WOODLAND & GREEN SPACE MANAGEMENT PLAN
at
Mount Vernon Hospital Site
Mount Vernon Road
Barnsley
South Yorkshire
S70 4DP

Client:
Orion Homes Ltd.

Client Address:
5 Benton Office Park
Bennett Avenue
Horbury
Wakefield
West Yorkshire
WF4 5RA

Client Telephone:
01924 831030

JCA Ref:
17016/EW

JCA Limited
Arboricultural & Ecological Consultants

Contents

1. Introduction

1.1 Purpose of the Management Plan

1.1.1 A woodland and green space management plan is required for the new housing development, at **The Former Mount Vernon Hospital Site** to provide detailed, independent, arboricultural advice on the existing woodland and proposed POS areas that require maintenance, thorough management, and enhancement post development.

1.2 Terms of Reference

1.2.1 I have been instructed by **Orion Homes Ltd.** to visit the site and prepare my findings in a report and a management plan.

1.2.2 For this purpose, I have been supplied with a proposed site plan; Drawing Ref. **Site Layout T** and a detailed landscape proposal; Drawing Ref. **H2 181003.1 Rev C**

1.3 Aims of the Management Plan

1.3.1 Recommendations are given with regards to new planting, pruning (trees and shrubs) aftercare and maintenance. Where further monitoring is required, this has also been scheduled.

1.3.2 All recommended prescriptions have been scheduled annually for a 5-year period, and thereafter recommendations are made for 5-year periods for up to 25 years. Details of timings can be found at **Appendix 1** (Tree Works Schedule).

1.3.3 Consideration is given to both risk and cost so that finances may be budgeted over the period of the management plan.

1.3.4 The management plan aims to address the following matters:

- Maintain and enhance the woodland and green space areas of the site, outside the boundaries of the individual plots.
- Provide guidance for the longer-term (years six to ten initially and then every 5 years subsequently) management of the site to ensure ongoing maintenance.
- Submit to the council annual reports and tree works applications for the works required to be carried out on the woodland area protected by the Tree Preservation Order as recommended in the reports.
- Set out management responsibilities/ownership

1.4 Scope of the Management Plan

1.4.1 This management plan only deals with those trees situated within the woodland and the greenspaces located outside of the individual housing plots.

1.4.2 It is advisable to have trees surveyed on a regular basis. It is for the owner to arrange for biennial inspections (every two years) in addition to the works recommended in this report.

1.4.3 Problems may arise which were unforeseeable at the time of writing this plan. In which case the advice of an arboricultural consultant should be sought. Adherence to this plan alone, without further inspections and appropriate amendments, is not recommended.

1.5 Management Responsibilities

1.5.1 The woodland compartments and greenspaces beyond the plot boundaries will be jointly owned by all properties within the new development.

1.5.2 To manage and implement the Management Plan (MP), a management company shall be employed through permission of the landowners. The management company shall be responsible for implementing all recommendations within the MP as well as regular safety inspections and appointing arboricultural contractors.

1.5.3 The management company will appoint an agent who shall arrange for the appointment of contractors to carry out tree works and instruct an arboricultural consultant to proceed with new management plans or review existing management plans on a 5-yearly basis/cycle. The appointment of the arboricultural consultant would also require annual reports to the council to acknowledge/ensure the yearly work has been carried out. The job of the arboricultural consultant would be to submit annual reports confirming that the maintenance schedule has been implemented/carried out as specified within the MP.

1.5.4 The maintenance of the woodland and the areas beyond the private boundaries shall be retained and maintained by the landowners for as long as the proposed development is in existence.

1.5.5 As the woodland falls under the protection of a Tree Preservation Order, tree work will require permission from the council gained via the submission of a single TPO application form for all woodland compartments. This application form will be submitted by the management company when tree removal or pruning works are required and as scheduled within the woodland and green space management plan. Tree work shall be carried out by Arboricultural Association approved contractors.

1.5.6 Once a management company has been instructed, the name and contact details shall be passed on to the LPA.

2. Woodland Context

2.1 Location and Character

2.1.1 The area is the former Mount Vernon Hospital Site, the building has been demolished leaving predominantly hardcore surface in the centre of the site, tarmac surfaces remain in-situ from the former car park. Stone walls are located along the northern and eastern boundaries with an existing driveway on the eastern boundary, off Mount Vernon Road. A small, grassed area is present to the western end and a narrow woodland strip exists along the south-western boundary; trees border a small section of the boundary to the north and northwest which separates the site from the adjacent school.

2.1.2 The site is in an urban area to the south of Barnsley, housing estates are interspersed with green space either grazing land or parkland. The woodland continues over Mount Vernon Road, extending along Pinfold Hill and Kingwell Road.

2.1.3 The history of the site has not been researched, however information within the PEA (**Brookes Ecological Ref: R-3716-01**) informs us that the woodland is known as Highstone Plantation and has been in existence since 1850's and is a priority habitat inventory (deciduous woodland) for England.

2.1.4 Due to the urban setting it is located within, this wooded area, although small, is considered an important greenspace and wildlife habitat as well as providing screening for the site and houses beyond.

2.2 Topography

2.2.1 The main body of the site is flat, with the woodland to the southwest sloping steeply down towards the boundary line while the grassed area to the west slopes steeply up towards the boundary.

2.3 Constraints

2.3.1 The site is the subject of a new housing development, with existing housing to the southwest. This area shall be maintained to ensure shading from existing trees is kept to a minimum any saplings that appear due to self-seeding (natural regeneration) within 5 metres of the boundary line should be removed.

3. Compartment Descriptions & Recommendations

3.1 General

3.1.1 The woodland area is small at 0.5ha in size. There are two distinct areas, one to the north-western end, which is more open, with fewer trees than in the southern end. The whole woodland appears unmaintained with dense Ivy growth to the south-eastern end and little in the way of natural regeneration. The age-mix throughout is fairly even, trees being mainly early-mature to mature and little in the way of succession.

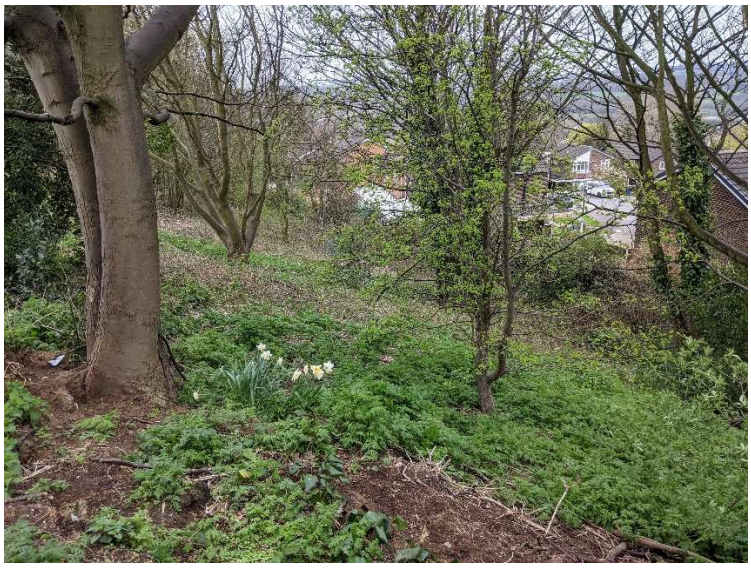
3.1.2 Predominant species within the woodland are Sycamore and Ash, with Oak, Beech, the occasional Birch, and an understorey of Hawthorn, Holly, Elder and occasional small Yew.

3.1.3 Rhododendron has become established in Area B which can become a problem if not dealt with. Its removal should be a priority.

3.2 Area A - Woodland

3.2.1 Description

The north-western end of the woodland located to the back of the houses along Brow Close and Ridgewalk Way. This area is open, trees within this area are predominantly early-mature Sycamore with the occasional small Holly, Elder and Hawthorn saplings. Some Ivy growth covers the floor with patches of nettle, and Bramble.



This area backs onto the existing housing and should remain open to prevent excessive shading and to prevent pressure from homeowners to have the trees pruned.

3.2.2 Recommendations

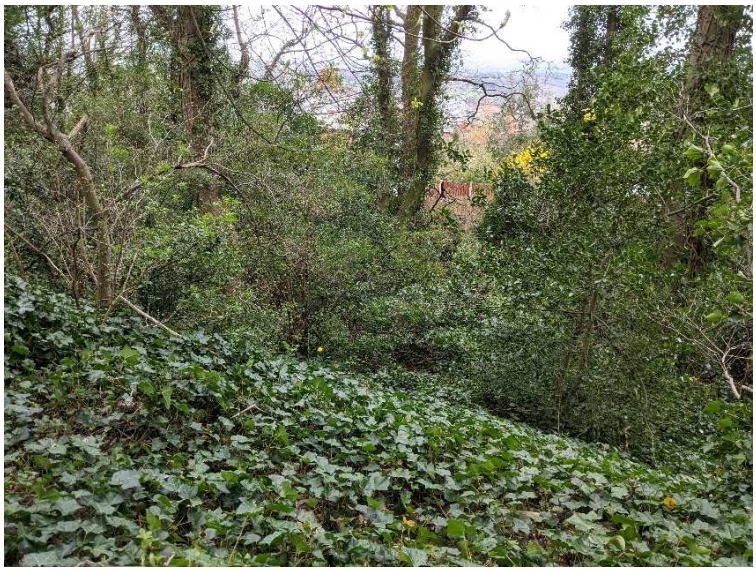
- No tree removal to be carried out.
- Carry out safety survey on a biennial basis.
- Sow wildflower seed

3.3 Area B - Woodland

3.3.1 Description

The south-eastern end of the woodland, denser than the northern end, predominantly early-mature to mature specimens, wider species mix including Sycamore, Ash, Beech and Oak more significant ground and shrub layer including dense Ivy, Elder, Holly, Bramble, Nettle, Dog Violet, Wild Garlic, Hemlock, Cleavers and Rhododendron. There is a small amount of Holly regeneration. Standing deadwood was noted as well as a patch of collapsed Elder stems towards the top of the bank. This area backs onto a small lane and the rear garden of a neighbouring property.

Rhododendron clearance should be a priority, to prevent its spread.



3.3.2 Recommendations

- No tree removal to be carried out.
- Removal of all Rhododendron.
- Carry out safety survey on a biennial basis

3.4 Area C – Grassed area

3.4.1 Description

Small section of grass to the western end of the site. Located on a steep slope which is likely to make grass maintenance difficult. Trees are to be planted within this section of the site to provide screening.

New planting in this area will comprise 3x Field Maple, 3x Norway Maple and 2x Whitebeam; as shown on the landscape proposals plan (**Ref: H2 181003.1**).

3.4.2 Recommendations

- Strip existing grassed area and sow with a wildflower mix which can be strimmed annually to maintain the area while retaining a habitat for insects and other pollinators. Maintenance schedules can be found at **Appendix 1.**

- Regular maintenance including tree/shrub pruning, grass cutting, replacement of any new trees/plants that have been lost. Maintenance schedules can be found at **Appendix 1**.

3.5 Area D – Verges

3.5.1 Description

Green areas beyond the individual housing plots. These areas will contain newly planted trees, grassed verges, shrub beds and small hedge sections.

New planting in this area will comprise 3x Silver Birch and 3x Wild Cherry Var *Plena* along the roadside verges. Tree planting along the road will be within grass verges with shrubs alongside. Hornbeam hedges will also be planted along the gardens of houses, some of these hedges will be located within the public spaces; as shown on the landscape proposals plan (**Ref: H2 181003.1**).

3.5.2 Recommendations

- Tree planting and regular maintenance including tree/shrub pruning, grass cutting, replacement of any new trees/plants that have been lost. Maintenance schedules can be found at **Appendix 1**.

4. Tree Work and Planting

4.1 Tree Prescriptions

4.1.1 Tree works are to proceed once the development phase is complete and all construction vehicles are moved from site.

- **Deadwood** within the woodland should be retained where it falls, unless it obstructs the footpaths, and in that case, it should be moved to somewhere safe. Deadwood plays an important role in the woodland structure, contributing towards the ground layer and towards nutrient cycling. Wood removed from trees during works can be utilised within the woodland to provide habitat piles, which in time, will become deadwood. Standing deadwood should be made safe and retained where practicable, this will provide additional habitat retreats for invertebrates and nesting birds.

- **Ivy and Bramble** contribute towards the woodland flora offering cover and shelter for nesting birds, protection for small animals, preserving the moisture levels in the soil and preventing soil erosion as they are dense ground cover plants. They can suppress regeneration so this should be monitored on a regular basis to ensure woodland succession is occurring.

- **Replacement planting:** This will be carried out in the two years following the planting of new trees. It involves the replacement of trees that have failed within the initial crop.

- **Weed control:** Weeds shall be removed by hand within a 1m radius around the new tree planting. This shall be carried out in years 2 and 3.

4.1.2 All tree work must be undertaken to BS 3998: 2010 – *Recommendations for tree works* and carried out by qualified, experienced and ideally Arboricultural Association approved contractors who must be adequately insured.

4.1.3 Any defects seen by a contractor or the client that were not apparent to the consultant must be brought to the attention of JCA immediately.

4.1.4 No liability can be accepted by JCA in respect of the trees unless the recommendations of this Management Plan are undertaken in accordance with current good practice and British Standards.

4.1.5 Any questions or queries regarding the proposals work should be directed to JCA Ltd. To prevent breaching planning legislation and incurring subsequent fines.

4.3 Wildflower specification

4.3.1 A woodland wildflower mix is to be spread across Areas A and C. Where existing trees are present, a 1.5m radius around the main stem will be left unseeded to prevent competition.

4.3.2 Recommendations for good establishment of grassland areas are given below:

- **Site Preparation**: It is recommended that this scheme is implemented after the completion of the development. First the weeds will need to be killed using an approved weed-killer
- **Seeding:** Seed will be spread using a commercial seeding machine and spread at a density of 3grams per square metre.
- **Timing**: Seeding can be carried out at any time of the year
- **Aftercare:** The seeded areas should be mowed once a year and the cuttings removed so they don't smother the plants for the following years' growth.

Appendix 1 Maintenance Schedule

	Year								
	1	2	3	4	5	6-10	11-15	16-20	21-25
Rhododendron control	B	B	check for any regrowth		check for any regrowth				
Planting - trees shrubs & hedges	C, D Winter								
Check for plant loss			C, D Winter		C, D Winter				
Replace any new tree/shrub loss			C, D Winter		C, D Winter				
Formative prune trees						A Yr10 Oct-Feb			
Hedge maintenance Area D					D Winter	Annually Winter	Annually Winter	Annually Winter	Annually Winter
Check tree shelters, stakes and ties.		C,D	C,D	Remove stake and ties from areas C and D					
Safety check	Biennial walkover of Areas A, B, C, D								
Mulch shrub beds		D February	D February	D February					
Sow grass/ wildflower seed	A, C Spring								
Cut wildflowers		Area C - September	Area C - September	Area C - September	Area C - September	Area C - annually in September	Area C - annually in September	Area C - annually in September	Area C - annually in September
Cut grass		Monthly April to October	Monthly April to October	Monthly April to October	Monthly April to October	Monthly April to October	Monthly April to October	Monthly April to October	Monthly April to October
Prune shrubs	Prune according to individual shrub requirements								
Review					A, B, C, D	Yr10	Yr15	Yr20	Yr25

Appendix 2: Explanation of Terms

Arboriculture	The cultivation of trees in order to produce individual specimens of the greatest ornament, for shelter or any primary purpose, other than the production of timber.
Canker	Disease damaged area of a tree, usually caused by fungus or bacteria.
Co-dominant Stem	A stem which has grown in direct competition to the main stem and which has formed a substantial size influencing the appearance of the tree.
Crown Lift	The removal of the lowest branches, usually to a given height. It allows more residual light and greater clearance underneath for vehicles etc.
Crown reduce	The reduction of a tree's height or spread while preserving its natural shape.
Crown thin	The removal of some of the density of a tree's crown**,** usually 5-25% allowing more light through its canopy and reducing wind resistance.
Deadwood	The removal of all dead, dying and diseased branches, from a tree. Also, wood which is dead.
Dieback	Where branches are beginning to show signs of death usually at the tips in the crown.
Epicormic shoots	Small branches that grow in uncharacteristic clusters around the base or the stem of a tree, usually as a result of bad pruning or some other stress factor.
Included bark	Where the bark on two adjoining branches or stems is growing tight together, forming a joint with limited physical strength.
Remedial pruning	The removal of old stubs, deadwood, epicormic growth, rubbing or crossing branches and other unwanted items from the tree's crown. Sometimes referred to as crown cleaning.

Appendix 3: Author Qualifications

Principal Consultant and Managing Director

Jonathan Cocking *F.R.E.S., Tech. Cert. (Arbor.A), PDipArb (RFS) FArborA CBiol MSB. MICFor.* Jonathan is a Registered Consultant and Fellow of the Arboricultural Association and sits on its Professional Committee. He has 31 years experience in the Arboricultural profession and served for eight years as Senior Arboriculturist with a large local authority before establishing JCA in 1997. Jonathan has since developed JCA's portfolio of services and its extensive client base. He is a Chartered Biologist, a Chartered Arboriculturalist and an Expert Witness with much experience of litigation work.

Technical Director

Toby Thwaites *BSc (Hons), HND (Arboriculture), MArborA.*. Toby joined JCA in 1998 after graduating in Ecology at the University of Huddersfield and has since graduated in Arboriculture at the University of Central Lancashire. A former JCA team leader and Consulting Arboriculturist, Toby is now Technical Director and oversees all office and on-site activities at JCA and is on hand to offer technical support and advice.

Consulting Staff: Arboriculture

Toby Parsons *Cert. Arb. (RFS), Tech. Cert. (Arbor.A).* Toby joined JCA after spending 6 years working as a senior climber for various Arboricultural contractors in the East Midlands and the South-West. He has gained the Level 2 Certificate in Arboriculture (RFS) and an Arboricultural Technicians Certificate. Toby is LANTRA certified in Professional Tree Inspection.

Andrew Bussey. Andrew joined JCA having spent 12 years working as a tree surgeon for various private companies and a Local Authority. He has various NPTC qualifications, is QTRA qualified and is currently studying for his Arboricultural Technicians Certificate.

Phil Humeniuk *FdSc (Arboriculture).* Phil joined JCA having spent 3 years working for various tree surgery companies and as a Tree Officer for a Local Authority. He also has several years experience working as a consultant both for JCA and for another consultancy. Phil obtained his foundation degree in Arboriculture at the University of Central Lancashire and has various NPTC's and is LANTRA certified in Professional Tree Inspection.

Emily Wilde *FdSc (Arboriculture).* Emily joined JCA having previously worked for various private tree surgery and consultancy companies over the past 8 years. She initially obtained a ND in Forestry & Arboriculture, followed by a FdSc in Arboriculture at Askham Bryan College, York. Emily has various NPTC certificates and is QTRA qualified.

Mick Eltringham *ND (Forestry).* Mick joined JCA after spending 12 years working in the industry for various private companies in the north and south of England. He has also spent the last five years working as a consultant for two canopy research projects in the Amazon Rainforest, working with Oxford University and the University of Arizona. He has various NPTC Qualifications.

Charles Cocking *FdSc (Arboriculture), MArborA.* Charles joined JCA in January 2014 as an Apprentice having previously worked for the company on a part time basis during 2013. Charles obtained his Foundation Degree in Arboriculture at Askham Bryan College, York, and is now part of our qualified Arboricultural consultancy team.

Paul Hodgson *Cert Arb (RFS), FdSc Arb, MArborA*. Paul joined JCA after spending 11 years working in the industry and for various organisations, which included practical tree work, surveying, lecturing at Myerscough College, Arb team leader at Royal Botanic Gardens, Kew, and a number of senior management positions. Paul is a professional member of the Arboricultural Association and a member of the Kew Guild.

Dan Kemp *FdSc (Arboriculture).* Dan joined JCA with nearly 30 years' experience in arboriculture. He worked as a London Tree Officer for 12 years and in several arboricultural and horticultural management posts, specialising particularly in tree risk assessments and tree related subsidence.

Consulting Staff: Ecology

David Bodenham *BSc Ind (Hons) Zoology, MSc Biodiversity and Conservation.* David joined JCA as an addition to the expanding ecology department. An advocate of evidence based conservation, he studied Zoology (Ind) at University and moved onto an MSc in Biodiversity and Conservation where he gained the myriad of skills needed as an ecologist. With over 7 years of experience, David specialises in bat and amphibian ecology.

Jenny Butler *Bsc (Hons) Environmental Science***.** Jenny joined JCA's ecology department in 2017, bringing with her a bachelor degree in Environmental Science from Bangor University. Jenny has previously worked as an Environmental Consultant for an Agri-Environment company and as a freelance ecological consultant. Jenny specialises in great crested newt and bat ecology.

Amanda Beck *Cert He in Field Ecology.* Amanda joined JCA's ecology department in 2018, previously working as a freelance Ecological Consultant in North Wales and Liverpool and as a trainee Ecologist in South Wales. Amanda has extensive practical experience in surveying for botanical, amphibians, terrestrial and marine mammals along with invertebrate research work. She has practical experience in habitat management and creation and is a CIEEM student member.

Joe Earnshaw *BSc (Hons), MSc Biodiversity and Conservation, Student CIEEM Member*. Joe joined JCA's ecology department in 2018. He has a bachelor degree in Animal Management, from Askham Bryan College, York and has further obtained an MSc in Biodiversity and Conservation from the University of Leeds. Joe has expertise in aquatic invasive species identification/control and has practical experience in artificial badger sett and wetland creation. Joe is a member of the West Yorkshire Bat Group and volunteers with the Rivers Trust as part of their river monitoring project.

Administrative Staff

Simeon Haigh *BSc (Hons).* IT Director.
Catherine Cocking Accounts Manager.
Kelly Saunders Accounts Assistant.
Lorraine Spink Administrative Assistant.
Lisa Beedham Marketing Manager.

Appendix 4: General Guidelines

A4.1 All work must be to BS 3998: 2010 - '*Recommendations for tree work'*.

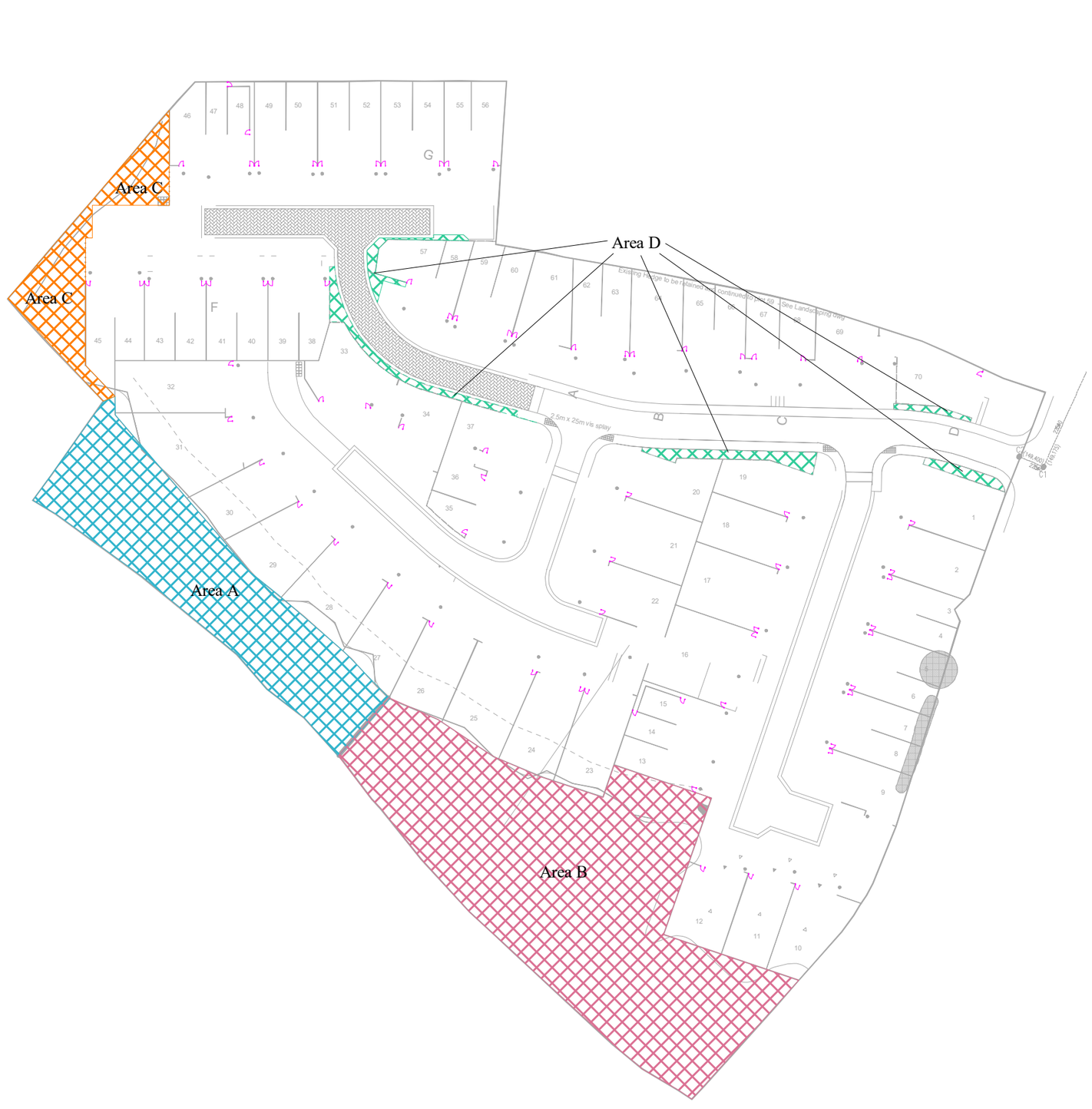
A4.2 Staff carrying out the work must be qualified, experienced and ideally be Arboricultural Association approved contractors, and should be covered by adequate public liability insurance.

A4.3 This report is based upon a visual inspection. The consultant shall not be responsible for events which happen after this time due to factors which were not apparent at the time, and the acceptance of this report constitutes an agreement with the guidelines and the terms listed in this report.

A4.4 Any defects seen by a contractor or the employer that were not apparent to the consultant must be brought to the consultant's attention immediately.

A4.5 No liability can be accepted by the consultant in respect of the trees unless the recommendations of this report are carried out under his supervision and within his timescale.

A4.6 It is advisable to have trees inspected by an arboricultural consultant regularly. In this instance it is recommended that these inspections are made every year.



Appendix 5: Site Plan

ADDRESS: Mount Vernon Hospital Site, Mount Vernon Road, Barnsley, South Yorkshire, S70 4DP.
JCA REF: 17016/EW

SCALE 1:1000	PAPER SIZE A3

JCA Limited
Arboricultural & Forestry Consultants

I hope that this report provides all the necessary information, but should any further advice be needed please do not hesitate to contact the author.

Signed

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Emily Wilde *FdSc (Arboriculture)*.

10th October 2022

For and on behalf of ***JCA Ltd***

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JCA Ltd. Arboricultural and Ecological Consultants
Professional Tree and Ecology Advice nationwide

ARBORICULTURAL SERVICES

Guidance for Architects and Developers

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- Arboricultural Implication Assessments (AIA)
- Arboricultural Method Statements (AMS)

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- Heave Assessment
- Tree Root Identification

Advice for Local Authorities and Social Housing

- Tree Safety Surveys
- Specialist Decay Detection
- Landscape and Orchard Design

Tree Advice for the Legal Profession

- Subsidence Litigation
- Personal Injury and Accident Investigation
- Expert Witness, Planning Inquiries and Appeals

Veteran Tree Management

- Ancient Woodland Management
- Veteran Tree Management

Tree Health and Pest and Disease Management

- Pest and Disease Surveys
- Tree Health Checks
- Disease Mitigation and Control

ECOLOGICAL SERVICES

Ecological Pre-Planning Services

- Phase 1 Habitat Surveys
- Great Crested Newt eDNA Sampling
- Protected Species: Bat, Wintering and Nesting Bird, Badger, Amphibian, Otter, Water Vole, White-Clawed Crayfish, Dormice and Reptile Surveys.
- Preparation for Environmental Impact Assessment (EIA)
- Invasive Species Surveys
- Code for Sustainable Homes

Ecological Post-Planning Services

- Biodiversity Enhancement Plans
- Protected Species Mitigation
- Ecological Management (Bat and Bird box installation and inspection)

HEAD QUARTERS:

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