Land at Tuttle Lane
Historical - 1907

Legend

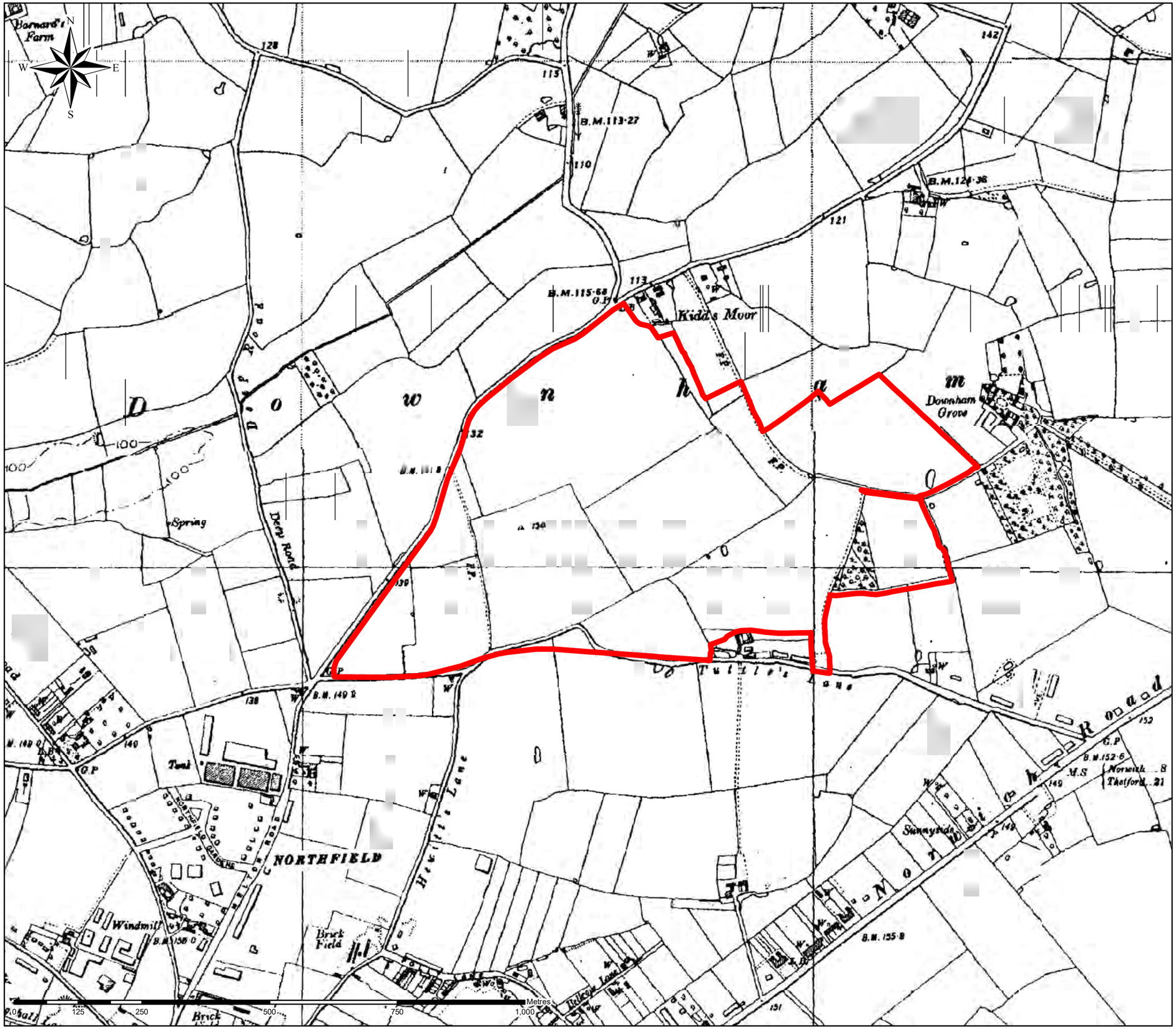
Proposed Development Site

BIDWELLS

Trumpington Road, Cambridge, CB2 9LD 01223 841841 - bidwells.co.uk

Scale: 1:7,500 @ A3
O.S. Ref: TG 1103

Drawing Number: B.14,747
Date: 02/03/2020



Land at Tuttle Lane

Historical - 1938

Legend

Proposed Development Site

BIDWELLS

Trumpington Road, Cambridge, CB2 9LD 01223 841841 - bidwells.co.uk

Scale: 1:7,500 @ A3
O.S. Ref: TG 1103

Drawing Number: B.14,748
Date: 24/01/2018

Land at Tuttle Lane

Historical - 1957

Legend

Proposed Development Site

BIDWELLS

Trumpington Road, Cambridge, CB2 9LD 01223 841841 - bidwells.co.uk

Scale: 1:7,500 @ A3
O.S. Ref: TG 1103

Drawing Number: B.14,749
Date: 02/03/2020

APPENDIX B
DEVELOPMENT PROPOSALS

EXISTING

- Site boundary
- Drains / ponds
- Woodland & hedgerows
- PROW

PROPOSED

- Site access
- Main roads
- Secondary roads
- Potential Access Link
- Buffer planting
- POS
- GI corridors
- Developable area
- Primary / Sixth Form Secondary School
- Local centre
- Recreational route
- NEAP/LEAP (400m walkable distance)
- Proposed Bus Hub

SuDS

- Drain/swale
- Potenial Attenuation / Lower point

Rev.	Date	Details
H	11.03.20	Update graphics
G	27.02.20	Update graphics
F	20.06.19	Update graphics
E	11.06.19	Update road layout
D	29.05.19	Update RLB and schools location
C	02.05.19	Primary/ Secondary school
B	19.03.18	Update attenuation basins graphic

GENERAL
Do not scale from this drawing.
All dimensions to be checked on site.
This plan is to be read with all accompanying documentation.

BIDWELLS
Urban Design Studio
Bidwell House, Trumpington Road, Cambridge CB2 9LD

WELBECK LAND
LAND AT TUTTLES LANE

LANDSCAPE ANALYSIS
MASTER PLAN STRATEGY

Bar Scale: 1:5000 @ A3 (25 0 25 50 75 100m)
Job Code: 41766
OS License Number: 100017734
Project Phase: -
Date: 11.03.20
Drawn By: JS
Checked By: MS
Drawing Number: UDS417666-A3-0102
Revision: H

Subject: Tuttles Lane, Wymondham
From: Urban Design Studio
Date: 30/05/2019

BIDWELLS

TUTTLES LANE DEVELOPMENT BRIEF_SCHOOL OPTION

TUTTLES LANE | WYMONDHAM | DEVELOPMENT BRIEF				
Client: Welbeck Land				
Total Site Area	**53.31 hectares**			
DEVELOPMENT TYPE	**Area (Hectares)**	**Area (SQM)**	**Area % of Total Site**	**No. of Dwellings @ 35dph**
Developable Area	33.84	338,400	63.47%	-
Road infrastructure (12% of Total Site Area)	6.4	64,000	12%	-
Housing Area	22.85	228,500	42.86%	800
Primary School	2.08	20,800	4.14%	-
Sixth Form Secondary School	2.50	25,000	4.68%	
Local Centre	0.50	5,000	0.93%	
Public Open Space Provision	11.6	116,000	21.75%	-
Vegetative Buffer	6.04	60,400	11.32%	-
Area Not Developable (existing woodland)	1.21	12,100	2.15%	-
OPEN SPACE POLICY REQUIREMENT (Wymondham AAP)	**No. of hectares per 1000 people**	**Indicative No. People (800 x 2.4)**	**Open Space (Ha)** **Requirement**	**Provided (11.6 + 6.04 ha)**
Formal open space	0.98	1,920	1.88	
Children's and young people's play	1.96	1,920	3.76	
Natural/Semi-natural green space	5.08	1,920	9.75	
Total Open Space Provision (Hectares)			**15.39**	**17.64**
OTHER PLAY REQUIREMENTS (Play England)				
Local Equipped Area for Play (LEAP)	Min area: 0.04ha Max walking distance: 400m 10m to the boundary of the nearest property / 20m to the nearest habitable living space.			

Local Area for Play (LAP)	Min Area: 0.01ha Max walking distance: 100m
SOUTH NORFOLK PLAY REQUIREMENTS (Recreational Open Space Requirements for Residential Areas, December 1994)	
Children Playspace (over 50 dwellings)	Min area: 0.04 – 0.1ha (as appropriate) Max walking distance: no more than 200m from any dwelling served To include an area of hard playing surface equating to one third of the total for 0.1ha areas. To include items of suitable play equipment: 3 or more items
HIGHWAY INFRASTRUCTURE	
Primary roads	14m width
Secondary roads	12m width
Internal roads	6m width
Footpaths	2m width
Cycle / Footpath	3m width

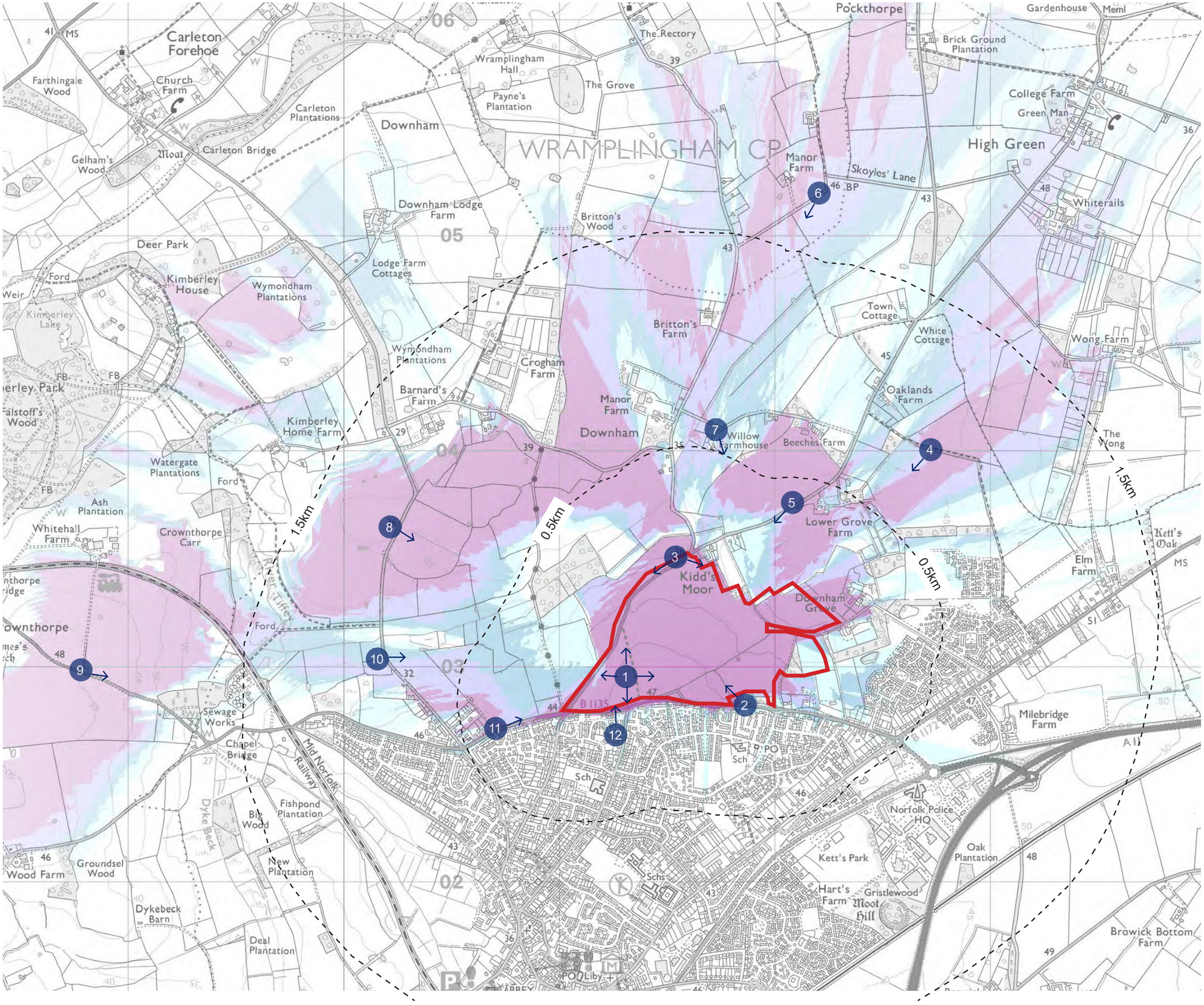
Definitions

Formal Open Space (formal parks, areas for community events and areas for sports/recreation – other than formal pitches) – Formal open space sites provide accessible, high quality opportunities for a range of informal recreation, formal sporting opportunities and community events.

Children's and young people's play (equipped areas, skate parks, etc) – Provision for children and young people consists of equipped play areas and specialist provision for young people, including skateparks, multi-use games areas (MUGA's) and Teen Shelters. The provision of facilities for children and young people is important in facilitating opportunities for physical activity and the development of movement and social skills. Provision for children's play is sub-divided into categories in line with the National Playing Fields Association play area categories. These include Local Areas of Play (LAP), Local Equipped Areas of Play (LEAP) and Neighbourhood Areas of Play (NEAP).

Natural/Semi-natural green space (woodlands, commons, wildlife areas) – Natural and semi-natural green space has been categorised into woodland, commons, and natural greenspace.

APPENDIX C
VISUAL ASSESSMENT



Legend

- Site Boundary
- Distance from Site
- 3 → viewpoints

Zone of Theroetical Visibility

Percentage of target points theoretically visible:

- Up to 25%
- Up to 50%
- Up to 75%
- Up to 100%

ZTV Parameters

Zone of Theoretical Visibility is generated using 'OS Terrain 5' (digital terrain data at 5 m resolution), assuming the following heights:

- 3 Storey apartment: 12.5 m (to ridge)
- Viewer height: 1.7m

The heights of existing vegetation/ structures are estimated, using 'Google Street View' and field observations.

Visual barriers less than 3 m high have not been modeled.

The ZTV identifies those areas from which the development would be theoretically visible. Due to the frequency of hedgerows and low-level vegetation the actual visibility would be significantly less extensive than the drawing indicates.

Rev.	Date	Details

GENERAL
Do not scale from this drawing.
All dimensions to be checked on site.
This plan is to be read with all accompanying documentation.

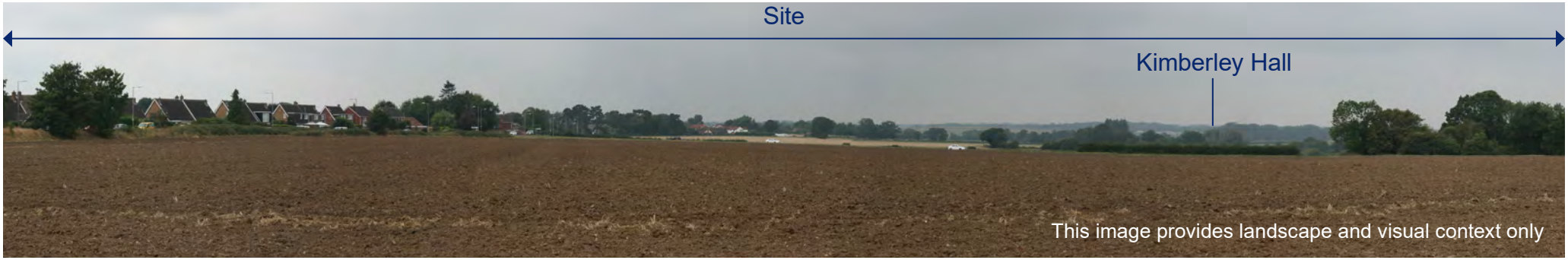
BIDWELLS
Urban Design
Bidwell House, Trumpington Road, Cambridge CB2 9LD

LAND AT TUTTLES LANE

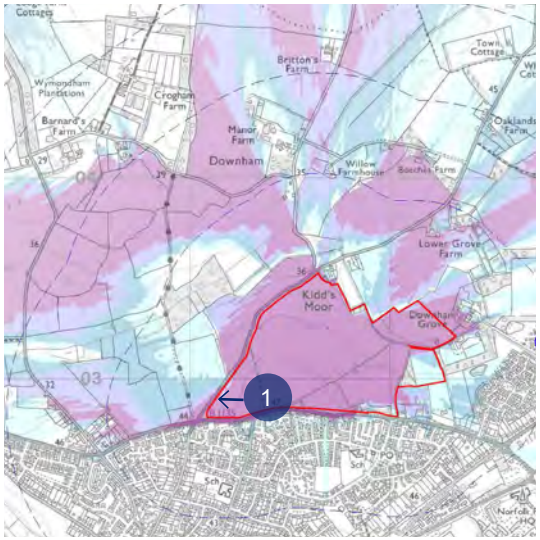
WYMONDHAM, NORFOLK

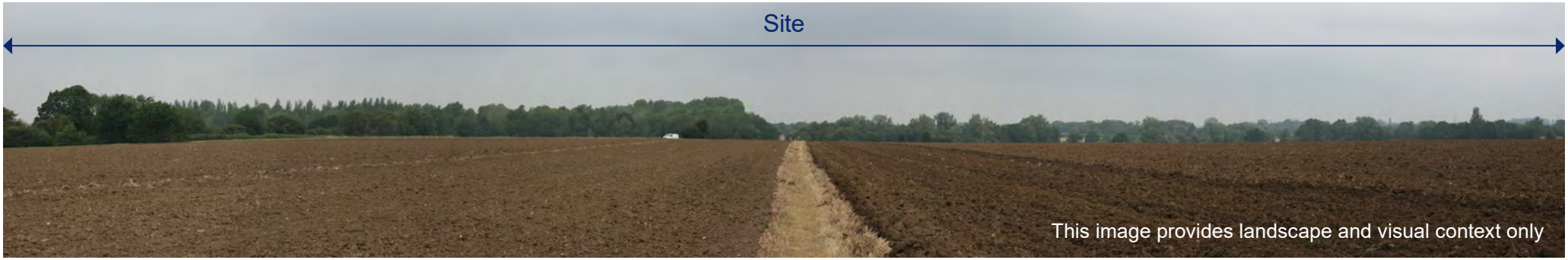
ZONE OF THEORETICAL VISIBILITY (ZTV)

Job Code:	OS License Number:		
-	0100031673		
Drawing Scale:	Date:	Drawn By:	Checked By:
1:20,000	15.03.18	RB	CD
Drawing Number:			Revision:
			-

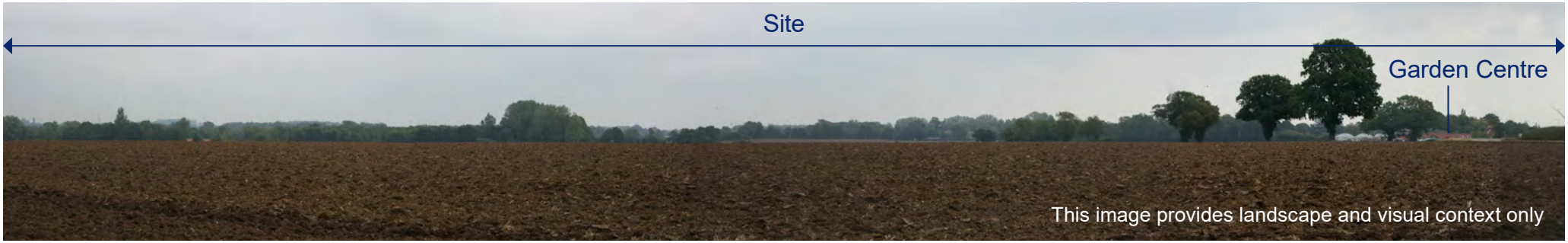


VIEWPOINT 1a - WEST: PUBLIC FOOTPATH FP6		
DESCRIPTION OF THE VIEW (0m from Site)	The photograph represents views experienced by pedestrians on a public footpath leading out of Wymondham to the north. The viewer is looking west across the River Ti ey valley. The Site is visible in the foreground, which is currently an ope eld used for agricultural purposes. To the left of the view are residential dwellings facing Tuttles Lane. The view extends a long way towards the wooded horizon line which is gently undulating.	
SENSITIVITY OF THE RECEPTORS: **HIGH**	**Susceptibility -** Visual receptors associated to this view are pedestrians on a public footpath who would appreciate the surrounding landscape for recreational reasons.	**Value** - The County Wildlife Sites are visible in the background and so is the woodland at Kimberley Hall Registered Park and Garden.
POTENTIAL CHANGES TO THE VIEW	Despite the landscape bu er provided along the footpath in the proposed master plan strategy this view will substantially change as the rural landscape will be replaced with an urban development. The long view towards the river valley would be lost.	





VIEWPOINT 1b - NORTH: PUBLIC FOOTPATH FP6		
DESCRIPTION OF THE VIEW (0m from Site)	The photograph represents views experienced by pedestrians on a public footpath leading out Wymondham to the north. The viewer is looking north across the Site, which currently consists of open agricultura elds. The view is enclosed in the immediate background by woodland blocks, which de ne the horizon line.	
SENSITIVITY OF THE RECEPTORS: **HIGH**	**Susceptibility -** Visual receptors associated to this view are pedestrians on a public footpath who would appreciate the surrounding landscape for recreational reasons.	**Value** - There are no landscape designations visible within this view, although these woodland blocks are a distinctive feature in the local landscape.
POTENTIAL CHANGES TO THE VIEW	The proposed development will substantially change the character of this view with the introduction of a new urban context. Although the landscape bu er along the footpath will provide some mitigation of the visual e ects of the proposal and preserve the wooded view at the end of the path, the tranquillity of the footpath would considerably diminish.	



VIEWPOINT 1c - EAST: PUBLIC FOOTPATH FP6		
DESCRIPTION OF THE VIEW (0m from Site)	The photograph represents views experienced by pedestrians on a public footpath leading out Wymondham to the north. The viewer is looking east across the Site, which consists of arabl elds. To the right of the view is Wymondham Garden Centre, visible behind the isolated hedgerow trees. The view is enclosed by the woodland blocks in the background.	
SENSITIVITY OF THE RECEPTORS: **MEDIUM**	**Susceptibility -** Visual receptors associated to this view are pedestrians on a public footpath who would appreciate the surrounding landscape for recreational reasons.	**Value** - There are no landscape designations visible within this view, although these woodland blocks are a distinctive features in the local landscape.
POTENTIAL CHANGES TO THE VIEW	The proposed development will substantially change the character of this view with the introduction of a new urban context. Although the landscape bu er along the footpath will provide some mitigation of the visual e ects of the proposal, the tranquillity of the footpath would considerably diminish.	

VIEWPOINT 1d - SOUTH: PUBLIC FOOTPATH FP6		
DESCRIPTION OF THE VIEW (0m from Site)	The photograph represents views experienced by pedestrians on a public footpath leading out of Wymondham to the north. The viewer is looking south towards Wymondham settlement edge. The Site, visible in the foreground, consists of open agricultura elds. The immediate horizon line is de ned by the dwellings along Tuttle Lane.	
SENSITIVITY OF THE RECEPTORS: **MEDIUM**	**Susceptibility -** Visual receptors associated to this view are pedestrians on a public footpath who would appreciate the surrounding landscape for recreational reasons.	**Value** - There are no landscape designations visible within this view, furthermore the interference of Wymondham settlement diminishes the value of the view.
POTENTIAL CHANGES TO THE VIEW	The proposed development will add some urban character to the view, which is already heavily characterised by the residential dwellings along Tuttles Lane. Therefore, despite the loss of some agricultural landscape, the overall character of the view will be retained as existing.	

VIEWPOINT 2: TUTTLE LANE		
DESCRIPTION OF THE VIEW (9m from Site)	The photograph represents views experienced by road users travelling eastwards on Tuttle Lane. The Site is visible in the fore and middle ground, although partially screened by the hedgerow to the left. The carpark of the Garden Centre is visible to the right of the view. The view is enclosed beyond the Site by woodlands which de ne the horizon line.	
SENSITIVITY OF THE RECEPTORS: **MEDIUM - LOW**	**Susceptibility -** Visual receptors associated to this view are road users on a busy peripheral road to the north of Wymondham, including pedestrians on a dedicated pavement.	**Value** - There are no landscape designations visible within this view. Furthermore, the Garden Centre car park and Tuttles Lane detract form the rural character of the view.
POTENTIAL CHANGES TO THE VIEW	The proposed development will substantially change the character of this view with the introduction of a new urban context. However, the proposed green corridor along the southern Site's boundary will preserve some sense of openness along Tuttles Lane and mitigate visual e ects.	

VIEWPOINT 3a: WEST - MELTON ROAD		
DESCRIPTION OF THE VIEW (6m from Site)	The photograph represents views experienced by road users travelling southward on Melton Road. The Site is visible in the foreground, which is characterised by an open rural landscape. The road is slightly sunken with grassed embankments on both sides of the road. Due to rising topography, the tree canopies on the horizon are barely visible over th eld line.	
SENSITIVITY OF THE RECEPTORS: **MEDIUM**	**Susceptibility -** Visual receptors associated to this view are road users whose focus would not primarily be on the surrounding landscape.	**Value** - There are no landscape designations visible within this view, nor distinctive landscape features.
POTENTIAL CHANGES TO THE VIEW	The proposed development will change the character of the view with the proposed bu er planting enclosing the road and replacing the open rura eld.	

VIEWPOINT 3b: EAST - MELTON ROAD		
DESCRIPTION OF THE VIEW (6m from Site)	The photograph represents views experienced by road users travelling northwards on Melton Road. The Site is visible in the foreground, which is characterised by open rural landscape enclosed by existing woodland and houses. The skyline is very close to the viewer largely de ned by the tree canopies. The road is slightly sunken with grassed embankment visible on the side of the road. The Wymondham Garden Centre's polytunnels are visible to the right of the view.	
SENSITIVITY OF THE RECEPTORS: **MEDIUM - HIGH**	**Susceptibility -** Visual receptors associated to this view are road users whose focus would not primarily be on the surrounding landscape.	**Value** - There are no landscape designations visible within this view, however, woodland blocks are locally distinctive landscape features.
POTENTIAL CHANGES TO THE VIEW	The proposed development will partially change the character of the view with the proposed bu er planting enclosing the road and replacing the open rura eld. Although the character of the skyline will not change, the horizon will move substantially closer to the viewer.	

VIEWPOINT 4: PUBLIC FOOTPATH FP26		
DESCRIPTION OF THE VIEW (1.13km from Site)	The photograph represents views experienced by pedestrians on a public footpath to the north of Wymondham, linking Norwich Common to Melton Road. The view is substantially screened by the hedgerow along the footpath, with glimpses of the landscape and the new sports club facilities visible through the occasional gaps. The Site is located in the far distance and it is not visible due to intervening vegetation.	
SENSITIVITY OF THE RECEPTORS: **MEDIUM**	**Susceptibility -** Visual receptors associated to this view are pedestrians on a public footpath. Their attention will focus on the surrounding landscape.	**Value** - There are no landscape designations visible within this view. Furthermore, the new sport facilities are somewhat detracting features in the landscape.
POTENTIAL CHANGES TO THE VIEW	Although more glimpses of the surrounding landscape are expected during winter months due to less foliage cover, the proposed development is unlikely to be visible due to intervening layers of planting and new sports facilities.	

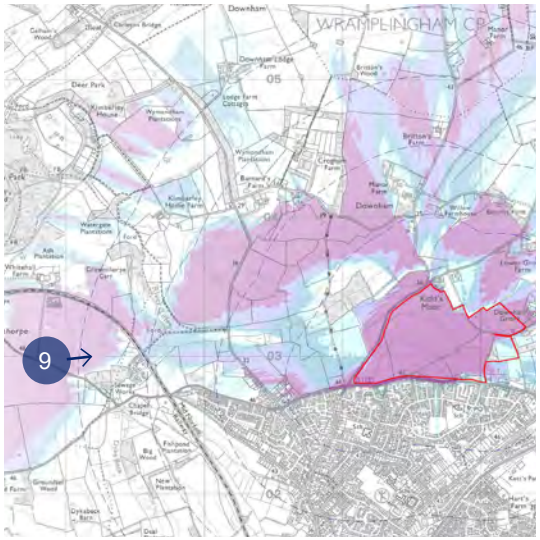
VIEWPOINT 5: MELTON ROAD		
DESCRIPTION OF THE VIEW (468m from Site)	The photograph represents views experienced by road users travelling southward on Melton Road. The Site is located in the background, beyond the hedgerow trees. In the foreground is an open agricultura eld visible through a gap in the hedgerow along Melton Road. The skyline is de ned by the tree canopies of the hedgerow which encloses th eld.	
SENSITIVITY OF THE RECEPTORS: **LOW**	**Susceptibility -** Visual receptors associated to this view are road users whose focus would not primarily be on the surrounding landscape.	**Value** - There are no landscape designations visible within this view, nor distinctive landscape features.
POTENTIAL CHANGES TO THE VIEW	The proposed development is located behind the hedgerow trees. The proposed bu er planting will implement the current hedgerow screening and, when mature, will e ectively neutralise any visual e ects of the proposal. Before then, glimpses of the new development are likely to be visible during the winter months as the existing hedgerow would not be in leaves.	

VIEWPOINT 6: GREEN LANE		
DESCRIPTION OF THE VIEW (1.7km from Site)	The photograph represents views experienced by road users on Green Lane. The viewer is looking south towards the Site, which is screened by the intervening vegetation. In the foreground is an open, agricultural eld. The wooded skyline is linear and consistent, the only detracting feature is the mast of the Police Station emerging over the horizon.	
SENSITIVITY OF THE RECEPTORS: **LOW**	**Susceptibility -** Visual receptors associated to this view are road users whose focus would not primarily be on the surrounding landscape.	**Value** - There are no landscape designations visible within this view. The visible landscape consists of attractive, but not distinctive, countryside.
POTENTIAL CHANGES TO THE VIEW	Due to distance and intervening vegetation, it's unlikely that the proposal would be visible in the view. Therefore the view will be substantially unchanged.	

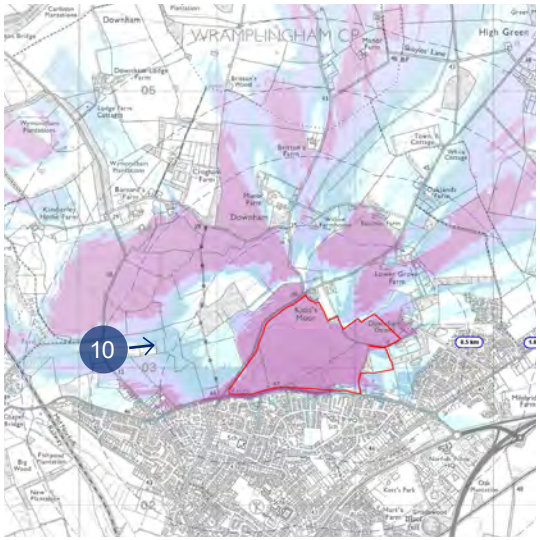
VIEWPOINT 7: YOUNGMANS ROAD		
DESCRIPTION OF THE VIEW (523m from Site)	The photograph represents views experienced by road users travelling on Youngmas Road. The Site is located in the background, and is partially screened by a block of woodland. In the foreground is an open agricultural eld visible through a gap in the hedgerow along the road. The view is partially enclosed by woodland to the right, but the long view to the left reaches Wymondham settlement edge. The skyline is largely de ned by the tree canopies.	
SENSITIVITY OF THE RECEPTORS: **LOW**	**Susceptibility -** Visual receptors associated to this view are road users whose focus would not primarily be on the surrounding landscape.	**Value** - There are no landscape designations visible within this view, although the woodland block is a distinctive feature in the local landscape.
POTENTIAL CHANGES TO THE VIEW	The proposed development would be partially visible in the background extending the urban character on what is currently agricultural land. However, the view already a ords glimpses of the dwellings and garden centre along Tuttles Lane and, furthermore, as the proposed bu er planting along Melton Road matures the development will be largely screened. The long view to Wymondham would be lost as a result of the proposed planting but the wooded character of the skyline reinforced.	

VIEWPOINT 8: BARNHAM BROOM ROAD		
DESCRIPTION OF THE VIEW (1.13km from Site)	The photograph represents views experienced by road users on Barnham Broom Road. The viewer is looking south towards the Site through a gap in the hedgerow along the road. The Site is partially screen by a woodland block to the left of the view. The agricultura elds of the Site are visible in the background to the right. Beyond it is the settlement edge of Wymondham. In the foreground is an open arabl eld and scattered trees. The skyline is largely linear and wooded.	
SENSITIVITY OF THE RECEPTORS: **LOW**	**Susceptibility -** Visual receptors associated to this view are road users whose focus would not primarily be on the surrounding landscape.	**Value** - There are no landscape designations visible within this view, although the woodland block is a distinctive features in the local landscape.
POTENTIAL CHANGES TO THE VIEW	While part of the proposed development will be screened by the existing woodland, the proposals will be visible to the right of the view extending the visible urban character along Tuttle Lane into the rural landscape. However, once the proposed planting bu er along Melton road will have matured, the proposal will be screened in the view. The long view to Wymondham will be lost but the wooded skyline character reinforced.	

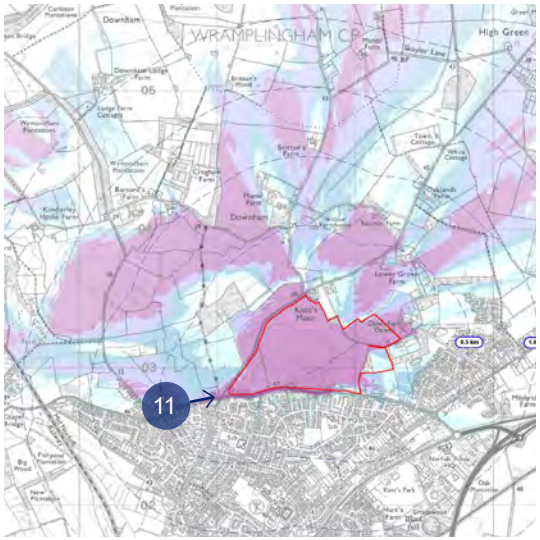
VIEWPOINT 9: CROWNTHORPE ROAD		
DESCRIPTION OF THE VIEW (2.38km from Site)	The photograph represents views experienced by road users travelling southward on Crownthorpe Road. The Site is located in the far distance and it's partially screened by the intervening vegetation. The landscape of the view is largely rural with the only interference of the road and hard surface for manoeuvring in the foreground. The wooded skyline is linear and consistent.	
SENSITIVITY OF THE RECEPTORS: **MEDIUM**	**Susceptibility -** Visual receptors associated to this view are road users whose focus would not primarily be on the surrounding landscape.	**Value** - There are local landscape designations visible within this view (County Wildlife Sites), but no other distinctive landscape features.
POTENTIAL CHANGES TO THE VIEW	The proposed development would be partially visible at the centre of the view in the far distance, therefore changes to the view are unlikely to be noticed by the receptors. Furthermore, as the proposed planting bu er along Melton Road would mature, the proposal would be substantially screened and no changes in the view noticed. The wooded character of the skyline would be slightly reinforced.	



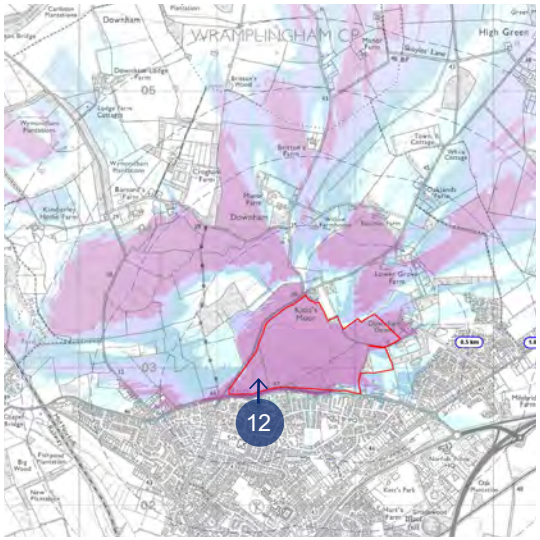
VIEWPOINT 10: BARNHAM BROOM ROAD		
DESCRIPTION OF THE VIEW (904m from Site)	The photograph represents views experienced by road users travelling southwards on Barnham Broom Road. The Site is visible in the background although views are partiall ltered by the existing trees and hedgerows. This vegetation also de nes part of the skyline, which is otherwise characterised by the houses on the northern edge of Wymondham. The open agricultura eld is a prominent feature of the view, however, the hedgerow in the foreground was recently trimmed and when grown back would provide substantial screening to the view.	
SENSITIVITY OF THE RECEPTORS: **LOW**	**Susceptibility -** Visual receptors associated to this view are road users whose focus would not primarily be on the surrounding landscape.	**Value** - The woodland to the left is a County Wildlife Site, but no other designations or distinctive landscape features characterise the view.
POTENTIAL CHANGES TO THE VIEW	The proposed development would be visible in the background, particularly before the proposed planting has matured. However, the change to the skyline will be minimal with a reinforced woodland horizon and glimpses of built form, less than currently visible. Overall the character of the view will be retained.	



VIEWPOINT 11: TUTTLES LANE WEST		
DESCRIPTION OF THE VIEW (366m from Site)	The photograph represents views experienced by road users travelling eastwards on Tuttles Lane West. Part of the Site is visible at the centre of the view, in the background, with some screening a orded due to existing hedgerows and hedgerow trees, as well as intervening built form. To the right of the view is the urban edge of Wymondham with houses fronting the open countryside. The view is almost equally split between th elds enclosed by hedgerows and the built form. The skyline is equally split between the two characters.	
SENSITIVITY OF THE RECEPTORS: **LOW**	**Susceptibility -** Visual receptors associated to this view are road users whose focus would not primarily be on the surrounding landscape. However, pedestrians and cyclists at lower speed would engage more with the surrounding landscape.	**Value** - There are no designations visible in the view and the urban character is detracting from other landscape qualities.
POTENTIAL CHANGES TO THE VIEW	The proposed development would be visible in the background, particularly before the proposed planting has matured. Similarly, the skyline will see an increase of urban features whilst the proposed planting has not matured. While the foreground of the view will remain unchanged, the extended urban character will replace the ope elds in the background reducing the distance to the perceived horizon line.	



VIEWPOINT 12: HEWITTS LANE		
DESCRIPTION OF THE VIEW (142m from Site)	The photograph represents views experienced by road users travelling northwards on Hewitts Lane. Most of the Site is screened by the intervening built form to the side of the road. However, a small portion is visible at the centre of the view, framed by the existing houses. The long view crosses the Site and ends at the woodland block to the north-west of it.	
SENSITIVITY OF THE RECEPTORS: **MEDIUM - LOW**	**Susceptibility -** Visual receptors associated to this view are road users whose focus would not primarily be on the surrounding landscape. However, pedestrians, particularly residents, and cyclists at lower speed would engage more with the surrounding landscape.	**Value** - There are no designations visible in the view and the urban character is detracting from other landscape qualities.
POTENTIAL CHANGES TO THE VIEW	The proposed development would be visible in the background framed by existing housing. The only view towards the countryside will therefore lose such character, with an increased urban extent across the whole viewpoint. However, as proposed mitigation planting matures, the proposed built form would be softened by the tree canopies. The skyline will retain the largely urban connotation, however, there will be a loss of the only portion of wooded character where the current view extends across the Site.	



APPENDIX 3
ARBORICULTURAL APPRAISAL

Arboricultural Appraisal

Land off Tuttles Lane, Wymondham

OAKFIELD
ARBORICULTURAL SERVICES

November 2017
OAS/17-221/AR01
Stephen Milligan
info@oakfieldarb.co.uk – Tel: 01379 674711

Contents

Section 1 : Introduction

1.1 Oakfield Arboricultural Services Ltd were instructed by Bidwells on behalf of Welbeck Strategic Land III Ltd to undertake an arboricultural appraisal on the site known as Land off Tuttles lane in Wymondham.

1.2 The aim is to collect data with regards to arboricultural constraints that may exist on the site with regards to a proposed future development of the site.

1.3 Where appropriate recommendations for tree works or removals will be made in order to facilitate the proposed redevelopment or to improve the overall condition of trees and abide by any legal ' Duty of Care' obligations that may exist.

Tree Survey

1.4 The survey was carried out in January 2018 in fair weather conditions and was carried out in accordance with BS 5837: 2012 'Trees in Relation to Design, Demolition and Construction – Recommendations'

1.5 In accordance with the BS:5837 recommendations, the survey will include all trees within the site that are 75mm in diameter at 1.5m, the survey may also include trees adjacent to the site up to a distance of 15m from the site boundary that may be affected by the proposed development. Trees may be represented individually or as part of larger groups and will be clearly marked on any provided plans.

1.6 The survey will include the following data:

- Tree/ Group number
- Species
- Height
- Branch spread in meters at the four cardinal points (individual trees only)
- Crown clearance in meters
- Diameter at 1.5m in mm
- Age class
- General condition
- Comments on structural condition
- Estimated remaining contribution in years
- Category
- Sub category
- Work recommendations

Further clarification is given within the survey explanatory notes in Appendix 1

Tree Categorisation

1.7 The purpose of the tree categorisation method is to help identify the overall quality and value, in a non-fiscal sense, of the existing trees stock so as to allow an informed decision to be made concerning which trees should either be retained or removed in the context of the proposed development. To qualify a tree must fall into one of the four categories A, B, C and U. Categories A, B and C are trees ranging from high to low quality with category U being trees of poor overall value. Further sub categories reflect arboricultural, 1, landscape, 2, or cultural values, 3; all carry the same weight and a tree can have more than one criterion.

- Category A - Trees of high quality and value that they are considered particularly good examples of their species and or essential components of groups such as dominant trees within avenues. Trees will have a minimum of 40 years life expectancy.

- Category B - Trees of moderate quality that may have been category A but have been downgraded due to impaired features such as significant remedial defects or poor past management that make their retention unsuitable beyond 40 years. Trees will have a minimum of 20 years life expectancy

- Category C - Trees of low quality that are unremarkable and have limited merit or such impaired condition they do not qualify for higher categories. Tree will have minimum of 10 years life expectancy

- Category U - Trees of poor quality and are in such condition they have less than 10 years useful life expectancy. Trees in this category are generally recommended for removal regardless of any proposals.

Preliminary Management Recommendations

1.8 Any recommendations made for management of the trees are preliminary only and are not to be considered a detailed work specification, this is of particular note if tree works must be applied for via the relevant local council due to presence of tree preservation orders or by location are within a conservation area.

1.9 All work recommendations recommended are done so on the basis they are carried out by qualified contractors and will be carried out in accordance as per the recommendation set out in BS:3998 'Recommendations for Tree Works'.

Limitations

1.10 This is a preliminary assessment from ground level and observations have been made solely from a visual perspective for the purposes of assessment in terms relevant to planning and development. No invasive or other detailed internal decay detection devices have been used in assessing internal conditions.

1.11 Any conclusions relate to conditions found at the time of inspection. Any significant alteration to the site that may affect the trees that are present or have a bearing on planning implications (including level changes, hydrological changes, extreme

climatic events or other site works) will necessitate a re-assessment of the trees and the site and render any previous advice/ findings invalid.

1.12 It must be noted this is not a health and safety risk assessment and should not be viewed as such. The survey carried out will assess general health however it may not have been appropriate or possible to view all parts of the tree so as to fulfil the criterion of a health and safety risk assessment.

1.13 This is an arboricultural report and no such reliance must be given to comments relating to buildings, engineering, soil or ecological issues and in particular this is not a survey to comment of the effects of trees with regards to subsidence or heave.

1.14 All measurements are metric and approximate.

1.15 Any lack of comments regarding recommended work does not imply that tree poses no level of risk and similarly it should not be implied that a tree will present an acceptable level of risk if any such recommended works are carried out. Trees are living things and exposed to extreme forces and other fungal or bacteria attack that are not necessarily visible to the naked eye and as such no tree should ever be viewed as safe. It is recommended that trees by regularly surveyed to ensure that any risk is limited as much as is practically possible.

Section 2 : Survey Findings

Site description

2.1 The site is a large area of agricultural land located mainly to the north of Tuttles Lane with an area also included to the west of Melton Road close to the junction of Tuttles Lane. The site is characterised by agricultural land mainly arable in nature and as such has little construction. The land is a mix of arable fields with field boundary vegetation and farm tracks with drainage ditches and the occasional pond.

2.2 Located to the northern fringe of Wymondham the site is bounded by residential dwellings to the south beyond Tuttles Lane with a few moor rural type properties located on eastern and northern boundaries. Wymondham Garden centre is found on the southern boundary along with other commercial sites and Wymondham Rugby Club[1] to the southern and eastern boundaries. Further new development can also be found to the east of the site accesses via the B1172.

[1] Wymondham Rugby Club has gained recent planning permission for a residential development.

Tree Preservation Orders

2.3 A desk top search on My South Norfolk shows there are no tree protection orders (TPO's) that exist on or adjacent to the site.

2.4 My South Norfolk also shows the site does not sit within a conservation area.

Species Composition

2.5 The species on and adjacent to the site were dominated by Oak, Ash and Sycamore a full list of species found within the site are as follows:

- Oak - *Quercus sp.*
- Ash - *Fraxinus excelsior*
- Sycamore - Acer psuedoplatanus
- Field Maple - *Acer campestre*
- Hawthorn - *Crataegus monogyna*
- Poplar - *Populus sp*
- Hazel - *Corylus avellana*
- Blackthorn - *Prunus spinosa.*
- Elm- *Ulmus sp.*
- Walnut - *Juglans regia*
- Willow - *Salix sp*
- Pine - *Pinus sp.*
- Cherry - *Prunus sp.*
- Horse Chestnut - Aesculus hippocastanum
- Beech - *Fagus sylvatica*
- Lawson Cypress - *Chamaecyparis sp.*

Tree Discussion

2.6 The surveyed vegetation was in general of native species and for the most part confined to field and land boundaries. Overall the sites vegetation was typical in its agricultural makeup with large individual specimen trees within hedgerows or taller lapsed hedgerows.

2.7 Overall condition of trees is generally fair although a few trees are in decline but given their low risk and low target area works would not be deemed essential at this

time. The trees are not under any active management and as such have unlikely undergone any remedial works unless required.

2.8 There are a significant number of Ash and the current outbreak of Ash dieback - *Hymenoscyphus fraxineus* is likely present within individual trees or within the area. Although current Forestry Commission advice is to not clear fell Ash, as yet, the reality is that on the continent 90% of the Ash population is now infected or lost in some areas and it is fair to assume that the UK will likely suffer the same fate and it is only a matter of time until Ash show significant signs of decline. However at this stage trees will be retained and should be monitored in case they show signs of resistance.

Age Class

2.9 The sites vegetation is predominantly mature in age with some semi mature possibly self set trees in areas that are not cultivated.

Category Grading

2.10 Of the vegetation recorded within the site there is a percentage split between the following categories

- Category B 57% - 49 individuals or groups - retention highly desirable
- Category C 42% - 37 individuals or groups - retention desirable
- Category U 1% - 1 individual - remove on arboricultural grounds

Section 3: Preliminary Work Recommendations

Management Recommendations

3.1 Given the agricultural nature of the site the surveyed trees are not under any active management. At this time there is no urgent need to undertake any specific management requirements and the trees are best left as existing providing the ecological and landscape benefits.

3.2 Once any development moves forward and the site becomes more used via construction and any open space allocation close to retained trees a need for a more pro-active management regime will likely be required. This would include such works as removal of dead, dying, damaged trees and or branches and other remedial works such as crown lifting so as to ensure health and safety obligations. This may also include management of areas of woodland that may be opened up to the public as useable open space.

Section 4 : Development Implications

Proposal

3.3 A fixed development layout is not available as yet and therefore cannot be assessed as part of this report and should not therefore be viewed as a full implications assessment (AIA) ; however the following observations can be made:

- Due to the location of the vegetation to field boundaries and the large areas of developable space within the site most trees can realistically be retained within any development so as to retain the existing landscape and give some maturity to any new development.
- Use of wooded areas would required further surveys and management plans so as to aid their healthy retention and comply with Occupiers Liability with regards to the safety of others
- Area of shade may affect proposed layout design in particular to the following locations; North of W1, East of W2, North of T18- T23. It should be noted that the represented shade arc on the constraints plan acts as a guidelines as to general shade patterns, these are best avoided with regards to the siting of dwellings.

3.4 Overall the tree constraints within the red line boundary are considered low due to their locations. In fact most vegetation should be deemed as an asset to the site as they will screen any development somewhat to the wider landscape, this is of particular relevance to the northern boundaries of the site.

Recommendations

3.6 If or when the site is put forward for development further survey works would be required including the need for further reports and plans to be submitted for any type of planning application this would include implications assessments, method statements and tree protection plans.

Appendix 1 Tree Survey Schedule

			Canopy Spread														
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations
T1	Oak	17	7	9	10	9	3	900	1080	366.25	MA	F	Normal form and condition. Ivy to stem	40+	B	1, 2	
T2	Oak	17	8	11	7	11	2	1000	1200	452.16	MA	F	Normal form and condition. Ivy to stem	40+	B	1, 2	
T3	Oak	6	3	6	2	0	2	400	480	72.35	MA	F	Poor form with extensive deadwood	10+	C	1	
T4	Ash	13	6	4	3	5	2	400	480	72.35	MA	F	Poor form. Ivy to stem	10+	C	1	Monitor for Ash dieback
T5	Oak	17	7	6	8	6	2	500	600	113.04	MA	F	Normal form and condition.	40+	B	1, 2	
T6	Ash	15	6	10	5	9	2	500	600	113.04	MA	F	Normal form and condition.	10+	C	2	Monitor for Ash dieback
T7	Field Maple	10	3	3	2	2	1	300	360	40.69	MA	F	Normal form and condition.	40+	B	1	
T8	Oak	9	5	4	3	4	1	750	900	254.34	MA	F	Ivy to stem. Normal condition	20+	B	1	

			Canopy Spread														
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations
T9	Field Maple	14	9	5	9	6	2	1000	1200	452.16	MA	F	Old hedgerow tree now lapsed	20+	B	1, 3	
T10	Ash	10	4	4	4	3	1	350	420	55.39	MA	F	Poor form. Offsite	10+	C	1	Monitor for Ash dieback
T11	Willow	14	8	7	6	5	1	700	840	221.56	MA	F	Offsite	20+	C	1	
T12	Oak	18	11	8	10	6	3	900	1080	366.25	MA	F	Normal form and condition. Ivy to stem	40+	B	1, 2	
T13	Oak	24	7	13	10	10	2	1200	1440	651.11	MA	F	No access to tree. Appears of normal form and condition	40+	B	1, 2	
T14	Sycamore	18	2	3	2	3	1	300	360	40.69	MA	F	No overall significance	20+	C	1	
T15	Oak	15	7	6	7	5	2	500	600	113.04	MA	F	Normal form and condition. Ivy to stem	40+	B	1, 2	
T16	Oak	16	6	10	6	7	2	750	900	254.34	MA	F	Normal form and condition. Ivy to stem	40+	B	1, 2	
T17	Oak	18	9	10	8	9	3	650	780	191.04	MA	F	Normal form and condition.	40+	B	1, 2	

			Canopy Spread														
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations
T18	Oak	17	7	10	5	8	3	540	648	131.85	MA	F	Bifurcated @ 3m with tight union. Fair condition	20+	B	2	
T19	Oak	20	7	5	6	10	4	500	600	113.04	MA	F	Normal form and condition.	40+	B	1, 2	
T20	Ash	20	8	3	4	4	5	600	720	162.78	MA	F	3 x stems. Poor condition with ivy to stem	10+	C	1	Monitor for Ash dieback
T21	Ash	24	5	5	5	3	4	700	840	221.56	MA	F	Poor condition with ivy to stem	10+	C	1	Monitor for Ash dieback
T22	Sycamore	15	5	6	5	4	0	700	840	221.56	MA	F	Multi-stemmed. Ivy to stems. No overall significance	20+	C	1	
T23	Hawthorn	6	5	3	2	2	0	400	480	72.35	MA	F	Heavy ivy	10+	C	1	
T24	Ash	18	4	5	7	7	3	750	900	254.34	MA	F	Multi-stemmed. Ivy to stems. No overall significance	10+	C	1	Monitor for Ash dieback
T25	Sycamore	10	3	3	3	3	0	300	360	40.69	MA	F	No overall significance	20+	C	1	
T26	Oak	10	5	5	4	4	3	350	420	55.39	MA	F	Semi mature with good potential	40+	B	1	

			Canopy Spread														
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations
T27	Sycamore	16	7	6	6	5	3	700	840	221.56	MA	F	Normal form and condition.	20+	B	1, 2	
T28	Horse Chestnut	7	3	3	3	2	0	350	420	55.39	MA	F	Of squat form	10+	C	1	
T29	Oak	15	8	7	7	6	3	580	696	152.11	MA	F	Normal form and condition. Ivy to stem	40+	B	1, 2	
T30	Sycamore	13	6	5	4	4	0	500	600	113.04	MA	F	Normal form and condition.	20+	B	1, 2	
T31	Sycamore	15	5	3	4	4	0	600	720	162.78	MA	F	Power lines to NE. Fair condition	20+	C	1	
T32	Sycamore	14	5	4	4	4	0	650	780	191.04	MA	F	Normal form and condition.	20+	B	1, 2	
T33	Sycamore	13	8	5	4	6	0	650	780	191.04	MA	F	Normal form and condition.	20+	B	1, 2	
T34	Sycamore	11	4	3	5	3	0	600	720	162.78	MA	F	Poor condition with ivy to stem	10+	C	1	
T35	Ash	15	4	4	4	4	0	600	720	162.78	MA	F	Poor condition	10+	C	1	Monitor for Ash dieback

			Canopy Spread														
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations
T36	Sycamore	16	4	5	4	4	0	400	480	72.35	MA	F	Normal form and condition.	20+	B	1, 2	
T37	Oak	13	9	5	7	7	2	750	900	254.34	MA	F	Topped in past	20+	B	2	
T38	Ash	15	7	4	6	7	0	800	960	289.38	MA	F	Multi-stemmed. Ivy to stems. No overall significance	10+	C	1	Monitor for Ash dieback
T39	Oak	13	4	4	4	4	1	750	900	254.34	MA	F	95% dead	<10	U	1	
T40	Oak	16	10	7	5	11	2	750	900	254.34	MA	F	Normal form and condition	40+	B	2	
T41	Poplar	25	8	7	9	6	3	800	960	289.38	MA	F	Normal form and condition. Mature for species	10+	C	2	
T42	Poplar	25	14	6	8	8	3	900	1080	366.25	MA	F	Normal form and condition. Mature for species	10+	C	2	
T43	Ash	12	4	6	4	4	1	550	660	136.78	MA	F	Poor condition. Ivy to stem	10+	C	1	Monitor for Ash dieback
T44	Ash	13	6	6	4	5	3	600	720	162.78	MA	F	Poor condition. Ivy to stem	10+	C	1	Monitor for Ash dieback

			Canopy Spread														
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations
T45	Poplar	15	3	3	3	3	1	450	540	91.56	MA	F	No overall significance	20+	C	1	
T46	Walnut	11	6	6	7	8	2	800	960	289.38	MA	F	Offsite	20+	B	1	
T47	Oak	17	7	7	8	6	2	750	900	254.34	MA	F	Normal form and condition. Offsite	40+	B	1, 2	
T48	Oak	8	4	3	4	2	0	400	480	72.35	MA	F	Poor form. Ivy to stem	20+	C	1	
T49	Oak	9	4	4	4	5	0	450	540	91.56	MA	F	Adjacent to highway	20+	C	2	
T50	Oak	18	5	11	8	8	3	800	960	289.38	MA	F	Ivy to stem. Poor form	40+	B	2	
T51	Oak	12	3	4	3	3	2	300	360	40.69	MA	F	Normal form and condition	40+	B	2	
T52	Oak	12	4	3	4	4	3	300	360	40.69	MA	F	Normal form and condition	40+	B	2	
T53	Oak	7	2	3	2	2	2	200	240	18.09	MA	F	Normal form and condition. Good potential	40+	B	1	

			Canopy Spread														
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations
T54	Oak	12	4	5	4	4	3	633	760	181.18	MA	F	Normal form and condition	40+	B	2	
T55	Field Maple	11	2	3	3	2	1	300	360	40.69	MA	F	Poor form . Ivy to stem	20+	C	1	
T56	Oak	10	3	3	4	4	2	300	360	40.69	MA	F	Wound to main stem, good occlusion process	20+	B	2	
T57	Field Maple	8	3	3	3	3	2	250	300	28.26	MA	F	Normal form and condition	40+	B	2	
T58	Hawthorne	4	2	2	2	2	2	250	300	28.26	MA	F	No significance	20+	C	2	
T59	Sycamore	8	3	3	3	3	2	300	360	40.69	MA	F	Poor form	10+	C	2	
T60	Ash	9	4	4	4	4	1	300	360	40.69	MA	F	No overall significance	10+	C	1	Monitor for Ash dieback
T61	Oak	18	6	6	7	6	1	900	1080	366.25	MA	F	Normal form and condition	40+	B	1, 2	
T62	Oak	16	7	7	6	6	3	500	600	113.04	MA	F	Normal form and condition	40+	B	1, 2	

			Canopy Spread														
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations
T63	Oak	12	4	4	4	4	3	450	540	91.56	MA	F	Normal form and condition	40+	B	1, 2	
T64	Oak	14	5	4	5	5	3	900	1080	366.25	MA	F	Normal form and condition	40+	B	1, 2	
T65	Oak	11	4	4	4	4	2	900	1080	366.25	MA	F	In decline	10+	C	1	
W1	Pine, Oak, Polar. Hawthorn, Hazel	20	As on plan				0	800	960	289.38	MA	F	Area of mixed planted woodland. Good overall landscape value.	40+	B	1, 2	Tree would require individually surveying for health and safety
W2	Ash, Sycamore, Hazel, Hawthorn	20	As on plan				0	700	840	221.56	MA	F	Area of mixed woodland. Predominantly Ash	20+	B	2	Monitor for Ash dieback
W3	Oak, Ash Poplar	20	As on plan				0	600	720	162.78	MA	F	Area of woodland	20+	B	2	
G1	Ash, Hawthorn, Oak, Field Maple	15	As on plan				0	500	600	113.04	MA	F	Small group of unmanaged trees to pond	20+	B	2	Monitor for Ash dieback
G2	Ash, Hawthorn, Field Maple, Sycamore, Hazel	15	As on plan				0	400	480	72.35	MA	F	Group to track SE of site. Possibly offsite	20+	B	2	Monitor for Ash dieback

			Canopy Spread													
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations
G3	Hawthorn, Ash, Field Maple, Cherry, Sycamore	18	As on plan				0	350	420	53.39	MA	F	Offsite group	20+	B	2	Monitor for Ash dieback
G4	Ash	20	As on plan				0	500	600	113.04	MA	F	Group of 3 Ash	10+	C	1	Monitor for Ash dieback
G4a	Hawthorn, Ash, Sycamore	16	As on plan				0	350	420	53.39	MA	F	Field boundary group. Good landscape value	20+	B	2	Monitor for Ash dieback
G5	Beech, Sycamore	12	As on plan				0	200	240	18.09	MA	F	Offsite group to rugby club grounds	20+	B	2	
G6	Sycamore	13	As on plan				1	400	0.1	0.00	MA	F	Group of multi-stemmed coppiced effect stems	20+	B	2	
G7	Ash, Hawthorn, Hazel, Field Maple	17	As on plan				0	450	540	91.56	MA	F	field boundary vegetation. Likely lapsed hedge. Mixed species varying in height. Power lines run along part of boundary	20+	B	2	Monitor for Ash dieback
G8	Elm, Field Maple, Hawthorn, Hazel.	10	As on plan				0	300	360	40.69	MA	F	Field Boundary hedgerow/	20+	B	1	Dead Elm stems within

			Canopy Spread													
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations
G9	Elm, Field Maple, Hawthorn, Hazel.	10	As on plan				0	300	360	40.69	MA	F	Field Boundary hedgerow/	20+	B	2	Dead Elm stems within
G10	Leyland Cypress	12	As on plan				0	300	360	40.69	MA	F	Offsite.	20+	C	2	
G11	Blackthorn, Field Maple	12	As on plan				0	300	360	40.69	MA	F	Offsite.	20+	C	2	
G12	Leyland Cypress	12	As on plan				0	300	360	40.69	MA	F	Offsite.	20+	C	2	
G13	Goat Willow	12	As on plan				0	350	420	55.39	MA	F	Offsite.	20+	C	2	
G14	Hawthorn, Ash	10	As on plan				0	350	0.1	0.00	MA	F	To boundary of residential house	20+	B	2	Monitor for Ash dieback
G15	Ash, Oak, Blackthorn, Hawthorn	18	As on plan				0	400	480	72.35	MA	F	Field boundary lapsed hedge. Up to 18m in height	20+	B	2	Monitor for Ash dieback
H1	Hawthorn, Field Maple, Blackthorn	3	As on plan				0	200	240	18.09	MA	F	Field boundary hedge	20+	C	2	
H2	Hawthorn	3	As on plan				0	200	240	18.09	MA	F	Field boundary hedge	20+	C	2	

			Canopy Spread													
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations
H3	Hawthorn	3	As on plan				0	200	240	18.09	MA	F	Field boundary hedge	20+	C	2	
H4	Hawthorne	3	As on plan				0	200	240	18.09	MA	F	Field boundary hedge to highway	20+	B	2	

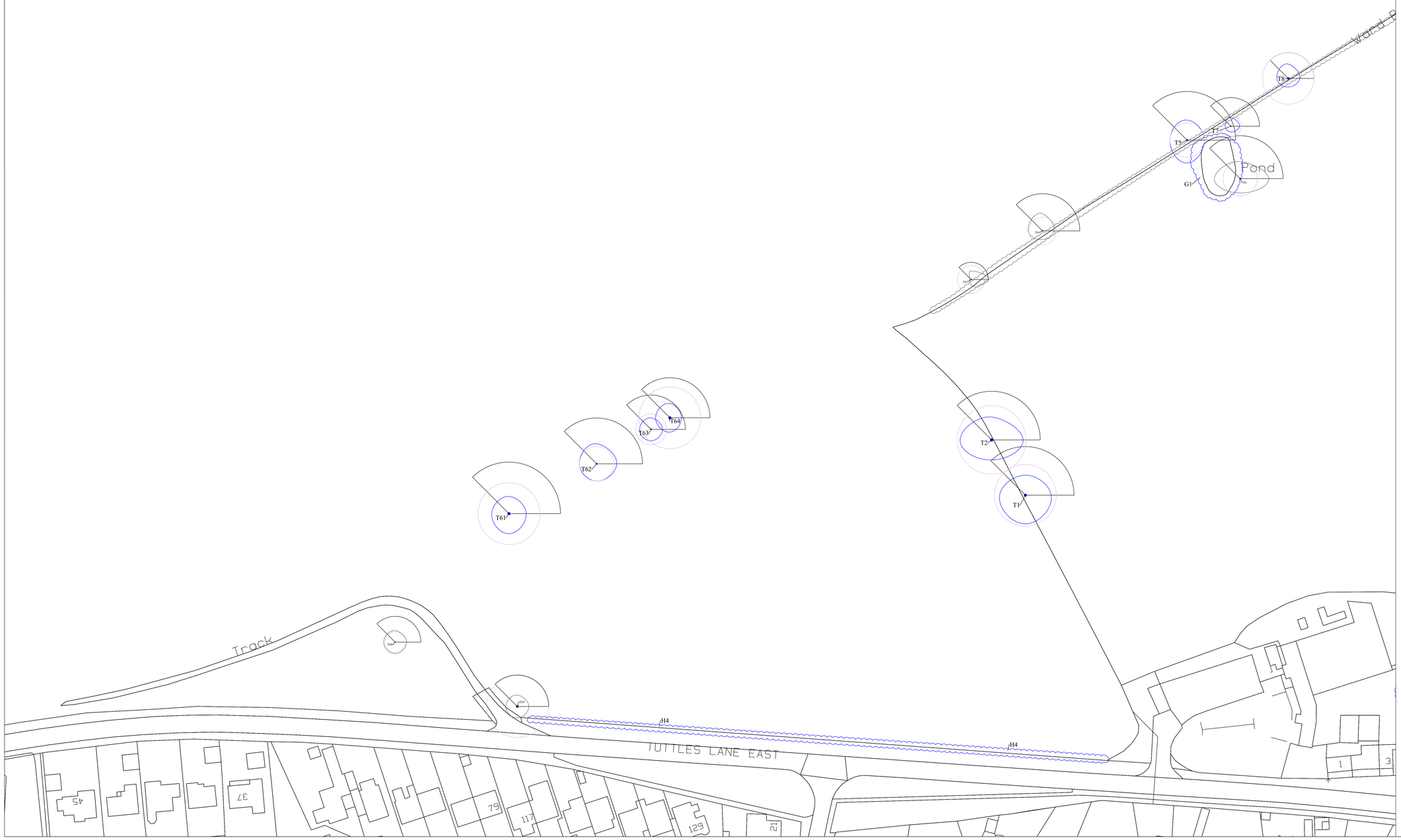
Tree Survey Explanatory Notes

- **Ref No**. Identifies trees, groups, hedgerows and woodlands on any accompanying plan
- **Species** Common Name are provided to give wider comprehension
- **Height** Tree height given in meters (approximate)
- **Canopy spread** Indicated crown spread at the four cardinal points North, East, South and West
- **Ground clearance** Height of ground clearance of the canopy from the ground
- **DBH (mm)** Diameter of stem measured at 1.5m from ground level.
- **RPR (cm)** Root protection radius. Distance to be protected measured radially from the centre of the stem
- **RPA (m^2)** Root protection area is the minimum root area which should remain undisturbed
- **Age Class** Age of tree expressed as Y- Young, EM - Early Mature, MA - Mature or OM - Over Mature

- **General Condition** Overall condition of tree expressed as Good, fair or poor
- **Comments** General comments as to structural defects or characteristics of the tree. Will include specific problems such as disease, deadwood, fungal bodies and pests
- **Estimated remaining years** Expressed in <10, 10+, 20+ and 40+ years
- **BS Category** Overall tree category A - High value, B moderate value, C low value, U poor value
- **Sub Category** Refers to retention category where 1 is arboricultural value, 2 landscape value, 3 cultural value. Trees may have more than one sub category

KEY

- Existing hedge or group. colour coded as above in accordence with BS 5837.
- T1 Existing Tree colour referenced in accordance with BS 5837 2012 as shown below
- Blue – Cat B Trees of moderate quality and value
- Grey – Cat C Trees of low quality and value
- Red – Cat R Trees that are dead or showing signs of irreversible decline
- Root Protection Area as calculated in accordance with BS 5837 2012



REV.	DATE	INITIALS	DETAILS
.	.	.	.

CLIENT Welbeck Strategic Land III Ltd			DWG. TITLE Tree Constraints Plan	
SITE Land off Tuttles Lane, Wymondham				
DRAWN BY SPM	CHECKED BY SPM	SCALE 1:500 @A0	DATE Feb 2018	DWG NO. OAS-17-221-TS01	REV .

KEY

Existing hedge or group. colour coded as above in accordence with BS 5837.

Existing Tree colour referenced in accordance with BS 5837 2012 as shown below

Blue – Cat B Trees of moderate quality and value

Grey – Cat C Trees of low quality and value

Red – Cat R Trees that are dead or showing signs of irreversible decline

Root Protection Area as calculated in accordance with BS 5837 2012

N

REV.	DATE	INITIALS	DETAILS
.	.	.	..

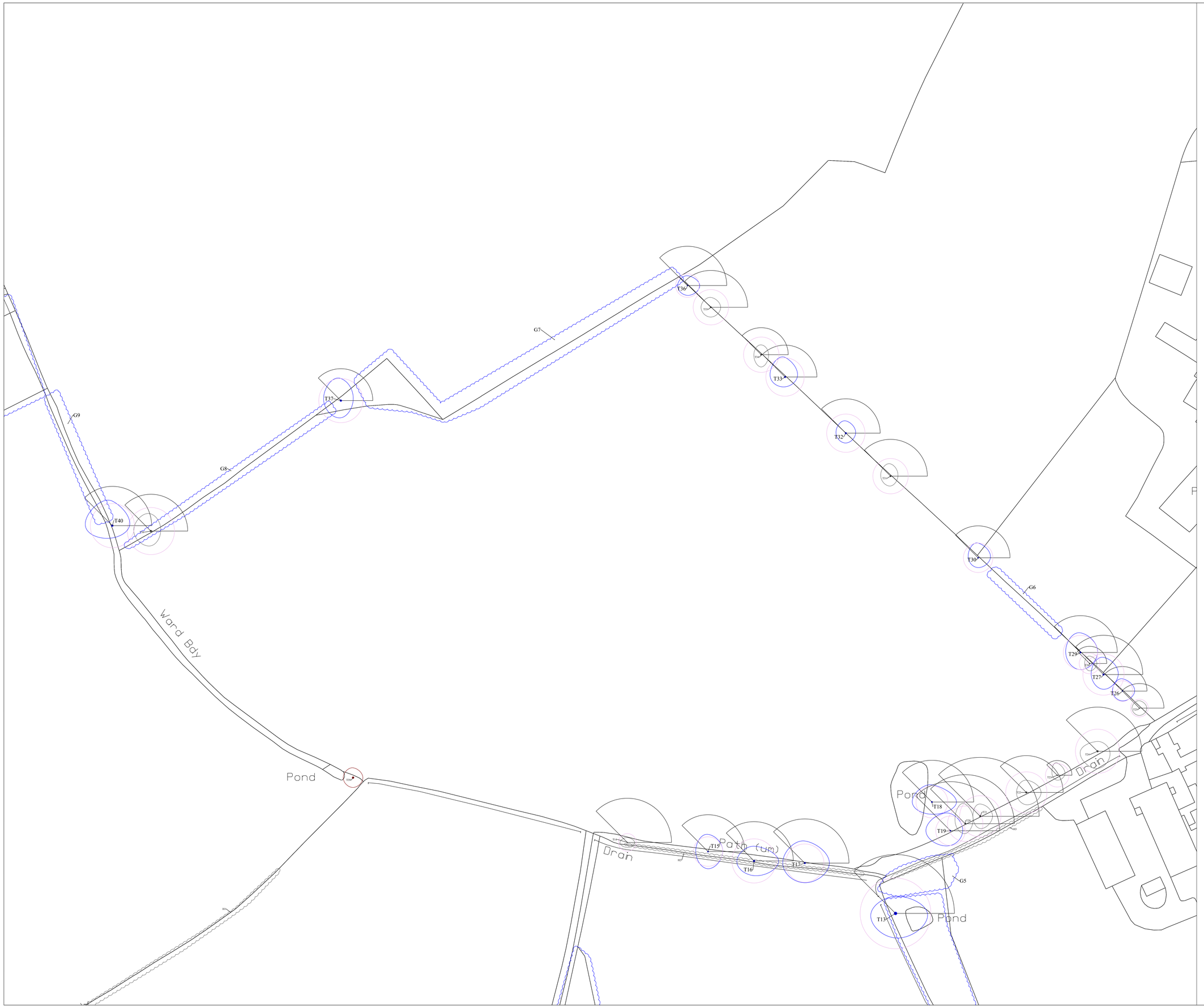
CLIENT	DWG. TITLE
Welbeck Strategic Land III Ltd	Tree Constraints Plan

SITE
Land off Tuttles Lane, Wymondham

DRAWN BY	CHECKED BY	SCALE	DATE	DWG NO.	REV
SPM	SPM	1:500 @A0	Feb 2018	OAS-17-221-TS02	.

KEY

- Existing hedge or group. colour coded as above in accordence with BS 5837.
- T1 Existing Tree colour referenced in accordance with BS 5837 2012 as shown below
- Blue – Cat B Trees of moderate quality and value
- Grey – Cat C Trees of low quality and value
- Red – Cat R Trees that are dead or showing signs of irreversible decline
- Root Protection Area as calculated in accordance with BS 5837 2012



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REV.	DATE	INITIALS	DETAILS
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CLIENT Welbeck Strategic Land III Ltd			DWG. TITLE Tree Constraints Plan		
SITE Land off Tuttles Lane, Wymondham					
DRAWN BY SPM	CHECKED BY SPM	SCALE 1:500 @A0	DATE Feb 2018	DWG NO. OAS-17-221-TS03	REV -

KEY

Existing hedge or group. colour coded as above in accordence with BS 5837.

T1 Existing Tree colour referenced in accordance with BS 5837 2012 as shown below

Blue – Cat B Trees of moderate quality and value

Grey – Cat C Trees of low quality and value

Red – Cat R Trees that are dead or showing signs of irreversible decline

Root Protection Area as calculated in accordance with BS 5837 2012

N

REV.	DATE	INITIALS	DETAILS
-	-	-	-

CLIENT Welbeck Strategic Land III Ltd			DWG. TITLE Tree Constraints Plan		
SITE Land off Tuttles Lane, Wymondham					
DRAWN BY SPM	CHECKED BY SPM	SCALE 1:500 @A0	DATE Feb 2018	DWG NO. OAS-17-221-TS04	REV -

KEY

Existing hedge or group. colour coded as above in accordence with BS 5837.

T1 Existing Tree colour referenced in accordance with BS 5837 2012 as shown below

Blue – Cat B Trees of moderate quality and value

Grey – Cat C Trees of low quality and value

Red – Cat R Trees that are dead or showing signs of irreversible decline

Root Protection Area as calculated in accordance with BS 5837 2012

N

REV.	DATE	INITIALS	DETAILS
-	-	-	-

CLIENT Welbeck Strategic Land III Ltd			DWG. TITLE Tree Constraints Plan		
SITE Land off Tuttles Lane, Wymondham					
DRAWN BY SPM	CHECKED BY SPM	SCALE 1:500 @A0	DATE Feb 2018	DWG NO. OAS-17-221-TS05	REV -

KEY

- Existing hedge or group. colour coded as above in accordence with BS 5837.
- T1 — Existing Tree colour referenced in accordance with BS 5837 2012 as shown below
- Blue – Cat B Trees of moderate quality and value
- Grey – Cat C Trees of low quality and value
- Red – Cat R Trees that are dead or showing signs of irreversible decline
- Root Protection Area as calculated in accordance with BS 5837 2012

N

REV.	DATE	INITIALS	DETAILS
-	-	-	-

CLIENT Welbeck Strategic Land III Ltd			DWG. TITLE Tree Constraints Plan		
SITE Land off Tuttles Lane, Wymondham					
DRAWN BY SPM	CHECKED BY SPM	SCALE 1:500 @A0	DATE Feb 2018	DWG NO. OAS-17-221-TS06	REV -

APPENDIX 4
ECOLOGY ASSESSMENT

Hopkins Ecology

Site:	**Land North of Tuttles Lane East, Wymondham**
Work Item:	**Ecology Assessment**
Client:	**Welbeck Strategic Land III Ltd**

Needs additional detail regarding impacts in context of scheme design.
Some photos 'over compressed' for size – better ones to go into final draft

Author: Dr GW Hopkins CEnv MCIEEM
Date: 12 February 2020

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Contents

Summary

Hopkins Ecology Ltd was appointed by Welbeck Strategic Land III Ltd to prepare a strategic ecological assessment of the Land North of Tuttles Lane East with a view to identifying constraints and opportunities in the context of its promotion for development.

The Site is on the northern fringe of Wymondham and comprises several arable fields and associated habitats immediately north of Tuttles Lane East, and has an area of *circa* 55ha.

There are no statutory sites within 5km but there are 44 non-statutory County Wildlife Sites, of which all but two are more than 1km distant and mainly associated with the River Tiffey Valley. The two nearest sites are to the north, one a wetland associated with an unnamed tributary of the River Tiffey that runs through part of the Site (with an Euclidean distance of 560m and a channel distance of ~1.47km from the Site) and the other a grassland 95m north-east. Neither has public access. It is concluded that the scheme will not directly or indirectly impact designated sites.

A review of local planning policies identifies the creation of green infrastructure corridors as a key policy within the Wymondham Area Action Plan (AAP). One such corridor crosses the Site and two pass along its boundaries.

The Site is considered to be typical of an intensive arable landscape, dominated by relatively large fields with partial hedgerows and small areas of other habitats.

There are two priority Habitats of Principal Importance: Hedgerows and Lowland Mixed Deciduous Woodland. Two lengths of hedgerow on the east boundary qualify as Important Hedgerows under the Hedgerow Regulations.

Great crested newts are concluded to be absent on the basis of the negative surveys of on-Site ponds in 2019. Although off-Site ponds could not be accessed for survey, of which there are ten within 250m, all but two of these ponds were surveyed for nearby schemes in 2010, with those surveys being negative. Further, from the suite of surveys in 2010, and earlier survey work, the vast majority of ponds in the wider locality (>60 ponds) have been surveyed and great crested newts have not been reported, such that it is reasonable to conclude that they are not present locally, and they are not breeding on-Site or otherwise using the Site as terrestrial habitats.

Direct surveys in 2019 did not find any evidence of a number of other groups and they are also considered to be absent: water voles, otters, badgers, reptiles and brown hares.

No evidence of roosting bats was found within the six trees surveyed, but small roosts cannot be ruled out. Foraging was recorded by five species: *Myotis* species, common pipistrelle, soprano pipistrelle, noctule and brown long-eared. Most activity was towards the east of the Site. The assemblage and individual species are considered to be of no more than local importance.

Nesting species of conservation concern present on on-Site were: skylarks, yellowhammer, dunnock, istle thrush and song thrush. Nesting off-Site, but foraging on-Site, were: house sparrows and starlings. The assemblage of wintering species was small, in terms of species and individuals. The Site is considered to be typical of Norfolk farmland, with skylarks at ‘typical’ densities for winter cereals. The assemblage and individual species are considered to be of no more than local importance.

The other species scoped in are hedgehogs and widespread but declining moths. These would be of local importance and minor components of larger populations across the landscape.

For the majority of species groups considered no mitigation of construction is required, by virtue of their absence. During Site works the following are recommended:

- Nesting birds. General site clearance works should avoid the nesting bird season of March to August inclusive, with nesting likely within hedgerows, scrub and also open fields. Where works cannot be timed to outside of the nesting seasons then a watching brief should be employed to survey areas prior to works.
- Bat roosts in trees. While no evidence of roosting was found, roosts are difficult to rule out. The trees with roosts features are rated as having low potential and most will be within open space areas. If works are required on any of these trees then appropriate mitigation is for pre-works inspections by the arboriculturists to confirm the absence of roosts, without the need for roost surveys. Where roosts are found or suspected during these inspections, then advice should be sought.
- Works near water. Measures to prevent soil and other run-off into the ditch network should be avoided, by following appropriate guidance.

Habitat loss is considered to be the principal pathway of adverse impact, with mitigation available for most species via appropriate soft landscaping and scheme masterplanning. Skylarks, however, are species of open shields and cannot be accommodated within the scheme. However, they remain a widespread species in Norfolk and the density on-Site is typical for winter cereals. Overall however the scheme proposals will provide substantial enhancement for species with equivalent conservation status, both birds and other species groups, and it is envisaged that the net overall change on biodiversity will be positive.

In conclusion, it is considered likely that the impacts on the majority of species can be mitigated. Appropriate landscaping and scheme design has the potential to deliver net ecological enhancement for most species groups. A key enhancement could be the delivery of the green infrastructure corridors identified within the Wymondham AAP, as part of scheme design and landscaping.

1. INTRODUCTION

BACKGROUND

1.1 Hopkins Ecology Ltd was appointed by Welbeck Strategic Land III Ltd to prepare an ecological assessment of the Land North of Tuttles Lane East. A residential-led scheme is proposed, with associated public open space, community uses, infrastructure and a primary school.

SITE CONTEXT AND STATUS

1.2 The Site is on the northern fringe of Wymondham and comprises a tract of farmland and associated habitat immediately north of Tuttles Lane East, with a total area of *circa* 55ha.

1.3 The Site is mostly farmland with some blocks of other habitat, farm buildings, a dwelling and garden centre. It is within the *South Norfolk and High Suffolk Claylands Natural Character Area*[1], which is characterised as an agricultural landscape *"incised by numerous small-scale wooded river valleys with complex slopes"*.

LEGISLATION AND PLANNING POLICY

1.4 The following key pieces of nature conservation legislation are relevant to legally protected species (with a more detailed description in Appendix 8):

- The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations); and
- The Wildlife and Countryside Act, 1981 (as amended).

1.5 Also, the National Planning Policy Framework (MHCLG, 2019[2]) requires local authorities to avoid and minimise impacts on biodiversity and, where possible, to provide net gains in biodiversity when making planning decisions. A substantial number of species are of conservation concern in the UK. A small number of these species are fully protected under the legislation listed above, but others in England are recognised as Species of Principal Importance under the Natural Environment and Rural Communities Act 2006 and reinforced by the National Planning Policy Framework. For these species local planning authorities are required to promote the "*protection and recovery"* via planning and development control. Examples include the widespread reptiles, skylarks and soprano pipistrelle and, brown long-eared bats.

1.6 Although the NPPF has an overarching aim of minimise impacts to biodiversity, the majority of species of conservation concern are not specifically recognised by legislation or planning policy. The level of protection afforded to these is undefined and should be considered within the overall aim of minimising impacts on biodiversity.

[1] Natural England (2014) *NCA Profile 83: South Norfolk and High Suffolk Claylands.* Available from: http://publications.naturalengland.org.uk/publication/6106120561098752

[2] MHCLG (2019) *A National Planning Policy Framework for England*. Ministry for Housing, Communities and Local Government, London.

2. METHODS

DESK STUDY

2.1 At the desk study comprised a formal data search from the local records centre and review of relevant data from and information from other sources (Table 1).

Table 1. Overview of desk study data sources.

Source	Information
Norfolk Biodiversity Information Service	Designated sites, species of conservation concern; 5km search radius
MAGIC (www.magic.gov.uk)	Additional information on statutory sites, habitats of principal importance and wider countryside information
Wymondham Area Action Plan and other policy documents	Information regarding local planning policies including a synthesis of related policies
Local Planning Applications, manual map-based searching of the South Norfolk DC website	Recent survey data for protected species locally, including negative data
Various literature and web-based searches	Information on local projects and initiatives of potential relevance as well as some species-level data
Historic maps Norfolk (http://www.historic-maps.norfolk.gov.uk/)	Aerial photographs from 1988 and 1946; OS maps from 1880s and earlier

FIELD SURVEYS

2.2 A scoping walkover survey was undertaken on 8 and 9 February 2018. and based on that a suite of follow-up species surveys were recommended, as listed in Table 2, with additional information provided in the Appendices. The lead field surveyor was Dr Graham Hopkins, who holds full bat and great crested newt survey licences and was present on all surveys other than the bird and botany surveys, and some reptile surveys. He was supported by experienced assistants as appropriate. The breeding bird and specialist botany surveys were undertaken by Mr Dave Showler, and he is a recognised authority on both groups.

Table 2. Summary of survey methods (see Appendices for more details).

Taxon	Summary	Survey standard / guidelines followed	Additional detail
Phase 1 and hedgerows	05 May 2018.	JNCC (2010)[3] and DEFRA (2007)[4]	-
Botany	Three transects of ~50m across the Site and wider, field with incidental recording 9-16 June 2019. The Important Arable Plant methods were used.	Plantlife (2015[5])	Appendix 4

[3] JNCC (2010) *Handbook for Phase 1 Habitat Surveys.* Joint Nature Conservation Committee, Peterborough.

[4] DEFRA (2007) *Hedgerow Survey Handbook*. DEFRA, London

[5] Plantlife (2015) *England's Important Arable Plants*. Available from: www.plantlife.org.uk/application/files/4715/2061/1183/Englands_Important_Arable_Plants_Report.pdf

Taxon	Summary	Survey standard / guidelines followed	Additional detail
Great crested newts	Habitat Suitability Index assessment. E-DNA sample 10 May 2019 with testing by Sure Screen Scientific in Derby.	ARG (2010)[6]; English Nature (2001[7], 2016[8])	Appendix 5
Bats: foraging	Site-wide bat surveys were undertaken in May – September 2019, comprising a transect and six static detectors deployed for five nights per month.	Collins (2016)[9]	Appendix 5
Bats: roosting	Emergence surveys of six trees not envisaged to be included within open space, in June and July.	Collins loc. cit.	Appendix 5
Birds	Five breeding bird surveys: 16, 29 May and 15, 20 and 22 June 2019. Wintering bird surveys 08 November and 11 December 2019, and 15 January 2020.	BTO (online)[10]	Appendix 6
Water voles and otters	Inspection for =evidence such as burrows, latrines and feeding remains (water voles); feeding remains and spraints (otters). 11 May 2019 and 18 September 2019.	Strachan and Moorhouse (2006)[11], Chanin (2003)[12]	-
Reptiles	Inspection of 30 refuge felts in September – October 2019.	Froglife (1999)[13]	Appendix 7
Badgers, brown hares and hedgehogs	Visual inspection and incidental observations (2018 and 2019).	Badgers, Harris et al. (1989)[14]; brown hares, Harris et al. (2016)[15]; hedgehogs, Roos et al. (2012)[16]	-

[6] ARG (2010) *Great Crested Newt Habitat Suitability Index. May 2010. ARG UK Advice Note 5.* Available online www.arguk.org

[7] English Nature (2001) *Great Crested Newt Mitigation Guidelines.* English Nature, Peterborough.

[8] https://www.gov.uk/guidance/great-crested-newts-surveys-and-mitigation-for-development-projects

[9] Collins, J. (2016) *Bat Surveys for Professional Ecologists*. Bat Conservation Trust, London.

[10] BTO (online) *British Trust for Ornithology website*: Downloaded May 2016. Available from: www.bto.org/about-birds/birdtrends/2014/methods/common-birds-census and www.bto.org/sites/default/files/u36/downloads/breedingcodes.pdf

11 Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016) *The Water Vole Mitigation Handbook*. Mammal Society, Aberdeen.

[12] Chanin, P. (2003). Monitoring the Otter Lutra lutra. Conserving Natura 2000 Rivers Monitoring Series 10. English Nature, Peterborough

[13] Froglife (1999) Reptile *Survey. Froglife Advice Sheet 10.* Froglife, Halesworth.

[14] Harris, S., Cresswell, P. and Jefferies, D. (1989) *Surveying Badgers*. Mammal Society, Aberdeen

[15] Harris, S.J., Massimino, D., Newson, S.E., Eaton, M.A., Marchant, J.H., Balmer, D.E., Noble, D.G., Gillings, S., Procter, D. and Pearce-Higgins, J.W. (2016) *The Breeding Bird Survey 2015. BTO Research Report 687*. British Trust for Ornithology, Thetford.

16 Roos, S., Johnston, A. and Noble, D. (2012) *UK Hedgehog Datasets and their Potential for Long-Term Monitoring. BTO Research Report No. 598*. BTO, Thetford.