appendix 3: Site Management Plan

KEY

- Tree Protection Zone
- Drainage Construction Zone
- Construction Access Route
- Temporary Site Boundary
- Phase 1 Build Route
- Phase 2 Build Route
- Phase 3 Build Route
- Phase 4 Build Route
- 20 Speed Limit Sign Locations



location plan 1:1250 @ A1 / 1:2500 @ A3
SITE AREA: 20902m2 / 5.164 Acres.



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WORKS / COMPOUND PLAN
NORTH PARK RHEDA PHASE 2 (RE)
KCS Agriculture Limited

CONCEPT SUPPORT Ltd
PROJECT DEVELOPMENT
Edengarth
1 Meadow Field
Harker Road Ends
Carlisle
CA6 4HE
TEL UK: 01228 672032

File: IS CS ED Rheda Park
Dwg No: RH WK 01
Date: 26/02/24
Scale: 1:500@A1 or :1000@A3

Rev:
A. Amendment to Works / Compound Plan 16-05-2024

Stage: PLANNING DWG

Appendix 4: Tree Survey

A Tree survey

on

Phase 2 of Development

At

North Rheda Park,

Frizington

On behalf of

KCS Agriculture Ltd.

By Julian Russell

6 Croft End,

Bampton, Penrith,

Cumbria CA10 2RS

1.0 Introduction

1.1 Summary

This survey and report was carried out by the Arboriculturist Julian Russell on the instruction of Ian Storey acting on the behalf of KCS Agriculture Ltd. to evaluate the current condition of the trees in and around the northern area of Rheda Park, Frizington, as part of their application for phase 2 of development in that location. The survey identifies a small number of trees that will need to be removed in the interest of public safety.

Despite their being only a small number of trees located in the area of phase 2 development, there are prominent groups of trees to the west and east that offer screening from views in and out of the site; and offer amenity value in terms of wildlife and conservation terms; and for landscape character to the immediate and wider area.

The survey recommends the removal of a small number of trees in the interests of public safety due to their very poor structural condition. Despite the footprint of Plot 11 coming to the edge of the RPA of Tree 28 it will not be damaged by the development provided that the protection measures stated in the Arboricultural Method Statement (AMS) are followed. This is also true of Tree 1 which has the building footprint of Plot 4 encroaching into its Root Protection Area (RPA). By shifting the position of this plot to the west by at least 900mm. damage to this tree by encroachment into its RPA can be avoided.

Due to the fact that the topography of the ground slopes outwards from the centre of the site the report also identifies the risks posed to trees by any potential changes in soil conditions both during and after development; such as changes in soil level and soil water; and the excessive run off of water. Again, such damage can be avoided by strict adherence to the measures laid out in the Arboricultural Method Statement (AMS).

1.2 Scope

This report and Arboricultural Impact Assessment (AIS) is based on the proposed site plan drawing No. RH SI 03 supplied by Eden Environment Ltd. for phase 2 of the development of North Rheda Park, Frizington.

This report and tree schedule (Appendix 2) is produced in accordance with the following sections of BS 5837:2012 Trees in Relation to Construction-Recommendations;

4.2 Tree survey and;

4.3 Tree categorization method.

Although trees worthy of retention are identified in the tree schedule, only after consultation with the LPA tree officer over all phases of the proposed development plan will such trees be confirmed.

The position of all trees referred to in this report and schedule are plotted on the supporting site map, Tree Constraints Plan. Root Protection Areas are marked on this as a circle centred on the position of the tree stem. However, this can sometimes portray an unrealistic reflection of the probable rooting area, the digging of trial pits in the soil may be used to plot the extent tree roots more accurately.

Despite this report making comments on the structural and physiological condition on the trees in and around the site, it should not be used as a tool to evaluate the risk posed to people and property from tree failure. This is beyond the scope of this report.

All information contained in this report is believed to be accurate at the time of the site visit on 21/1/2022.

1.3 Wildlife and Habitat Considerations

The Wildlife and Countryside Act (1981) and associated legislation gives statutory protection to wild birds, bats, certain species of mammal, invertebrate and plants. It is important to ensure that this legislation is considered prior to any work on trees. It is normally considered necessary to survey any trees with significant cavities or crevices for bats and dormice along with checking for nesting birds prior to any tree work.

Trees with the highest conservation value tend to be native species and of late maturity in age class, along with Ivy covered trees by providing cover for nesting birds and possibly bats. Tree with dead wood and cavities also provide valuable niche habitat for an array of flora and fauna and efforts should be made to conserve trees with these features where appropriate.

1.4 Site Description

The survey site is approximately 3h and is comprised of predominantly grassland used for grazing livestock, mature trees and hedges running along either side of the site perimeter; and newly built residential housing area in the southern section of the site, the first phase of the development, where construction work is still currently ongoing.

The topography slopes gently downward in all directions from the centre of the site, which can result in a build up of soil water on the periphery of the site. This is most evident on the eastern site boundary, where an abundance of rushes (*Juncus*) is present, a plant that is associated with wet soil conditions. Careful consideration should be made during the planning and development phase on the potential changes to soil hydrology in these areas, along with run off from construction related activities.

1.5 Trees and Hedgerows

The majority of the trees within the site (the details of which are listed in the accompanying tree schedule) are located along the eastern boundary, forming both a partial green screen in and out of the site and a valuable corridor for wildlife to both nest and travel to neighbouring trees and woodland. Many of the trees in this areas are in poor structural and physiological condition having poorly shaped crowns and long stems and branches with insufficient taper a result of heavy mutual shading.

Photo 1: looking north west from the eastern site boundary. note the ground sloping towards the trees and the rushes indicating wet soil conditions.

Photo 2: looking south from the eastern boundary; these trees offer some screening from the development and valuable source of habitat. However many are in poor structural and physiological condition.

Immediately to the north of the site boundary, adjacent to location of Plots 9 & 10 are a group of three Austrian pines (*Pinus nigra ssp. Nigra*), all of which are either dead or dying and in an extremely poor structural condition and would need to be removed prior to any development on the grounds of public safety.

A short distance to the west of these pines is an oak (tree 84), which is in good health and has a relatively good structure. This tree will provide a degree of landscape character and wildlife value to the site into the future and efforts should be made to retain this tree where possible.

The existing tree cover on the site is to be augmented by the planting of new trees and hedges. These will comprise of a mixture of both native species that will provide excellent natural habitat; and ornamental specimens for amenity interest.

Of all the trees situated outside the site boundary, it is the ones along the western edge, covered under TPO W2 that have the potential to be an impact on the next phase of development or be impacted on by the development. The position, size and dimensions of individual tree stems was not recorded as they are situated on private residential properties, but include sycamore (*Acer*

pseudoplatanus), oak (*Quercus),* ash (*Fraxinus*), cherry (*Prunus*), beech (*fagus*), pines (*Pinus*) and spruce (*Picea*). Many of these trees in this area are well in excess of 20m in height and are in poor structural condition and have a high potential for structural failure.

Photos 3, 4 & 5: looking north and west from the centre of the site at the trees on adjacent land covered by TPO W2; they offer valuable screening and wildlife habitat but many are in poor condition and will become increasingly liable to structural failure over time and will be sensitive to any changes to soil conditions in or around their root zones.

There is a strip wood running parallel to the far side of road just beyond the eastern boundary of the site. This comprises of Scots pine (*Pinus sylvestris*), sycamore (*Acer pseudoplatanus*), ash (*Fraxinus excelsior*) and beech (*Fagus sylvatica*). Unlike the trees on the survey site on the opposite side of the road, they have a distinct understorey of shrubs beneath, including Rhododendron, briar (*Rhubus sp.*), Hawthorn (*crateagus sp.*) and some natural regeneration of trees. The overall physiological condition of the trees here is markedly superior to those located across the road in the site.

Photo 6: looking south east from midway along the eastern site boundary; these trees have a higher value in terms of landscape character, wildlife and conservation and provide a high level of screening from view.

2.0 Arboricultural Impact Assessment

2.1 Trees as a Constraint to this Development

2.1.1 Above Ground Constraints

It should be the ambition and intention to retain as many trees as possible in and around this this development site. However, as the nature of the land usage is to change significantly with this planning proposal, a small number of trees on or near the site will pose a significant and unmitigable constraint due to their poor structural condition and pose an unacceptably high risk to public safety in the event of failure.

2.1.2 Trees Identified for Removal Prior to Development

- Trees 25, 26 & 27 – three pines on the northern end of the site.
- Tree 28b – an unidentifiable standing dead wood stem.

2.1.3 Mitigation by Pruning

In some instances where stems and branches from trees on adjacent land encroach onto the site and restrict access, it may be necessary to prune back the problematic tree parts. However, care and consideration must be taken to avoid the potentially harmful effects of excessive or poor pruning which can send a tree into physiological decline and or leave it more structurally unsound, not to mention ruin their landscape quality. It is therefore essential that any tree pruning be carried out to the standard meeting current arboricultural industry best practice (BS3998: recommendations for tree work 2010).

In some circumstances where pruning would be significantly detrimental to a tree or the constraint caused by it cannot be effectively alleviated, eg. Due to the size of the tree and severity of the defective part, tree felling should be deemed the most feasible course of action.

2.2 Potential for Damage to Trees on Development Sites

Trees can be damaged by actions directly resulting from construction related activities in the following ways:

- Impact damage from vehicles, plant machinery or other tools and machinery used during development; or
- Unnecessary/poor pruning of above ground parts of the tree.
- Damage to roots as a result of excavations or compaction from site traffic; or from changes in soil conditions suitable for root growth in the root zone of the tree which includes any changes to soil moisture levels.

Such damage can result from;

- Changes in soil level around the roots or changes in gradient that will change the hydrology of the soil around the tree roots.
- Soil capping from impermeable hard surfaces.
- Loss of soil structure due to compaction or waterlogging.
- Poisoning from substances toxic to root growth such as fuels and oils, lime based substances such as cement, or sodium.

The only tree at risk of such damage is Tree 1which is located within the building footprint of Plot 4. This can be avoided by moving the position of this by at least 900mm. to the west. The foot print of the building of Plot 11 is located just outside the Root Protection Area of Tree 28 and will not be affected.

Tree root damage can also occur indirectly as a result of either soil contaminants leaching through neighbouring soil into the rootzone, or by either too much or too little soil water, resulting from changes in soil levels and conditions nearby. These two trees along with the others on the eastern part of the site and those on neighbouring land to the west are particularly vulnerable to such damage due to being situated on the downward slope from the construction activity. This can be avoided by strict adherence to the protection measures stated in the Arboricultural Method Statement in Section 3.0.

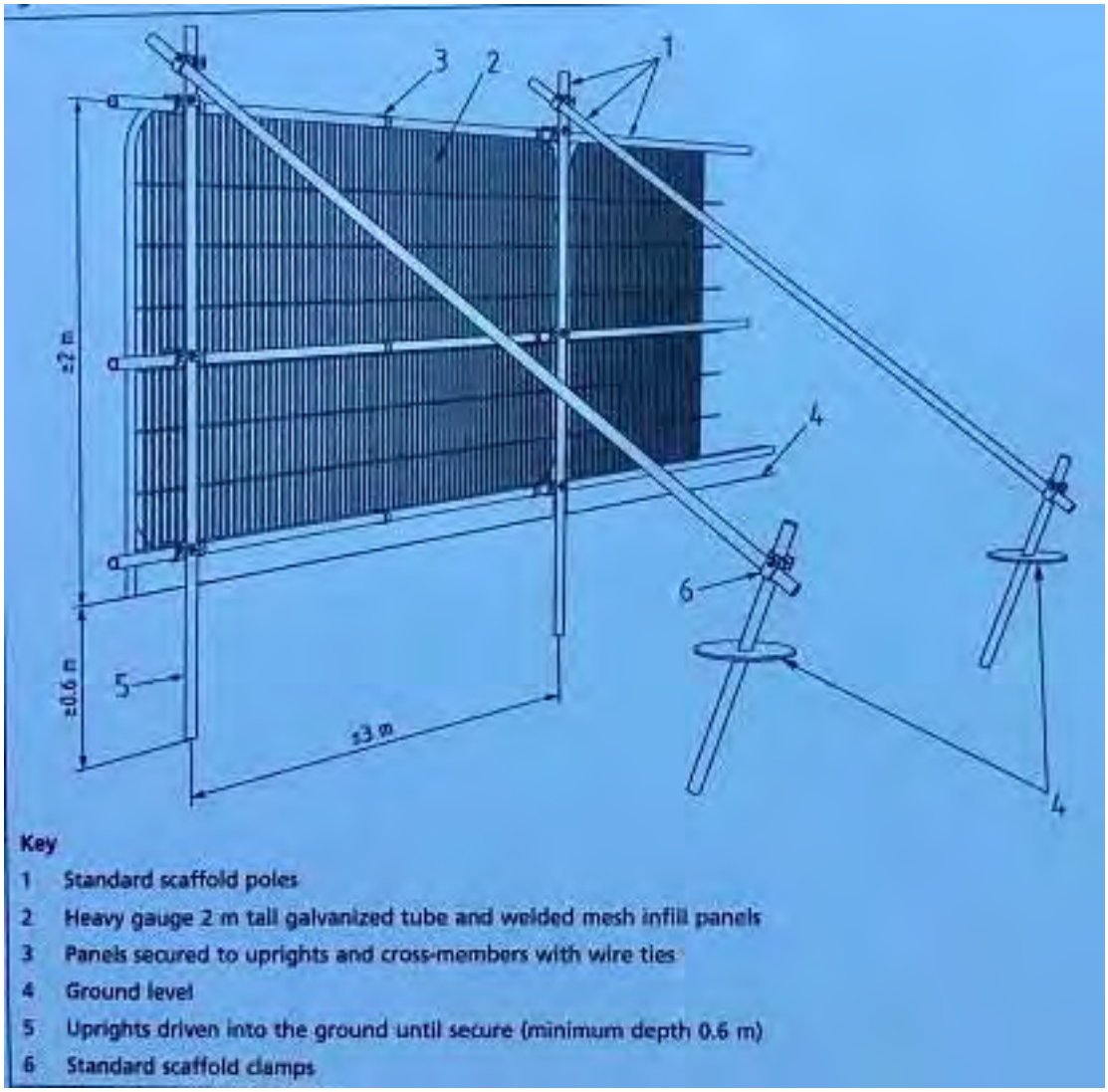
Photo 7: The piling of soil within the rootzones of trees is extremely damaging and must be avoided.

Photo 8: Trees here are on the downward slope on the western site boundary and are potentially vulnerable to water run off on hard impermeable surfaces. and decreased availability in soil water from compacted soil.

3.0 Arboricultural Method Statement

3.1 Proposed Tree Protection Measures

All the trees deemed worthy of protection in the Tree Schedule are to be protected in accordance with section 9.2 of BS5837: 2012 - Trees in Relation to Construction – Recommendations; with barriers fit for purpose to exclude all activities associated with development in order to protect both the above ground parts of the trees and their root protection areas.



Example of recommended specification of protective fencing above.

Services, including those provided by statutory undertakers such electricity, water, gas and telephone needed for the new development will be located outside the RPAs of all retained trees.

No building materials, fuels or oils should be stored within the RPAs of trees to be retained or where new ones are to be planted.

No vehicles or plant should operate or be parked within the RPAs of retained trees without the soil being suitably protected from compaction as recommended by either myself or the LPAs tree officer.

No cement should be stored or mixed close to or within the RPAs of retained trees or where new ones are to be planted; nor is the washing of cement mixers permitted in or close to these areas.

Any excavations must be lined before uncured concrete is to be poured into them to prevent soil leaching.

The soil level should not be altered without prior consent from an arboriculturist.

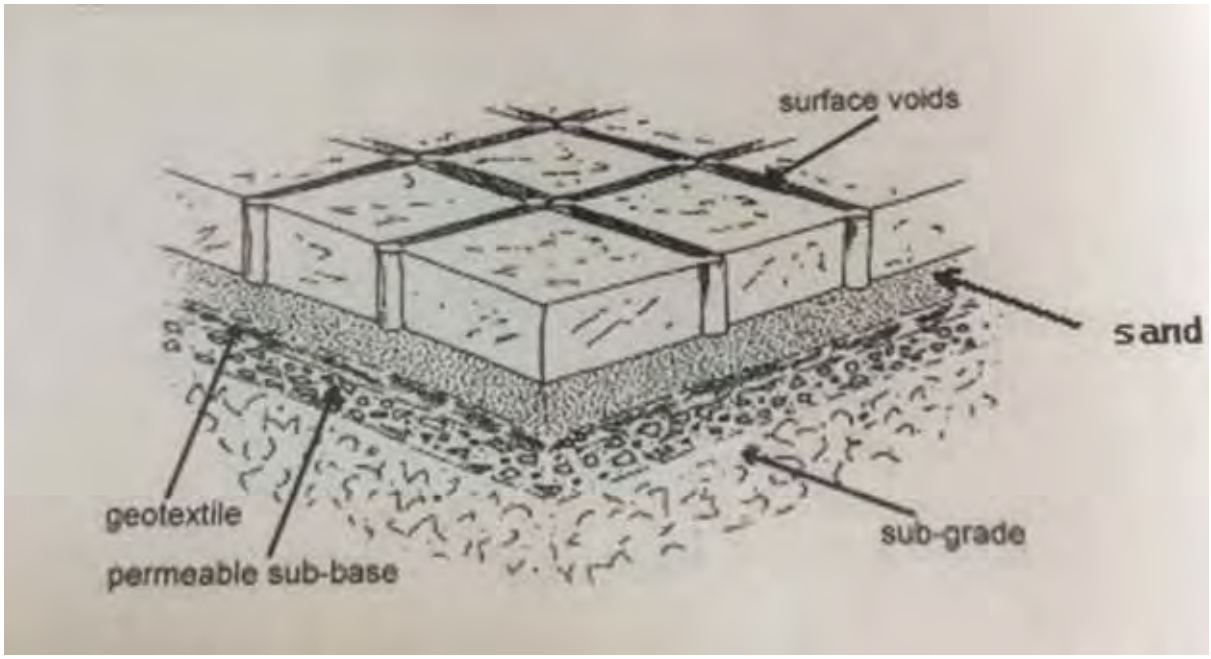
Excavated soil must not be stored directly above or below any trees or hedges on sloping ground.

Drainage pipes and soak aways should be made impervious to penetration by tree roots.

No bonfires are permitted within 20m of the outer edge of the crown of a retained tree.

No surface water runoff should be redirected into or out of the RPA of a retained tree.

New hard surfaces should be permeable to allow both the percolation of surface water and gas exchange in and out of the soil below. This will also reduce the amount of surface water runoff in or out of the root zones of retained trees. Example given below.



3.2 Construction Work within the RPAs of Trees

Construction work must be avoided where possible in RPAs, but where it is deemed unavoidable excavations must be carried out with hand tools and provision made to protect from soil compaction as recommended in sections **7.2 & 7.3** of **BS5837: 2012**. Any such work must be carried out under the supervision of an arboriculturist.

Any underground services should be installed within the RPAs of retained trees by following guidance contained within NJUG Volume 4 (Guidance For The Planning And Installation And Maintenance Of Utility Apparatus In Proximity To Trees, (Issue 2, 2007) www.njug.org.uk/)

Schedule of Protection Measures

1. Fell trees identified for removal.
2. Issue site managers with a copy of AMS and Tree Protection Plan
3. Erect protective fencing around retained trees
4. Install ground protection.
5. Construction phase.
6. Landscaping phase – all planting should be carried out when the trees are dormant (between November and April).
7. Take up ground protection (only when all plant traffic has finished on site).
8. Take down protective fencing (this may have to be done before the ground protection is removed to allow vehicles on to load the fencing away).

4.0 Skills Knowledge and Experience of the Author

Julian has over 16 years' experience in both the forestry and arboriculture industries.

This began in 2004 after studying for his National Diploma in forestry and arboriculture at Askham Bryan college York, when he found work in commercial forestry as a wood cutter; and included work with the Forestry Commission at Grizedale Forest park. This is where he not only learnt many of his surveying techniques but was involved in work to maintain and enhance the conservation and recreation value of the area.

He has worked for two years in a tree nursery, which gave him valuable practical knowledge of the planting and aftercare of young trees, along with excellent knowledge of tree pests, diseases and disorders.

This experience has enabled him to ensure that trees on planting schemes are well suited for the particular site and given the best chance of growing into healthy specimens.

With over 12 years' experience as a climbing arborist, Julian has considerable experience in assessing the hazard potential of trees and is proficient in both prescribing and conducting appropriate remedial action.

After completing his Foundation Degree at Myerscough College in 2010 Julian has embarked into the realms of Arboricultural consultancy.

Appendix 5: Tree Schedule

Tree no:	Species Age class	Height m. Dbh cm.	Crown spread N-E-S-W	RPA M^2 radius	BSI Retention category	Structural condition	Physiological condition	comments
1	Elm mature	18 75	6-6-6-6	9.0	B2	fair	fair	Moderate condition.
2	Sycamore mature	16 45	4-4-4-4	5.4	B2	fair	fair	Moderate condition
3	Sycamore mature	17 56	4-4-4-4	6.7	B2	fair	fair	Moderate condition
4	Sycamore mature	10 47	4-4-4-4	5.7	B2	fair	fair	Moderate condition
5	Horse chestnut mature	14 54	5-5-5-5	6.5	C2	Poor	poor	Numerous dead branches in cow, wounds on lower stem and leaning heavily towards the west.
6	Beech Early mature	10 17	2-2-2-2	2.0	C2	fair	poor	Stunted form due to suppression and poor soil conditions.
7	Elm mature	16 40	4-4-4-4	4.8	C2	poor	poor	Poor health and form due to competition from other trees and poor soil conditions.
8								Not present

9								Not present
10	Elm mature	19 49	4-4-3-3	5.6	C2	poor	poor	Poor condition due to shading from other trees and wet soil conditions
11	Norway maple mature	14 28	4-4-4-4	3.4	C2	fair	poor	Poor form and health due to poor soil conditions and mutual shading from other trees.
12	Sycamore mature	17 54	4-4-4-4	6.5	B2	fair	fair	Moderate condition
13	Horse chestnut mature	18 34	3-3-3-3	4.1	B2	fair	poor	Poor condition due to suppression from other trees
14	Beech mature	15 32	4-3-3-3	3.8	C2	poor	poor	Stunted growth and form, leaning towards the east, root plate starting to fail.
15	Sycamore mature	15 25	3-3-3-3	3.0	B2	fair	fair	Poor stem taper due to suppression
16	Oak mature	18 70	5-3-3-6	5.6	B2	fair	fair	Moderate condition
17	Horse chestnut mature	16 58	4-4-4-4	7.0	B2	fair	fair	Moderate condition, with large wound on lower stem.
18	Austrian pine	19	4-4-4-4	7.0	B2	Fair	Poor	Numerous dead branches and poor stem taper.

	mature	52						
19	Beech Early mature	7 24	5-5-2-2	2.9	C2	poor	fair	Growing up underneath tree 52
20								Not present
21	Oak mature	18.5 75	5-6-4-4	9.0	B2	fair	fair	Heavily weighted crown towards the east, several broken branches
22	Elm mature	16 41	4-4-3-3	4.9	C2	poor	poor	
23								Not present
24	Horse chestnut mature	15 78	4-4-4-4	9.4	B2	fair	fair	Numerous dead and broken branches
25	Austrian pine Over mature	16 68			U	Very poor	Very poor	Structurally unsound and a high risk of failing
26	Austrian pine Over mature	16 84			U	Very poor	Very poor	Very Structurally unsound with partially failed rootplate.
27	Austrian pine dead				U			Dead – partially failed root plate.

28	Oak mature	20 100	7-7-7-10	12.0		good	good	Good condition for age, offering high amenity value. Broken branch hanging in crown.

Cascade Chart for Assessing Tree Quality

Trees for removal	
Category and definition	**criteria**
Category U Those in such a condition that any existing value would be lost within 10 years, and which should in the current context, be removed for sound arboricultural reasons	• These that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees, for example, being at increased of failure due to sudden exposure. • Trees that are dead or showing signs of immediate and irreversible decline. • Trees infected with pathogens that threaten the health and safety of nearby trees. • Very low value trees restricting the growth of better quality specimens.

Trees to be considered for retention			
Category and definition	**1. Mainly arboricultural values**	**2. Mainly landscape values**	**3. Mainly cultural values, including conservation**
Category A Those of high quality with an estimated remaining life expectancy of at least 40 years.	Good examples of their species especially if rare, or essential components of groups, or formal, or semi-formal arboricultural features.	Trees, groups or woodlands which provide a definite screening or softening effect to the location, or significant landscape features.	Trees, groups, or woodlands of significant conservation, historical, or commemorative value.
Those of moderate quality and value with an estimated remaining life expectancy of at least 20 years.	Trees downgraded from category A due to an impaired but remediable condition.	Trees present in numbers that form distinct landscape features that are collectively of more value than they would be as individuals, or trees occurring as collectives with little visual impact on the wider locality.	Trees with clear conservation or other cultural value.
Category C Those of low quality with an estimated remaining life expectancy of at least 10 years, or younger trees with a dbh. Below 150mm.	Trees not qualifying into category A or B.	Trees that are only of value because of their contribution to a group, or trees offering only low or temporary landscaping benefits.	Trees with no material conservation or cultural benefits.

Appendix 6: Tree Constraints Plan

Tree Constraints / Protection Plan

North Rheda Park - Phase 2

Cat U (unsuitable)

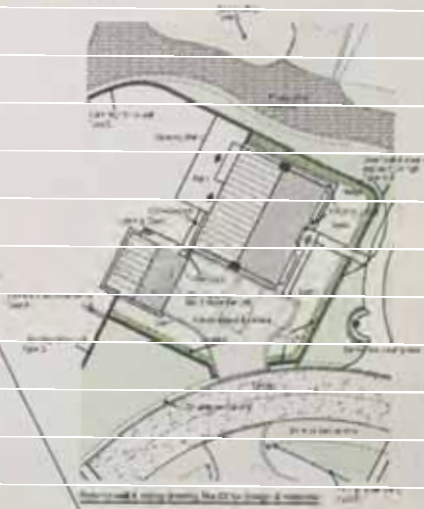
Cat A (high quality)

Cat B (moderate quality)

Cat C (low quality)

Root Protection Areas

Position of protective fencing



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SITE PLAN
EXTERNAL WORKS

NORTH PARK RHEDA
PHASE 2
KCS Agriculture Limited

CONCEPT SUPPORT Ltd

J. Russell 21/2/2022

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