



West Blean and Thornden Woods

NVC Survey

Produced for Kent Wildlife Trust

By Applied Ecology Ltd

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Contents

	Executive Summary	1
1	Introduction	3
	Background	3
2	Survey Approach	5
	NVC Classification and Field Survey	5
	GIS Mapping and Attribute Data	6
3	Survey Findings	7
	NVC Communities	7
	Notable Plants	10
4	Conclusions	22

Tables

Table 3.1: Breakdown of NVC plant communities within the Study Area.	7
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Figure

Figure 1.1: Study Area and project plots.	4
Figure 3.1: NVC overview.	11
Figure 3.2: Woodland management (indicative).	12
Figure 3.3: Aerial of Study Area.	13
Figure 3.4: NVC northwest.	14
Figure 3.5: NVC northwest – aerial.	15
Figure 3.6: NVC southwest.	16
Figure 3.7: NVC southwest – aerial.	17
Figure 3.8: NVC northeast.	18
Figure 3.9: NVC northeast – aerial.	19
Figure 3.10: NVC southeast.	20
Figure 3.11: NVC southeast – aerial.	21



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Executive Summary

- The NVC plant communities present within the Study Area were classified and mapped in the field by AEL on 4–7 May 2021.
- All vegetation stands were assigned to the most appropriate NVC community and sub-community types using a combination of the NVC keys, data tables, community descriptions and using professional judgement and experience. The plant community field maps were subsequently transferred to ArcGIS.
- The Study Area (570 ha) supported 557 ha of woodland in total which is equivalent to 98% of the total area. The composition and structure of the woodland varied considerably reflecting patterns of past treatment, management and occasionally restocking, with individual NVC types usually incorporating a range of contrasting structural stages.
- The most common and widely distributed NVC woodland type was W10 *Quercus robur*-*Pteridium aquilinum*-*Rubus fruticosus* woodland which accounted for around 85% of the woodland present, and with sub-communities W10a and W10b the most widespread.
- Low lying areas with base rich soils typically supported W8 *Fraxinus excelsior* - *Acer campestre* - *Mercurialis perennis* woodland which was more diverse in terms of tree, shrub, and ground layer plants, and accounted for around 4% of the woodland cover.
- Small areas of other woodland types were also present including W16 *Quercus* spp. - *Betula* spp. - *Deschampsia flexuosa* woodland, W14 *Fagus sylvatica* - *Rubus fruticosus* woodland, W1 *Salix cinerea* - *Galium palustre* woodland and W22 *Prunus spinosa* - *Rubus fruticosus* scrub.
- Various plantations of Scots pine *Pinus sylvestris*, Corsican pine *P. nigra*, western hemlock *Tsuga heterophylla* and Leyland cypress *Cupressus × leylandii* were also present, resulting in a range of degraded NVC woodland communities, and in some instance stands that could not be assigned to an NVC type due to severe degradation.
- Notable plant interest was restricted to a range of woodland and heathland plants that are Near Threatened in England due to significant population decline.



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1 Introduction

Background

- 1.1 Applied Ecology Ltd (AEL) was commissioned by the Kent Wildlife Trust (KWT), in March 2021, to carry out a National Vegetation Classification (NVC) survey of West Blean and Thornden Woods, Canterbury, Kent (Ordnance Survey grid reference TR 154636).
- 1.2 The Study Area covers 570 ha and falls entirely within the West Blean and Thornden Woods Site of Special Scientific Interest (SSSI), albeit with the SSSI boundary extending beyond the Study Area in several locations. The location of the Study Area and the Wilder Blean ‘bison’, ‘control’ and ‘proxy’ plots are shown by **Figure 1.1**.
- 1.3 The primary purpose of the study was to survey and map the NVC plant communities present and to prepare a digital GIS map that would enable the KWT to assess future vegetation changes due to the implementation of the Wilder Blean project.
- 1.4 The collection of accompanying plant data through select stand sampling following the NVC mapping was part of our initial appointment, but this was subsequently removed from the agreed survey scope due to an overlap with ongoing KWT surveys.



West Blean and Thornden Woods - NVC Survey

Study Area and project plots

- Study Area
- bison plot
- control plot
- proxy plot

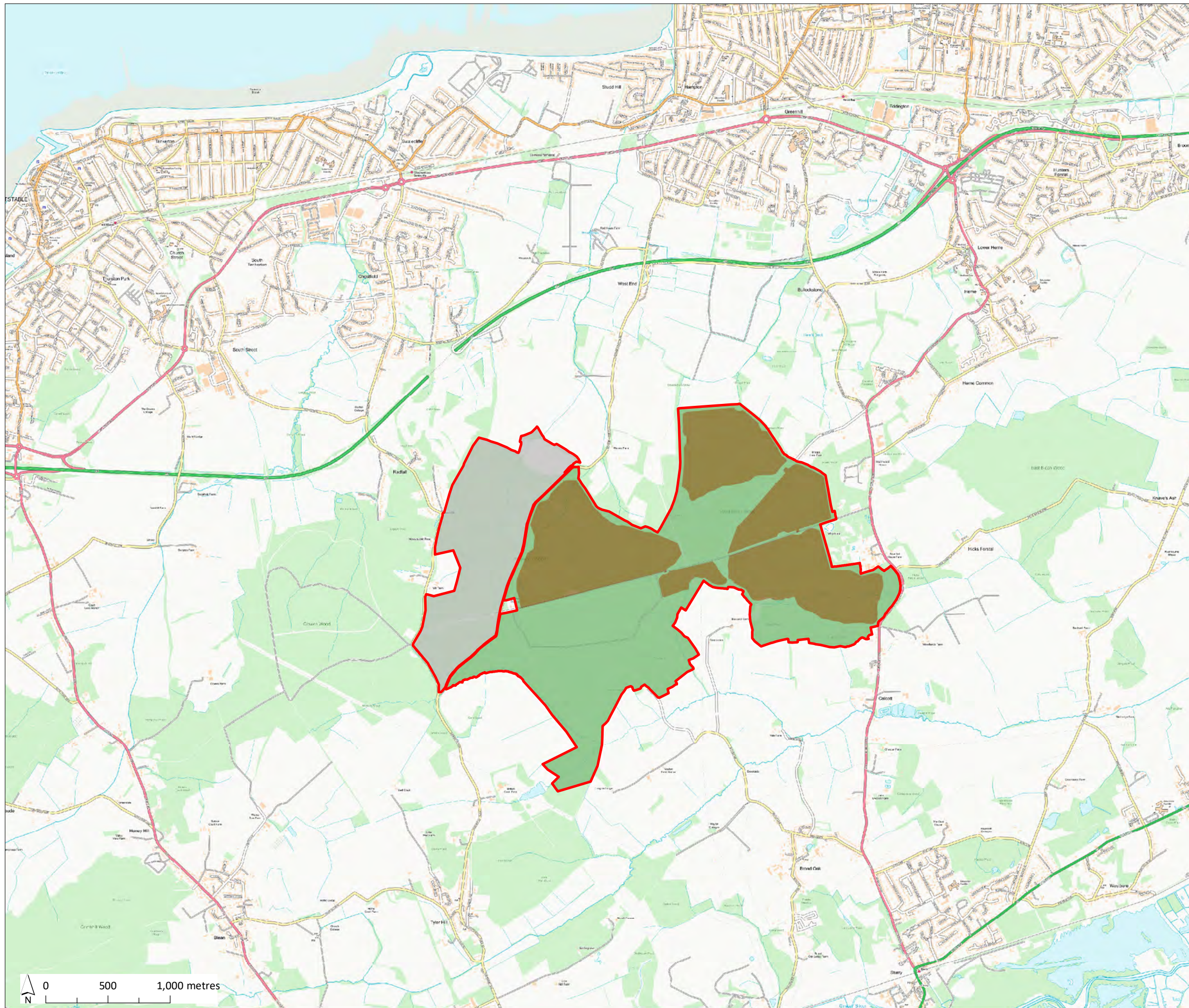


Figure 1.1

Map Scale @ A3: 1:30,000

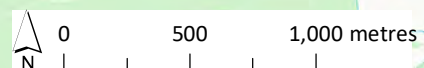
Surveyed by: n/a

Survey date: n/a

Drawn by: RJH

Checked by: RD

Status: Final



2 Survey Approach

NVC Classification and Field Survey

- 2.1 The woodland and open habitats present within the Study Area were classified and mapped according to the communities and sub-communities published by the NVC (Rodwell, 1991-2000)^{1,2,3,4,5}. The recommendations set out in Rodwell *et al* (2000)⁶ to extend the coverage of the NVC were also followed, where necessary, most importantly in relation to the identification and mapping of planted conifer stands. Stands dominated by conifers that no longer possess a semi-natural tree, shrub, and/or ground layer to enable reliable interpretation of the former woodland type would be mapped according to the dominant conifer species.
- 2.2 Prior to the field survey, colour base maps (A3@1:3,000 scale) were prepared using Ordnance Survey (OS) Mastermap data and aerial photographs, with areas of homogenous vegetation identified and digitised on the aerial base maps to aid their recognition and refinement in the field.
- 2.3 The field survey was undertaken by Rob Hutchinson (MSc Vegetation Survey and FISC Level 5 botanist) on 4–7 May 2021 during fine and dry weather conditions. The survey was timed to coincide with the peak period for key vernal species such as bluebell *Hyacinthoides non-scripta* and wood anemone *Anemone nemorosa*, with the presence of the later species particularly important to distinguish W10b from other W10 sub-communities.
- 2.4 The Study Area was walked in part before mapping to gain an appreciation of the plant communities present and their scale and extent of variation. The plant communities were mapped at as high resolution as possible with the size of vegetation stands mainly limited by the quality and resolution of available aerial photographs. All vegetation stands were assigned to the most appropriate NVC community and sub-community types using a combination of the NVC keys, data tables, community descriptions and using professional judgement and experience. While the timing of the survey was considered optimal, certain ground layer species, such as bracken *Pteridium aquilinum*, would occur at higher frequency and at greater abundance later in the season and could have a bearing on community placement.
- 2.5 In addition to community mapping, the locations of any notable plant species seen during the survey, including nationally rare, scarce, and threatened plants, and species included in the Kent Rare Plant Register, were recorded using a hand-held GPS with an eight figure OS grid reference.

¹ Rodwell, JS, ed (1991) *British plant communities Volume 1: Woodlands and scrub*. Cambridge, CUP.

² Rodwell, JS, ed (1991) *British plant communities Volume 2: Mires and heaths*. Cambridge, CUP.

³ Rodwell, JS, ed (1992) *British plant communities Volume 3: Grasslands and montane communities*. Cambridge, CUP.

⁴ Rodwell, JS, ed (1995) *British plant communities Volume 4: Aquatic communities, swamps, and tall-herb Fens*. Cambridge, CUP.

⁵ Rodwell, JS, ed (2000) *British plant communities: Volume 5: Maritime communities and vegetation of open habitats*. Cambridge, CUP.

⁶ Rodwell, JS, Dring, JC, Averis, ABG, Proctor, MCF, Malloch, AJC, Schaminée, JNJ, & Dargie TCD, (2000) *Review of coverage of the National Vegetation Classification*. JNCC Report, No. 302.



GIS Mapping and Attribute Data

- 2.6 The plant community field maps were scanned and digitised in ArcGIS using aerial photographs to further refine the community boundaries, where necessary. Significant areas of scrub and open habitats, such as grassland, heathland, and bracken communities, were mapped as separate stands, and the creation of a separate shapefile for these communities was not considered necessary.
- 2.7 The following data was included in the attribute table for each polygon:
- NVC_Com (NVC community) – allocated NVC community type(s).
 - NVC_SubCom (NVC sub-community) – allocated NVC community type(s).
 - Canopy_dom (dominant tree species) – independent of NVC type and based only on ad hoc observations and field notes.
 - Growth (management/structural type) – independent of NVC type and based only on ad hoc observations and field notes.
 - Area_m² – area of polygon in meters sq.



3 Survey Findings

NVC Communities

Overview

- 3.1 An overview NVC map for the Study Area at 1:13,000 scale is provided in **Figure 3.1**, and an indicative woodland management map (aligned to woodland structure) is shown by **Figure 3.2**. A corresponding aerial photograph is provided in **Figure 3.3**.
- 3.2 More detailed NVC maps for the Study Area are presented at a 1:6,500 scale and with corresponding aerial photographs in **Figures 3.4–3.11**. A breakdown of the NVC plant communities including areas within the ‘bison’, ‘control’ and ‘proxy’ plots, is provided in **Table 3.1**.

Table 3.1: Breakdown of NVC plant communities within the Study Area.

NVC community / habitat type	Area (ha)			
	Total	Bison plot	Control plot	Proxy plot
W10a	304.25	116.58	39.07	148.60
W10b	70.28	25.94	7.64	36.70
W10a (<i>Pinus nigra</i> - degraded)	56.82	32.99	16.26	7.56
W16a	21.73	-	21.73	-
W10a (<i>Pinus sylvestris</i> - degraded)	17.46	2.17	5.46	9.83
W8b	12.62	0.42	1.21	10.99
W10a/W23a	11.49	1.86	6.71	2.93
W10a (mixed <i>Pinus</i> - degraded)	9.49	9.18	-	0.31
MG6a (<i>Alopecurus pratensis</i> var.)	8.40	0.04	8.25	0.11
W10a/W14	7.16	1.83	1.83	3.49
W14	7.04	6.57	-	0.46
W8b/W10a	5.30	-	-	5.30
W14 (<i>Pinus sylvestris</i> / <i>Fagus</i> - degraded)	5.12	3.34	1.55	0.23
W8a	5.05	-	0.16	4.89
W8b/W10b	3.40	-	-	3.40
track/path	3.29	0.69	0.31	2.29
W10d	3.11	-	0.32	2.80
W16a (<i>Pinus sylvestris</i> - degraded)	2.54	-	2.54	-
W10a/H1	2.29	2.19	-	0.10
W10a/U4	2.23	2.23	-	-
<i>Pinus sylvestris</i> plantation	1.96	-	-	1.96
W16a (<i>Pinus nigra</i> - degraded)	1.56	-	1.56	-
W10d (degraded)	1.09	1.09	-	-
W10d (mixed conifers - degraded)	1.04	-	1.04	-
<i>Tsuga heterophylla</i> plantation	0.92	-	-	0.92
W22a	0.77	-	0.77	-



NVC community / habitat type	Area (ha)			
	Total	Bison plot	Control plot	Proxy plot
<i>Cupressus × leylandii</i> plantation	0.71	0.63	-	0.08
W10a/W16a	0.61	-	-	0.61
W8a/W10b	0.49	0.48	-	0.01
W23a	0.47	-	0.40	0.06
S22	0.22	-	0.22	-
MG13	0.21	0.21	-	-
W10c	0.21	-	-	0.21
W1	0.19	-	0.19	-
Arable land	0.13	-	-	0.13
Standing water	0.05	0.05	-	-
Totals	569.70	208.49	117.22	243.98

- 3.3 The Study Area (570 ha) supported 557 ha of woodland in total which is equivalent to 98% of the total area. The remainder was a large open grassland field of MG6 *Lolium perenne-Cynosurus cristatus* grassland, typical sub-community, *Alopecurus pratensis* variant, located in the northwest of the Study Area, with smaller areas of swamp (a vegetated field drain running through the grassland field), arable land, standing water and paths and tracks.

W10 *Quercus robur* - *Pteridium aquilinum* - *Rubus fruticosus* woodland

- 3.4 The most common and widely distributed NVC woodland type was W10 *Quercus robur*-*Pteridium aquilinum*-*Rubus fruticosus* woodland which accounted for around 85% of the woodland present⁷. The composition and structure of this woodland varied considerably reflecting patterns of past treatment, management and occasionally restocking, but incorporated extensive areas of old and neglected mixed coppice with oak standards, young sweet chestnut *Castanea sativa* coppice, and dense stands of silver birch regeneration (often with damp grassland and/or heather heathland components) in areas of clear fell.
- 3.5 The most common canopy trees overall were common oak *Quercus robur* and birch *Betula pendula*, with an understorey typically including some coppice hazel *Corylus avellana*, sweet chestnut *Castanea sativa*, holly *Ilex aquifolium*, hornbeam *Carpinus betulus* and beech *Fagus sylvatica*. Large areas of rather homogenous sweet chestnut coppice were included in this W10 community, although not always within the W10b sub-community (which is the typical NVC placement for sweet chestnut stands), as well as smaller areas dominated by hornbeam.
- 3.6 The ground layer was typically species-poor, and often sparse, with frequent patches of bramble and bracken, and with occasional but often extensive patches of bluebell *Hyacinthoides non-scripta* and wood anemone *Anemone nemorosa* – with the anemone usually indicative of slightly damper soil conditions. A wide range of other field layer plants were noted with the most common and widespread including honeysuckle *Lonicera*

⁷ when all sub-communities and transitions are included in the total area.



periclymenum, wood sage *Teucrium scorodonia*, hairy wood-rush *Luzula pilosa*, great wood-rush *Luzula sylvatica*, and common cow-wheat *Melampyrum pratense*.

- 3.7 The most common W10 sub-communities were the W10a typical sub-community and the W10b *Anemone nemorosa* sub-community, although the W10c *Hedera helix* sub-community and the W10d *Holcus lanatus* sub-community were also recorded very locally. The W10d *Acer pseudoplatanus*-*Oxalis acetosella* sub-community is a northern and western woodland type and was not recorded.
- 3.8 Several stands of W10 woodland were in a degraded condition due to cycles of felling and restocking, mostly with coniferous trees. The ground layer in these areas was often completely dominated by bramble and bracken, occasionally with small quantities of honeysuckle and wood sage but lacking more sensitive species associated with semi-natural stands.

W8 *Fraxinus excelsior* - *Acer campestre* - *Mercurialis perennis* woodland

- 3.9 W8 *Fraxinus excelsior* - *Acer campestre* - *Mercurialis perennis* woodland accounted for around 4% of the woodland present⁸, and was typically distributed in low lying areas, for example along streams and in areas of seepage associated with more poorly drained base-rich soils.
- 3.10 Compared to W10, this woodland type is characterised by a more varied mix of trees, shrubs, and ground layer plants, resulting in woodland with a more visually diverse and structurally complex character. Oak and hazel remained frequent but were joined by a range of other trees and shrubs such as ash *Fraxinus excelsior*, field maple *Acer campestre*, hawthorn *Crataegus* species, wild cherry *Prunus avium*, spindle *Euonymus europaeus*, and crab apple *Malus sylvestris*. In contrast to W10, birch was typically absent or very rare in stands of W8 woodland.
- 3.11 Bluebell and wood anemone remained a common feature of the ground layer, but with a range of additional preferential species, such as dog's mercury *Mercurialis perennis*, yellow archangel *Lamium galeobdolon*, wood spurge *Euphorbia amygdaloides*, primrose *Primula vulgaris*, wood melick *Melica uniflora*, lesser celandine *Ranunculus ficaria*, moschatel *Adoxa moschatellina*, male fern *Dryopteris filix-mas*, lords and ladies *Arum maculatum*, lesser periwinkle *Vinca minor*, and pendulous sedge *Carex pendula*.
- 3.12 Only the W8a *Primula vulgaris*-*Glechoma hederacea* sub-community and the W8b *Anemone nemorosa* sub-community were recorded from the Study Area. No areas of degraded W8 woodland, due to felling and replanting for instance, were noted within the Study Area.

W16 *Quercus* spp. - *Betula* spp. - *Deschampsia flexuosa* woodland

- 3.13 W16 *Quercus* spp. - *Betula* spp. - *Deschampsia flexuosa* woodland accounted for around 4% of the woodland present and was restricted to the western part of the Study Area.
- 3.14 Overall, these woodland stands were similar to W10 woodland being dominated by mix of oak and birch. Occasional rowan *Sorbus aucuparia* were, however, noted, and hazel and

⁸ when all sub-communities and transitions are included in the total area.



other woody species typical of W10 stands were notably absent or very rare. A few stands of sweet chestnut coppice were also assigned to this woodland community type.

- 3.15 Bracken remained a frequent ground layer species, although often here without bramble, and many of the other typical W10 associates were noticeably absent. Occasional fine blades of wavy hair-grass *Deschampsia flexuosa* and depauperate stems of heather *Calluna vulgaris* were also noted and supported the W16 community allocation.

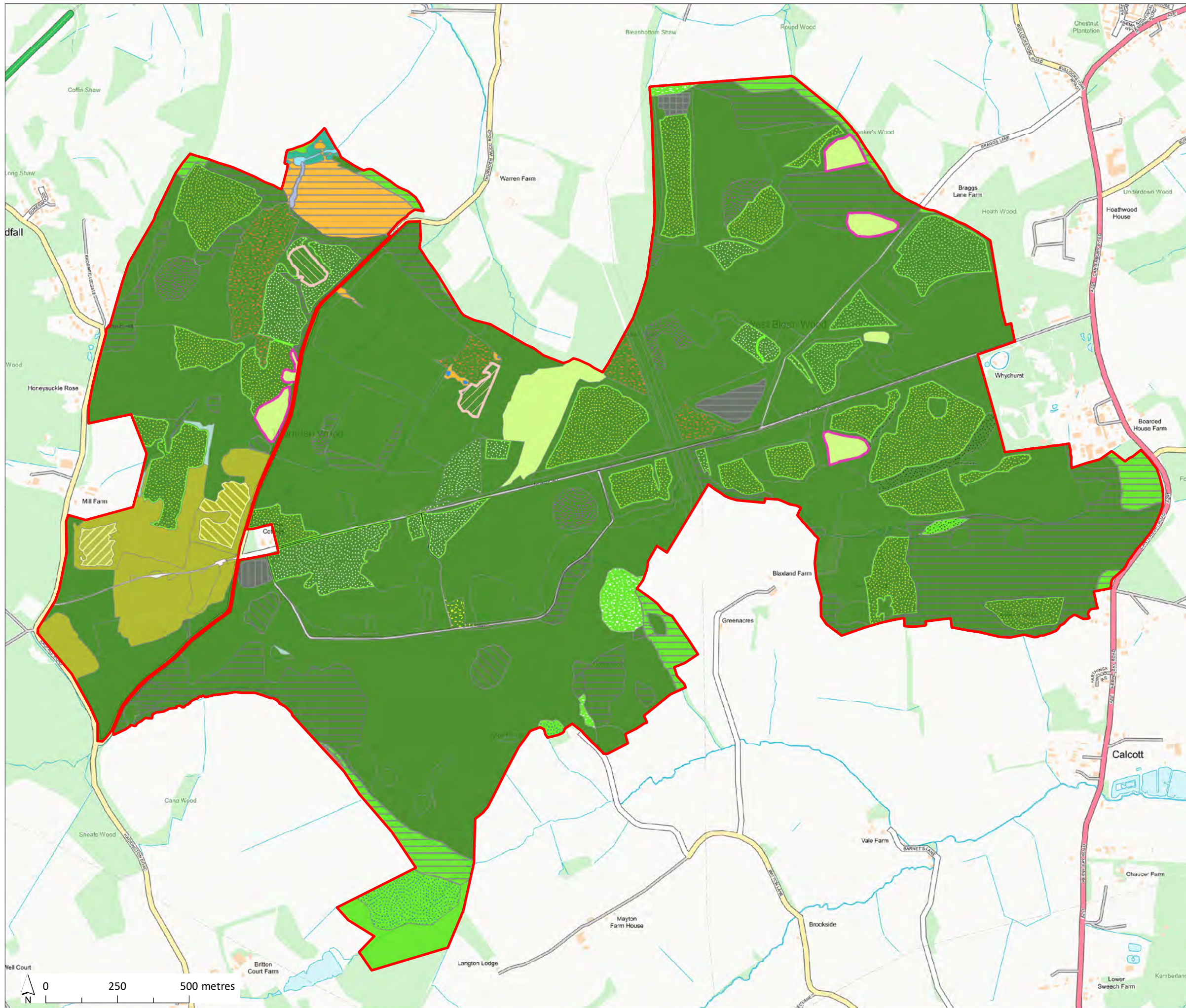
Other woodland types

- 3.16 Around 2% of the woodland was assigned to W14 *Fagus sylvatica* - *Rubus fruticosus* woodland which was often at least partly planted and formed a highly distinctive community of tall and well-spaced beech with a very sparse ground layer. Very small areas of W1 *Salix cinerea* - *Galium palustre* woodland and W22 *Prunus spinosa* - *Rubus fruticosus* scrub were also recorded.
- 3.17 Various plantations of Scots pine *Pinus sylvestris*, Corsican pine *P. nigra*, western hemlock *Tsuga heterophylla* and Leyland cypress *Cupressus × leylandii* were present within the Study Area.

Notable Plants

- 3.18 From a brief review of existing plant records, the Site and its immediate surrounds does not appear to support a high frequency or diversity of individually rare and/or notable plant species.
- 3.19 No Nationally Rare or Scarce plant species were seen during the NVC survey. Five species that are considered Near Threatened in England were noted, namely common cow-wheat *Melampyrum pratensis* subsp. *pratensis* (common and widespread across the Site), heather *Calluna vulgaris* (common and widespread along open rides, clear fell and other open areas), heath speedwell *Veronica officinalis* (single heathy ride at around TR 16696357), tormentil *Potentilla erecta* (single heathy ride at around TR 16696357) and wood sorrel *Oxalis acetosella* (one small patch seen in woodland at TR 14366308).
- 3.20 Other species noted of interest included a patch of the moss *Sphagnum auriculatum* (uncommon locally) and the alien aquatic curly waterweed *Lagarosiphon major* (of no conservation interest or value, but not widely recorded) both in and around a pool at TR 15176390.
- 3.21 Other locations for the above species, and other plant species of note, would almost certainly be found if specific searches were undertaken.





West Blean and Thornden Woods - NVC Survey

NVC overview

- Study Area
- W1
- W8a
- W8a/W10b
- W8b
- W8b/W10a
- W8b/W10b
- W10a
- W10a (Pinus sylvestris - degraded)
- W10a (Pinus nigra - degraded)
- W10a (mixed Pinus - degraded)
- W10a/H1
- W10a/U4
- W10a/W14
- W10a/W16a
- W10a/W23a
- W10b
- W10c
- W10d
- W10d (Pinus sylvestris - degraded)
- W10d (mixed conifers - degraded)
- W14
- W14 (Pinus sylvestris/Fagus - degraded)
- W16a
- W16a (Pinus nigra - degraded)
- W16a (Pinus sylvestris - degraded)
- W22a
- W23a
- Pinus sylvestris plantation (no NVC remnant)
- Tsuga heterophylla plantation (no NVC remnant)
- Cupressus x leylandii (no NVC remnant)
- main path
- arable
- MG13
- MG6a (Alop prat var.)
- S22
- standing water

Figure 3.1

Map Scale @ A3: 1:13,000

Surveyed by: RJH

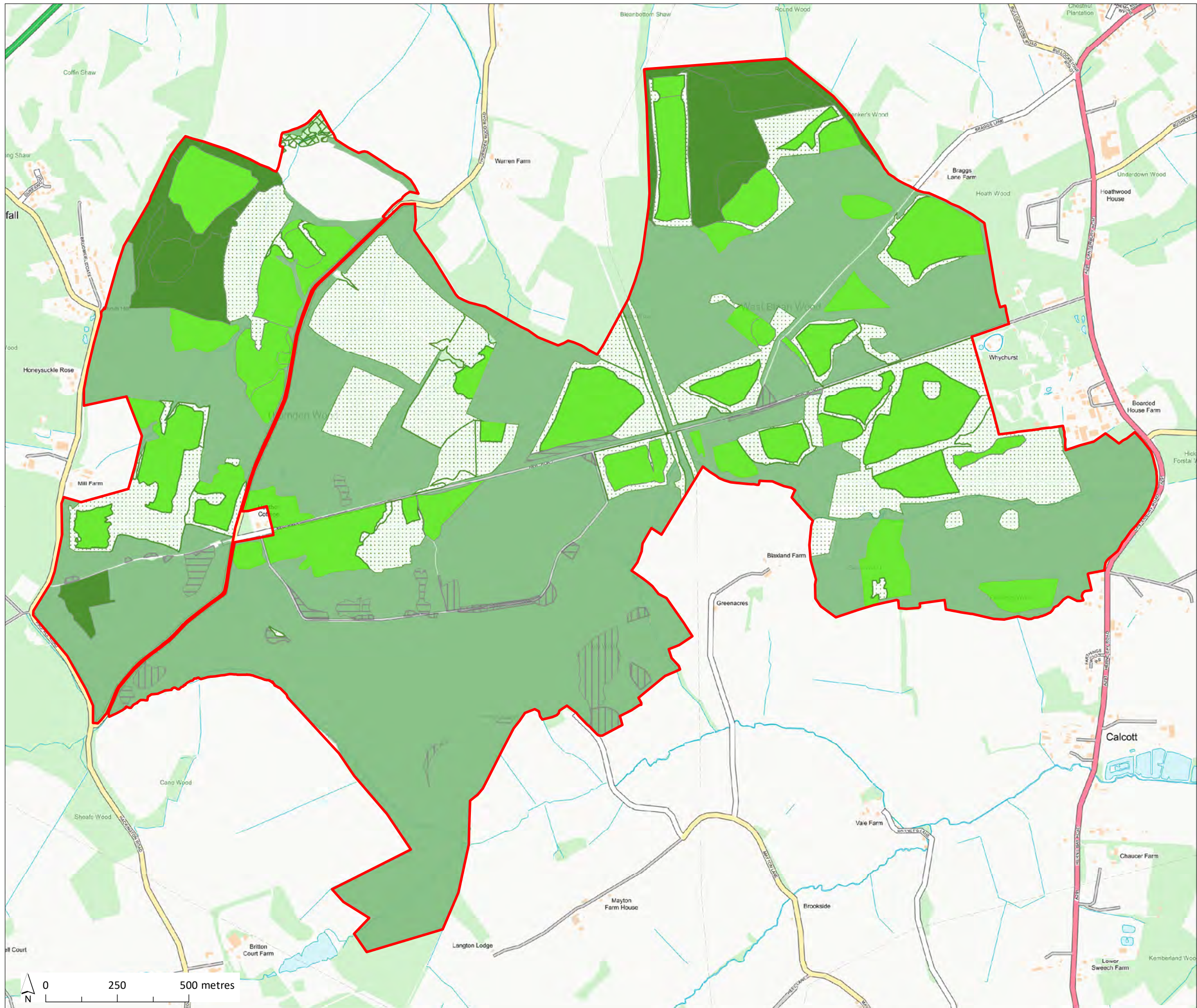
Survey date: 4-7 May 2021

Drawn by: RJH

Checked by: RJH

Status: Final





West Blean and Thornden Woods - NVC Survey

Woodland management (indicative)

- Study Area
- coppice - old
- coppice - young
- coppice - recent
- high forest
- plantation
- natural regeneration
- scrub

Figure 3.2

Map Scale @ A3: 1:13,000

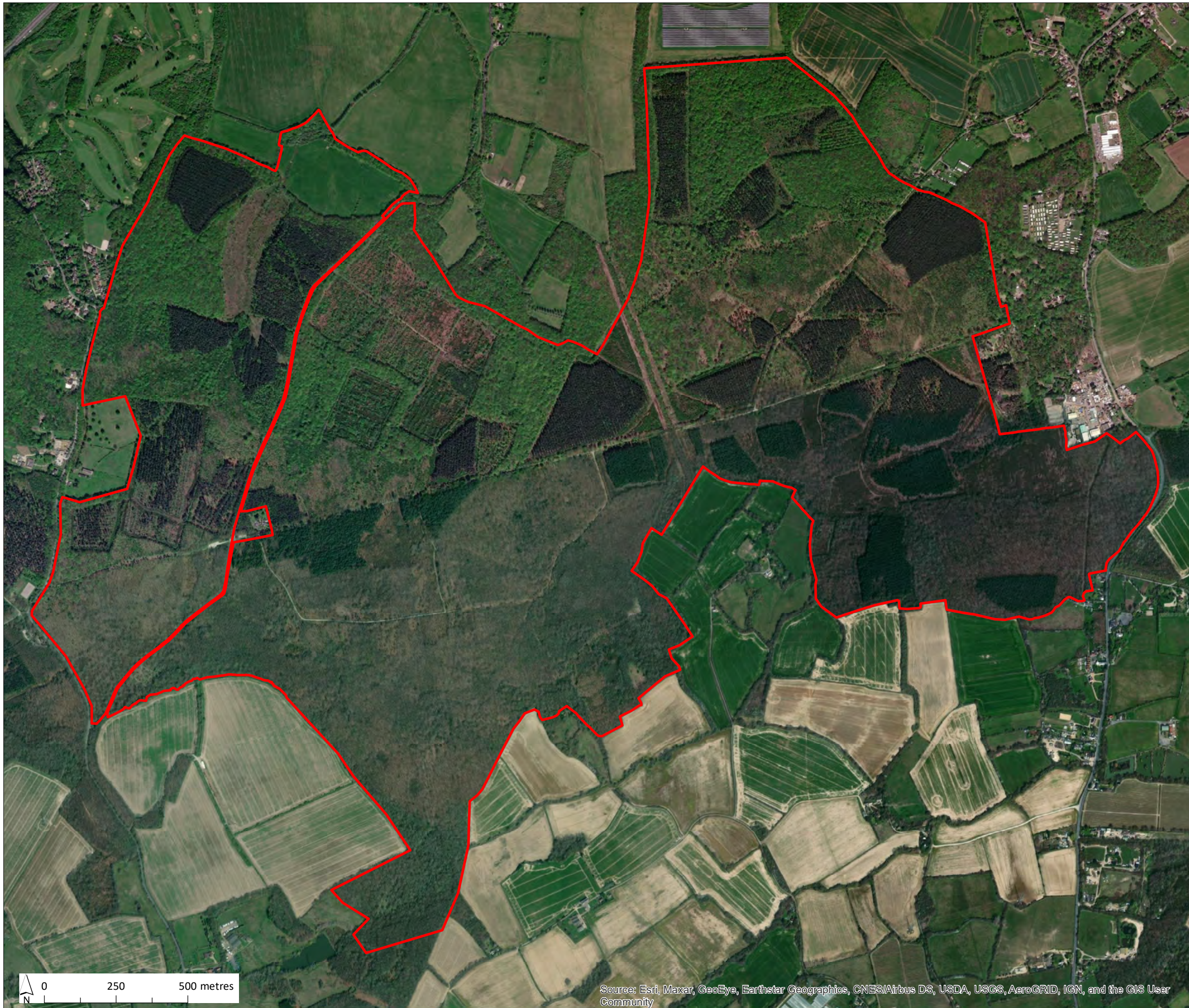
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Survey date: 4-7 May 2021
Drawn by: RJH
Checked by: RJH
Status: Final



West Blean and Thornden Woods - NVC Survey

Aerial of Study Area

 Study Area



0 250 500 metres

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Figure 3.3

Map Scale @ A3: 1:13,000

Surveyed by: RJH

Survey date: 4-7 May 2021

Drawn by: RJH

Checked by: RJH

Status: Final



West Blean and Thornden Woods - NVC Survey

NVC northwest

- Study Area
- W1
- W8a
- W8a/W10b
- W8b
- W8b/W10a
- W8b/W10b
- W10a
- W10a (Pinus sylvestris - degraded)
- W10a (Pinus nigra - degraded)
- W10a (mixed Pinus - degraded)
- W10a/H1
- W10a/U4
- W10a/W14
- W10a/W16a
- W10a/W23a
- W10b
- W10c
- W10d
- W10d (Pinus sylvestris - degraded)
- W10d (mixed conifers - degraded)
- W14
- W14 (Pinus sylvestris/Fagus - degraded)
- W16a
- W16a (Pinus nigra - degraded)
- W16a (Pinus sylvestris - degraded)
- W22a
- W23a
- Pinus sylvestris plantation (no NVC remnant)
- Tsuga heterophylla plantation (no NVC remnant)
- Cupressus x leylandii (no NVC remnant)
- main path
- arable
- MG13
- MG6a (Alop prat var.)
- S22
- standing water

Figure 3.4

Map Scale @ A3: 1:6,500

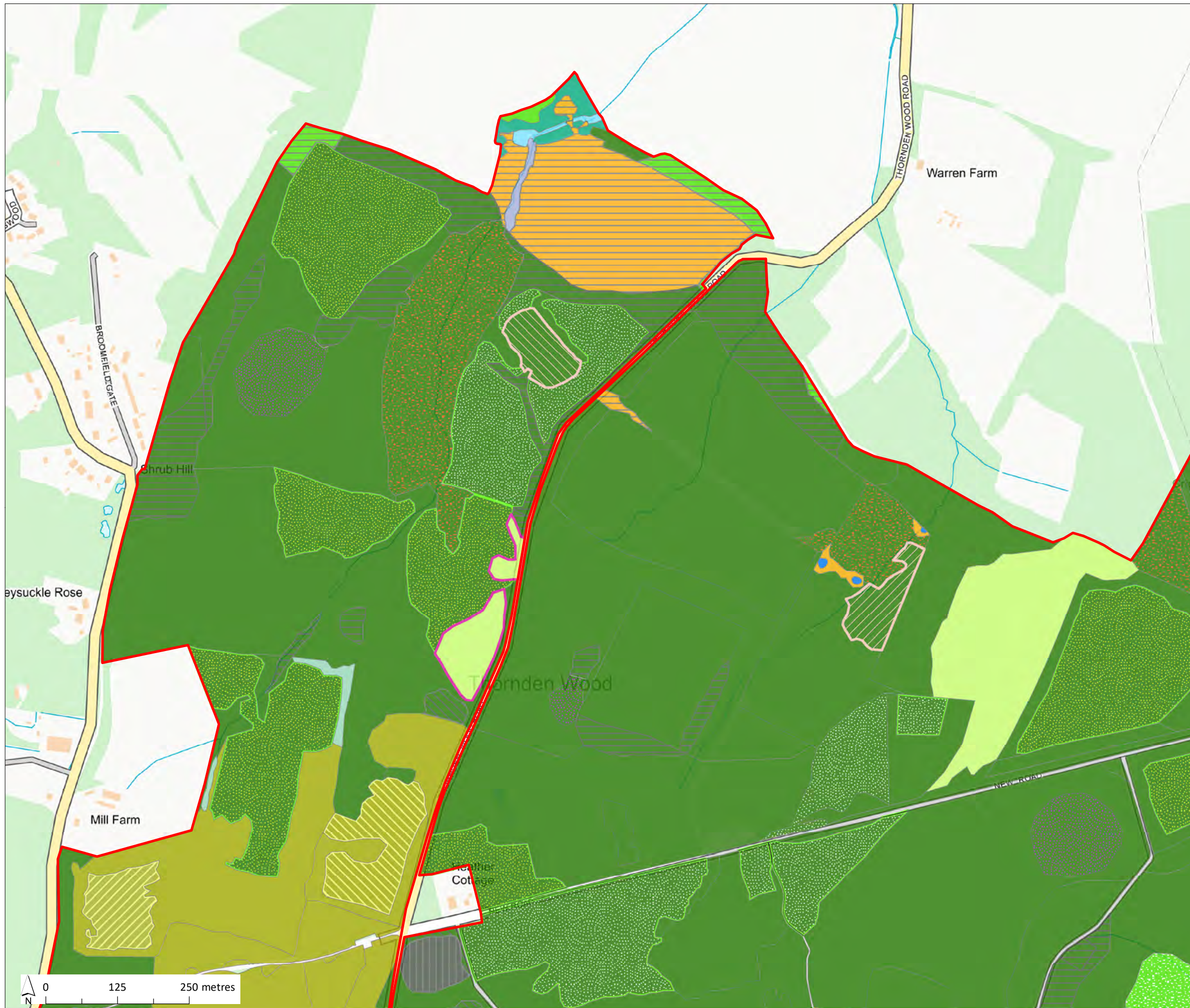
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Survey date: 4-7 May 2021

Drawn by: RJH

Checked by: RJH


Status: Final

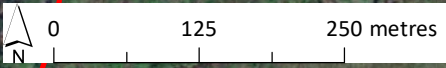




West Blean and Thornden Woods - NVC Survey

NVC northwest - aerial

 Study Area

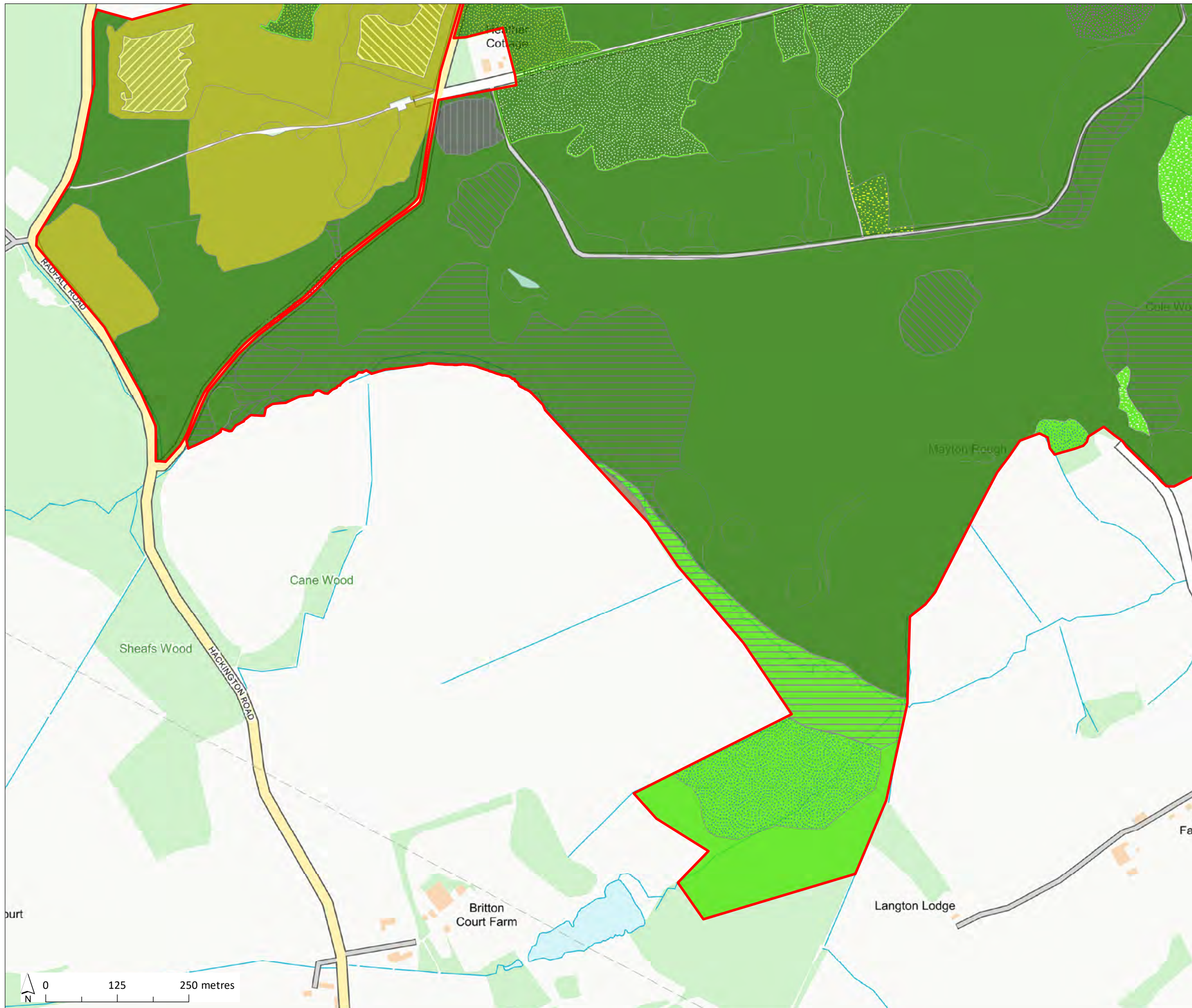


Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Figure 3.5
Map Scale @ A3: 1:6,500

Surveyed by: RJH
Survey date: 4-7 May 2021
Drawn by: RJH
Checked by: RJH
Status: Final





West Blean and Thornden Woods - NVC Survey

NVC southwest

- Study Area
- W1
- W8a
- W8a/W10b
- W8b
- W8b/W10a
- W8b/W10b
- W10a
- W10a (Pinus sylvestris - degraded)
- W10a (Pinus nigra - degraded)
- W10a (mixed Pinus - degraded)
- W10a/H1
- W10a/U4
- W10a/W14
- W10a/W16a
- W10a/W23a
- W10b
- W10c
- W10d
- W10d (Pinus sylvestris - degraded)
- W10d (mixed conifers - degraded)
- W14
- W14 (Pinus sylvestris/Fagus - degraded)
- W16a
- W16a (Pinus nigra - degraded)
- W16a (Pinus sylvestris - degraded)
- W22a
- W23a
- Pinus sylvestris plantation (no NVC remnant)
- Tsuga heterophylla plantation (no NVC remnant)
- Cupressus x leylandii (no NVC remnant)
- main path
- arable
- MG13
- MG6a (Alop prat var.)
- S22
- standing water

Figure 3.6

Map Scale @ A3: 1:6,500

Surveyed by: RJH

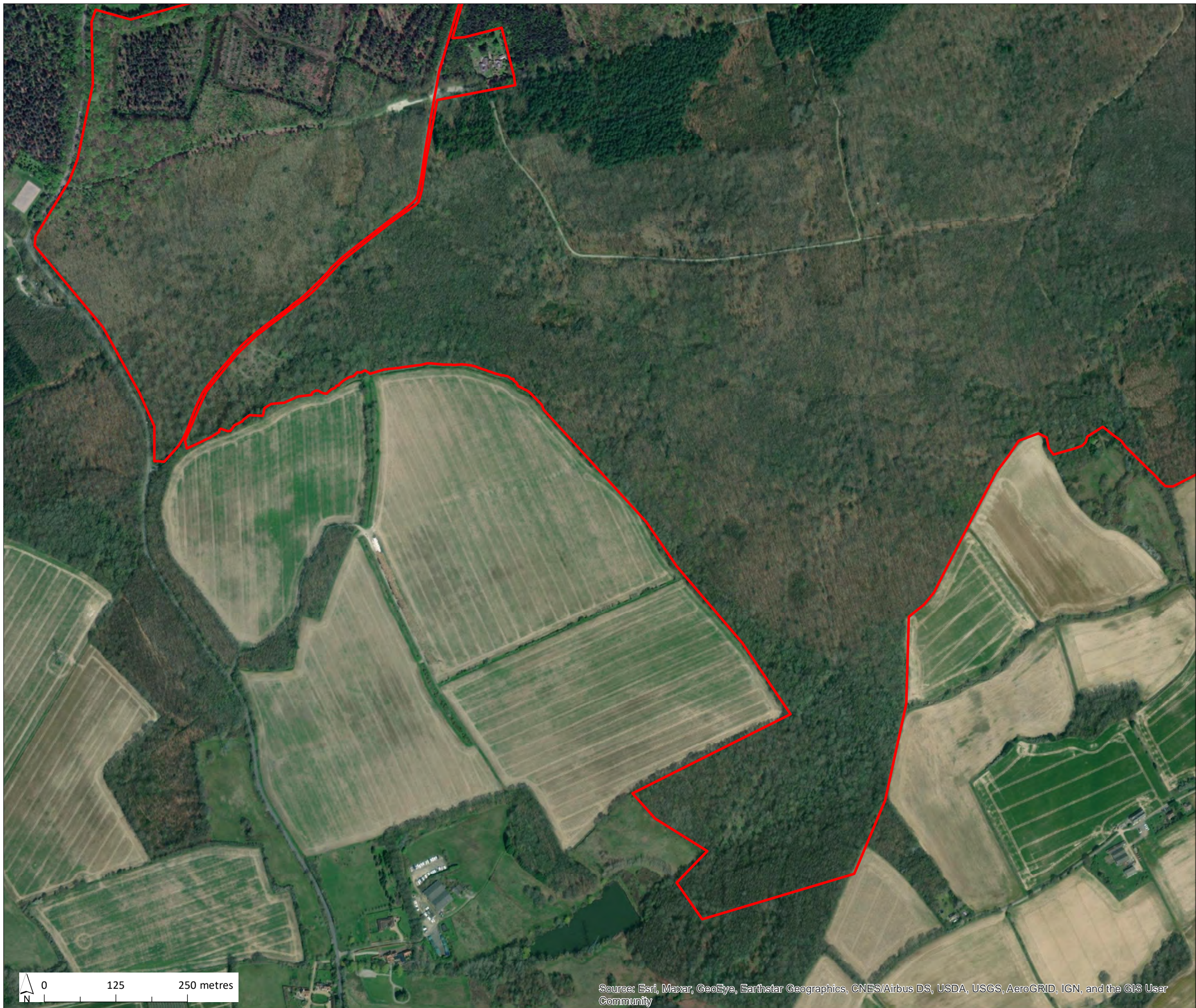
Survey date: 4-7 May 2021

Drawn by: RJH

Checked by: RJH

Status: Final





West Blean and Thornden Woods - NVC Survey

NVC southwest - aerial


 Study Area

Figure 3.7

Map Scale @ A3: 1:6,500

Surveyed by: RJH

Survey date: 4-7 May 2021

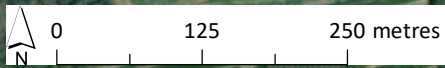
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Checked by: RJH

Status: Final



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



West Blean and Thornden Woods - NVC Survey

NVC northeast

- Study Area
- W1
- W8a
- W8a/W10b
- W8b
- W8b/W10a
- W8b/W10b
- W10a
- W10a (Pinus sylvestris - degraded)
- W10a (Pinus nigra - degraded)
- W10a (mixed Pinus - degraded)
- W10a/H1
- W10a/U4
- W10a/W14
- W10a/W16a
- W10a/W23a
- W10b
- W10c
- W10d
- W10d (Pinus sylvestris - degraded)
- W10d (mixed conifers - degraded)
- W14
- W14 (Pinus sylvestris/Fagus - degraded)
- W16a
- W16a (Pinus nigra - degraded)
- W16a (Pinus sylvestris - degraded)
- W22a
- W23a
- Pinus sylvestris plantation (no NVC remnant)
- Tsuga heterophylla plantation (no NVC remnant)
- Cupressus x leylandii (no NVC remnant)
- main path
- arable
- MG13
- MG6a (Alop prat var.)
- S22
- standing water

Figure 3.8

Map Scale @ A3: 1:6,500

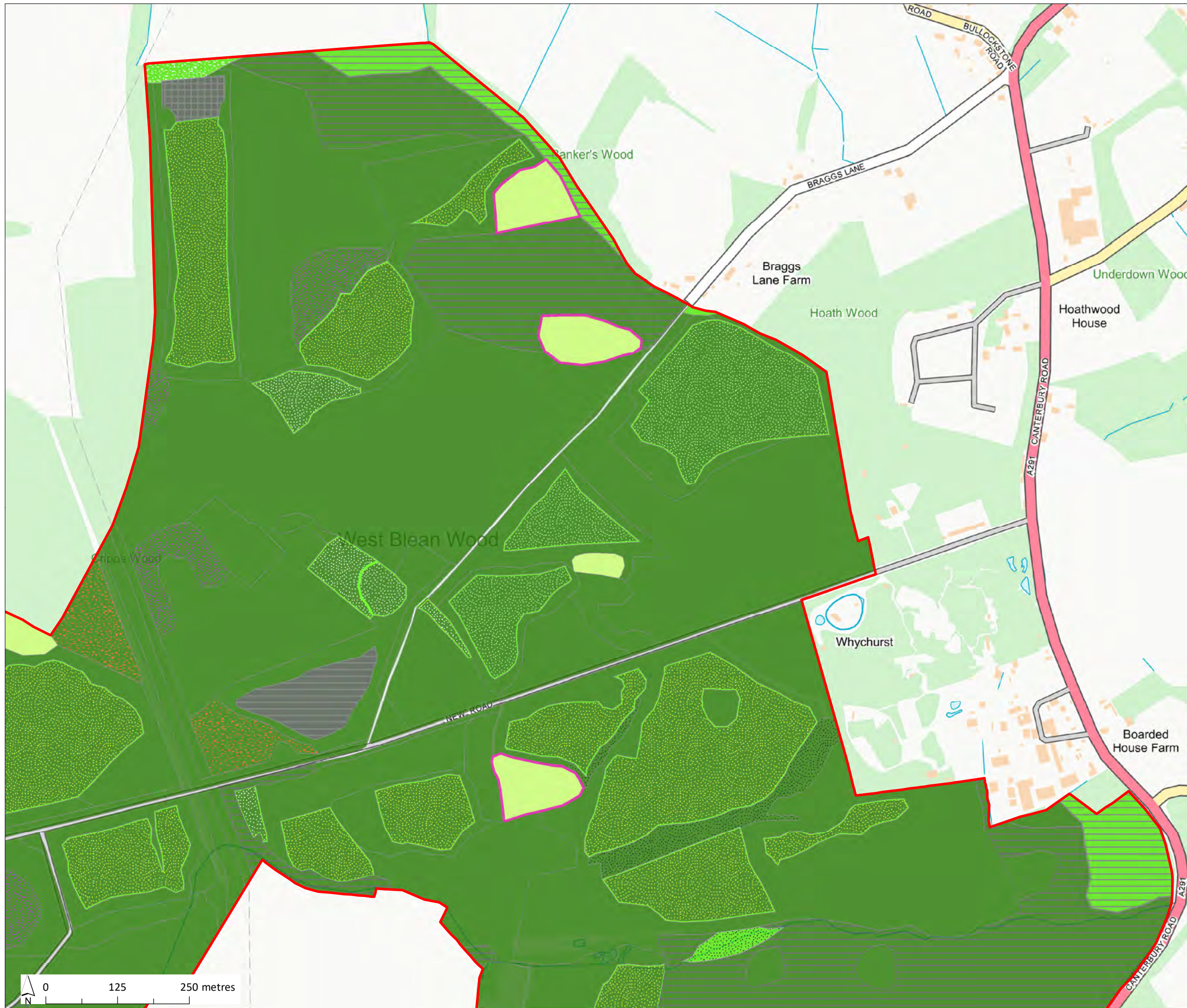
Surveyed by: RJH

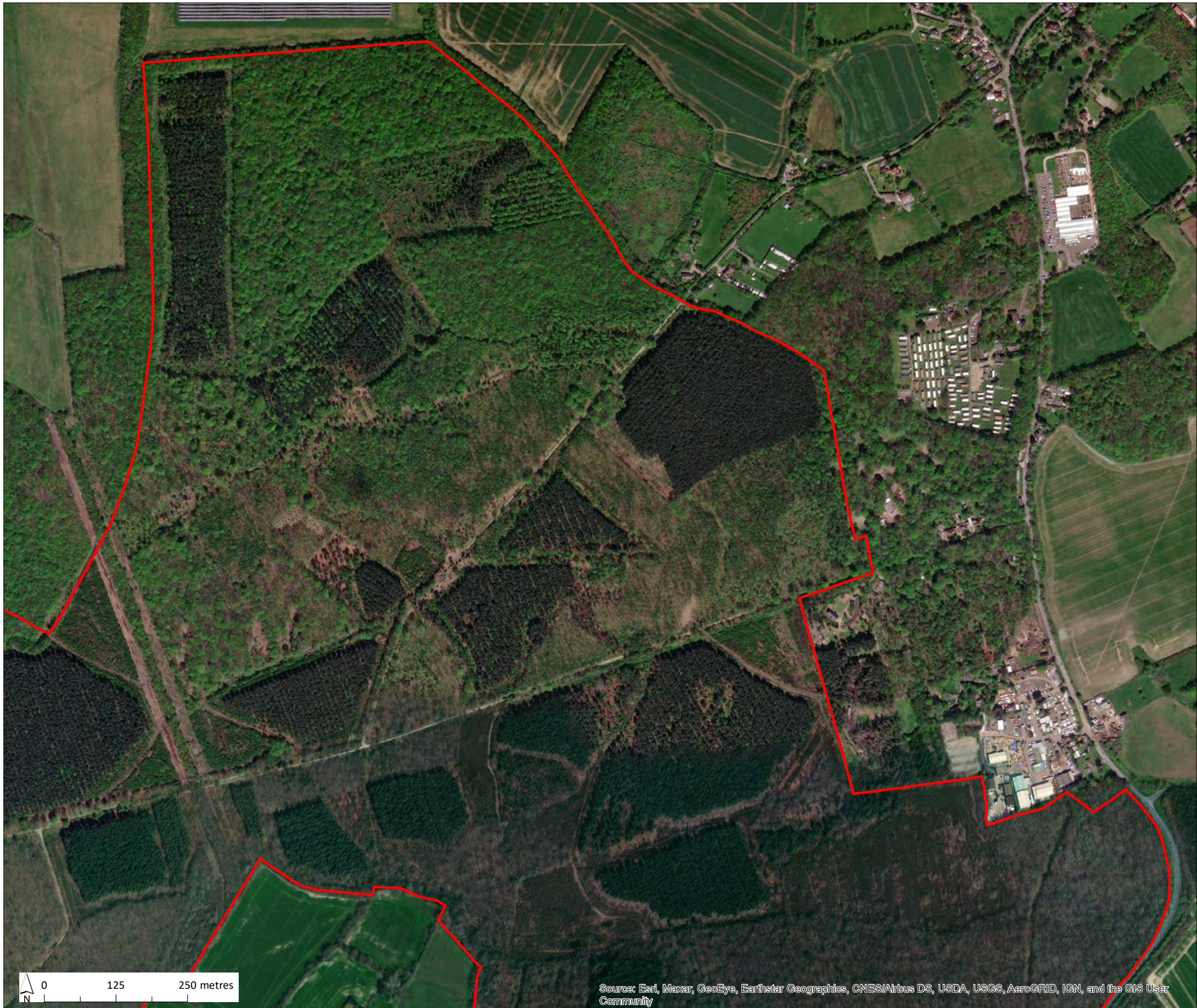
Survey date: 4-7 May 2021

Drawn by: RJH

Checked by: RJH

Status: Final





West Blean and Thornden Woods - NVC Survey

NVC northeast - aerial


 Study Area

Figure 3.9

Map Scale @ A3: 1:6,500

Surveyed by: RJH

Survey date: 4-7 May 2021

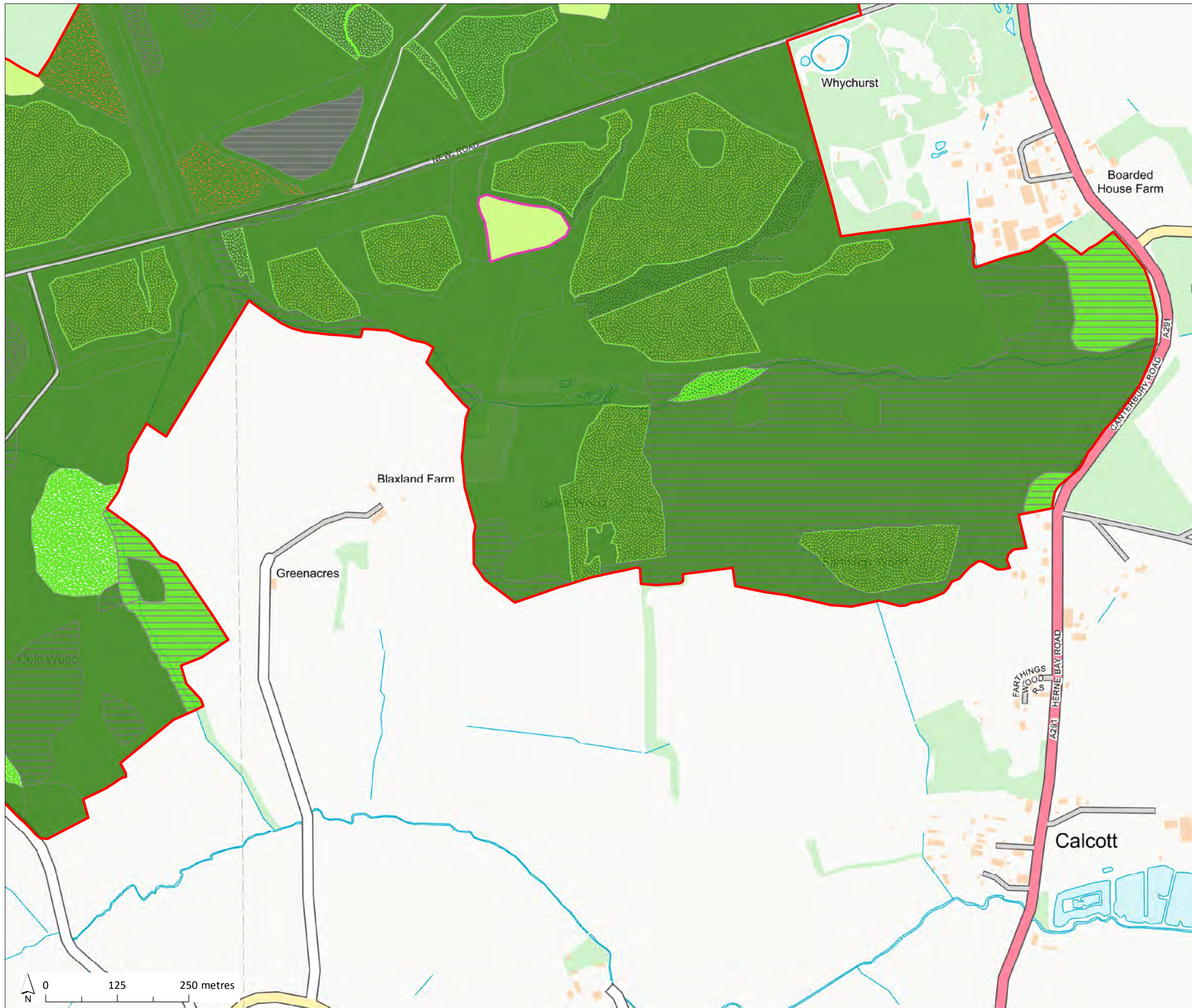
Drawn by: RJH

Checked by: RJH

Status: Final



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



West Blean and Thornden Woods - NVC Survey

NVC southeast

- Study Area
- W1
- W8a
- W8a/W10b
- W8b
- W8b/W10a
- W8b/W10b
- W10a
- W10a (Pinus sylvestris - degraded)
- W10a (Pinus nigra - degraded)
- W10a (mixed Pinus - degraded)
- W10a/H1
- W10a/U4
- W10a/W14
- W10a/W16a
- W10a/W23a
- W10b
- W10c
- W10d
- W10d (Pinus sylvestris - degraded)
- W10d (mixed conifers - degraded)
- W14
- W14 (Pinus sylvestris/Fagus - degraded)
- W16a
- W16a (Pinus nigra - degraded)
- W16a (Pinus sylvestris - degraded)
- W22a
- W23a
- Pinus sylvestris plantation (no NVC remnant)
- Tsuga heterophylla plantation (no NVC remnant)
- Cupressus x leylandii (no NVC remnant)
- main path
- arable
- MG13
- MG6a (Alop prat var.)
- S22
- standing water

Figure 3.10

Map Scale @ A3: 1:6,500

Surveyed by: RJH

Survey date: 4-7 May 2021

Drawn by: RJH

Checked by: RJH

Status: Final

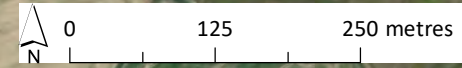




West Blean and Thornden Woods - NVC Survey

NVC southeast - aerial

 Study Area



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Figure 3.11

Map Scale @ A3: 1:6,500

Surveyed by: RJH
Survey date: 4-7 May 2021
Drawn by: RJH
Checked by: RJH
Status: Final



4 Conclusions

- The Study Area (570 ha) supported 557 ha of woodland in total which is equivalent to 98% of the total area. The composition and structure of the woodland varied considerably reflecting patterns of past treatment, management and occasionally restocking, with individual NVC types usually incorporating a range of contrasting structural stages.
- The most common and widely distributed NVC woodland type was W10 *Quercus robur*-*Pteridium aquilinum*-*Rubus fruticosus* woodland which accounted for around 85% of the woodland present, and with sub-communities W10a and W10b the most widespread.
- Low lying areas with base rich soils typically supported W8 *Fraxinus excelsior* - *Acer campestre* - *Mercurialis perennis* woodland which was more diverse in terms of tree, shrub, and ground layer plants, and accounted for around 4% of the woodland cover.
- Small areas of other woodland types were also present including W16 *Quercus* spp. - *Betula* spp. - *Deschampsia flexuosa* woodland, W14 *Fagus sylvatica* - *Rubus fruticosus* woodland, W1 *Salix cinerea* - *Galium palustre* woodland and W22 *Prunus spinosa* - *Rubus fruticosus* scrub.
- Various plantations of Scots pine *Pinus sylvestris*, Corsican pine *P. nigra*, western hemlock *Tsuga heterophylla* and Leyland cypress *Cupressus × leylandii* were also present, resulting in a range of degraded NVC woodland communities, and in some instance stands that could not be assigned to an NVC type due to severe degradation.
- Notable plant interest was restricted to a range of woodland and heathland plants that are Near Threatened in England due to significant population decline.



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