APPENDIX 2

Woodland Condition Assessment

Indicator	Good (3 points)	Moderate (2 points)	Poor (1 point)	Score per indicator	
				W1	W2
Age distribution of trees	Three age classes present	Two age classes present	One age class present	2	2
Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland	Evidence of significant browsing pressure is present in 40% or less of whole woodland	Evidence of significant browsing pressure is present in 40% or more of whole woodland	3	2
Invasive plant species	No invasive species present in woodland	Rhododendron or laurel not present, other invasive species < 10% cover	Rhododendron or laurel present, or other invasive species > 10% cover	2	2
Number of native tree species	Five or more native tree or shrub species found across woodland parcel	Three to four native tree or shrub species found across woodland parcel	None to two native tree or shrub species across woodland parcel	3	2
Cover of native tree and shrub species	> 80% of canopy trees and >80% of understory shrubs are native	50-80% of canopy trees and 50-80% of understory shrubs are native	< 50% of canopy trees and <50% of understory shrubs are native	2	2
Open space within woodland	10 – 20% of woodland has areas of temporary open space, unless woodland is <10ha in which case lower threshold of 10% does not apply	21- 40% of woodland has areas of temporary open space	More than 40% of woodland has areas of temporary open space	1	1

Woodland regeneration	All three classes present in woodland; trees 4-7cm dbh, saplings and seedlings or advanced coppice regrowth	One or two classes only present in woodland	No classes or coppice regrowth present in woodland	1	1
Tree health	Tree mortality less than 10%, no pests or diseases and no crown dieback	11% to 25% mortality and/or crown dieback or low risk pest or disease present	Greater than 25% tree mortality and or any high risk pest or disease present	3	3
Vegetation and ground flora	Ancient woodland flora indicators present	Recognisable NVC plant community present	No recognisable NVC community	2	1
Woodland vertical structure	Three or more storeys across all survey plots or a complex woodland	Two storeys across all survey plots	One or less storey across all survey plots	1	2
Veteran trees	Two or more veteran trees per hectare	One veteran tree per hectare	No veteran trees present in woodland	1	1
Amount of deadwood	50% of all survey plots within the woodland parcel have standing deadwood, large dead branches/ stems and stumps	Between 25% and 50% of all survey plots within the woodland parcel have standing deadwood, large dead branches/ stems and stumps	Less than 25% of all survey plots within the woodland parcel have standing deadwood, large dead branches/ stems and stumps	1	1

Woodland disturbance	No nutrient enrichment or damaged ground evident	Less than 1 hectare in total of nutrient enrichment across woodland area and/or less than 20% of woodland area has damaged ground	More than 1 hectare of nutrient enrichment and/or more than 20% of woodland area has damaged ground	1	3
TOTAL				23	23

APPENDIX 3

Woodland Classification Note

Farncombe House
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Additional woodland information

1. Background

1.1. Further clarification regarding the categorisation of the woodland within the Appeal Site has been requested by Surrey Wildlife Trust (SWT), and this note has been prepared to provide additional information in this regard.

1.2. A number of habitat surveys have been undertaken across the Appeal Site and have included the woodland, allowing its key characteristics to be assessed across a number of years and through different seasons.

1.3. Regarding the classification, SWT questions whether the woodland within the site qualifies as a Habitat of Principal Importance as a result of landscape-scale mapping identifying an area on the eastern side of the site as potential priority deciduous woodland habitat.

1.4. In order to provide additional clarification regarding this, the definition of Lowland Mixed Deciduous Woodland – the classification which it is believed is being suggested here – is provided below, followed by further discussion regarding the key aspects of this definition and the on-site woodland.

2. Lowland Mixed Deciduous Woodland Definition

2.1. The definition against which woodland should be assessed for inclusion in this category is published by JNCC, and states the following:

> *"Lowland mixed deciduous woodland includes woodland growing on the full range of soil conditions, from very acidic to base-rich, and takes in most semi-natural woodland in southern and eastern England, and in parts of lowland Wales and Scotland. It thus complements the ranges of upland oak and upland*

ash types. It occurs largely within enclosed landscapes, usually on sites with well-defined boundaries, at relatively low altitudes, although altitude is not a defining feature. Many are ancient woods and they include the classic examples of ancient woodland studied by Rackham (1980) and Peterken (1981) in East Anglia and the East Midlands. The woods tend to be small, less than 20ha. Often there is evidence of past coppicing, particularly on moderately acid to base-rich soils; on very acid sands the type may be represented by former wood-pastures of oak and birch.

There is great variety in the species composition of the canopy layer and the ground flora, and this is reflected in the range of associated NVC and Stand Types. Quercus robur is generally the commoner oak (although Quercus petraea may be abundant locally) and may occur with virtually all combinations of other locally native tree species.

In terms of the National Vegetation Classification the bulk of this type falls into W8 (mainly sub-communities a - c in ancient or recent woods; in the lowlands W8d mostly occurs in secondary woodland) and W10 (sub-communities a to d) with lesser amounts of W16 (mainly W16a). Locally, it may form a mosaic with other types, including patches of beech woodland, small wet areas, and types more commonly found in western Britain. Rides and edges may grade into grassland and scrub types.

The canopy variations as represented by the Stand Type system include most of the field maple (2), lime (4, 5), suckering elm (10) and hornbeam (9) Stand Groups, and substantial proportions of the wych elm (1), ash (3) and oak (6) Stand Groups. More rarely, birch (12) and some alder stands (7C) may also occur. These may require separate management treatments.

There are no precise data on the total extent of lowland mixed deciduous woodland in the UK, but in the late 1980s the Nature Conservancy Council estimated the total extent of this type to be about 250,000ha. There is however no doubt that the area of this priority type on ancient woodland sites has declined in area by clearance, overgrazing and replanting with non-native species, by about 30–40% over the last 50 years."

3. Discussion of on-site woodland

3.1. The characteristic of the woodland which is first noted on surveying the vegetation is the lack of understorey structure, and homogeneous, grass-dominated ground flora. Rather than representing an example of a structurally-diverse woodland, both on-site parcels exist as a collection of mature specimens below which is present only sparse ground coverage. In addition to the understorey being absent, regeneration is limited with no clear sapling development providing replacement specimens for the canopy layer.

3.2. Regarding the canopy layer, and with reference to the definition set out above, a large number of non-native trees are present throughout the woodland parcels. Specifically, of the 29 species present only 12 are native, and rather than exhibiting a canopy comprising any of the species listed in

the definition above, the woodland on site largely comprises Norway Maple, London Plane and Raywood Ash.

3.3. Furthermore, on account of the site's history, much of the woodland which is currently present has been planted at a similar time, meaning that the woodland parcels lack age diversity, with the trees present falling into the same age class and further hindering the development of a structurally diverse woodland.

3.4. Finally, as set out in the Arboriculture Impact Assessment, a number of the trees present within both woodland parcels exhibit signs of disease such as Massaria, Canker and Phytophthora, and the majority of the Ash trees are exhibiting Ash Dieback. This further demonstrates the suboptimal condition of the woodland, and suggests that without management further deterioration in condition and ecological value are highly likely.

4. Woodland enhancement

4.1. As set out in previous submissions there is significant scope to deliver woodland enhancement as part of the appeal proposals.

4.2. Whilst some trees will require removal to facilitate construction, the majority of the woodland is to be retained, and these areas can in turn be enhanced and brought under an ecologically-guided management plan designed to optimise their value.

4.3. For the sake of clarity, the areas of woodland to be retained and enhanced are illustrated in Plan ECO1 below.

5. Summary

5.1. As discussed above, a number of site surveys have recorded that the on-site exhibits a lack of diversity in structure and age, a large number of non-native species, prevalent disease across several species, and a lack of regeneration or natural development.

5.2. On the basis of these factors it is not considered to represent an example of woodland in favourable condition, nor is it considered to qualify as priority habitat.

KEY:

- SITE BOUNDARY
- RETAINED AND ENHANCED WOODLAND

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9959: LAND AT KENLEY CAMPUS, CATERHAM

PLAN ECO1:
RETAINED AND ENHANCED WOODLAND

Rev: A
Jan 2025

APPENDIX 4

Reptile Refugia Locations

KEY:

- Site Boundary
- Wider Study Area
- Reptile Tin Locations

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9959: KENLEY CAMPUS, CATERHAM

REPTILE TIN LOCATIONS

Rev: A
Jan 2025

APPENDIX 5

Lowland Mixed Deciduous Woodland Definition

UK Biodiversity Action Plan
Priority Habitat Descriptions

Lowland Mixed Deciduous Woodland

From:
UK Biodiversity Action Plan; Priority Habitat Descriptions. BRIG (ed. Ant Maddock) 2008.

This document is available from:
http://jncc.defra.gov.uk/page-5706

For more information about the UK Biodiversity Action Plan (UK BAP) visit
http://www.jncc.defra.gov.uk/page-5155

Lowland Mixed Deciduous Woodland

Lowland mixed deciduous woodland includes woodland growing on the full range of soil conditions, from very acidic to base-rich, and takes in most semi-natural woodland in southern and eastern England, and in parts of lowland Wales and Scotland. It thus complements the ranges of upland oak and upland ash types. It occurs largely within enclosed landscapes, usually on sites with well-defined boundaries, at relatively low altitudes, although altitude is not a defining feature. Many are ancient woods and they include the classic examples of ancient woodland studied by Rackham (1980) and Peterken (1981) in East Anglia and the East Midlands. The woods tend to be small, less than 20ha. Often there is evidence of past coppicing, particularly on moderately acid to base-rich soils; on very acid sands the type may be represented by former wood-pastures of oak and birch.

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References

Peterken, G.F. (1981) *Woodland conservation and management*. London: Chapman & Hall.

Rackham, O. (1980) *Ancient woodland*. London: Arnold.