



The Croft Medical Centre, Eastergate, West Sussex

Ecology Report

Produced for Montagu Evans LLP

By Applied Ecology Ltd

July 2016

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Contents

1	Introduction	1
	Background	1
2	Survey Approach & Findings	5
	Survey Approach	5
	Survey Findings	5
3	Conclusions and Recommendations	10
	Conclusions	10
	Recommendations	10
	Appendix 1	13
	Plant species list	13
	Appendix 2	17
	Biodiversity Checklist	17
	Appendix 3	19
	Landscape proposal plans	19
	Figures	
	Figure 1.1: Site location.	4
	Figure 2.1: Site photographs.	8
	Figure 2.2: Site boundary and northern land area.	9





1 Introduction

Background

- 1.1 Applied Ecology Ltd (AEL) was commissioned by Montagu Evans LLP (on behalf of the Croft Medical Practice), in June 2016, to undertake an ecological appraisal of an area of land (the proposed location for a new medical centre) located to the north and west of the existing Croft Medical Centre in Eastergate, near Chichester, West Sussex (central grid reference SU 94668 05690). The location of the application site is shown by **Figure 1.1**.

Legislation & Planning

Legislation

- 1.2 The Wildlife and Countryside Act 1981 (as amended) provides the main legal framework for nature conservation and species protection in the UK. The Site of Special Scientific Interest (SSSI) is the main statutory nature conservation designation in the UK. Such sites are notable for their plants, or animals, or habitats, their geology or landforms, or a combination of these. Natural England is the key statutory agency in England for advising Government, and for acting as the Government's agent in the delivery of statutory nature conservation designations.
- 1.3 Designation of a SSSI is a legal process, by which sites are notified under the Wildlife and Countryside Act 1981. The 1981 Act makes provision for the protection of sites from the effects of changes in land management, and owners and occupiers receive formal notification specifying why the land is of special scientific interest, and listing any operations likely to damage the special interest.
- 1.4 The Countryside and Rights of Way Act 2000, and The Natural Environment and Rural Communities (NERC) Act 2006, provide supplementary protected species legislation. Specific protection for badgers *Meles meles* is provided by the Protection of Badgers Act 1992.

Habitats and Species of Principal Importance in England

- 1.5 The Natural Environment and Rural Communities (NERC) Act came into force on 1 October 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list has been drawn up in consultation with Natural England, as required by the Act.
- 1.6 The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.



Habitats of Principal Importance

- 1.7 Fifty-six habitats of principal importance are included on the S41 list. These are all the habitats in England that were identified as requiring action in the UK Biodiversity Action Plan (UK BAP) and continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework. They include terrestrial habitats such as upland hay meadows to lowland mixed deciduous woodland, and freshwater and marine habitats such as ponds and sub-tidal sands and gravels.

Species of Principal Importance

- 1.8 There are 943 species of principal importance included on the S41 list. These are the species found in England which were identified as requiring action under the UK Biodiversity Action Plan (BAP) and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework. In addition, the hen harrier *Circus cyaneus* has also been included on the list because without continued conservation action it is unlikely that the hen harrier population will increase from its current very low levels in England.
- 1.9 In accordance with Section 41(4) the Secretary of State will, in consultation with Natural England, keep this list under review and will publish a revised list if necessary.

National Planning Policy Framework

- 1.10 The National Planning Policy Framework (NPPF) was published in March 2012 and replaces previous planning policy guidance (PPS 9) on biodiversity. NPPF states the following in relation to biodiversity and planning:

“When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

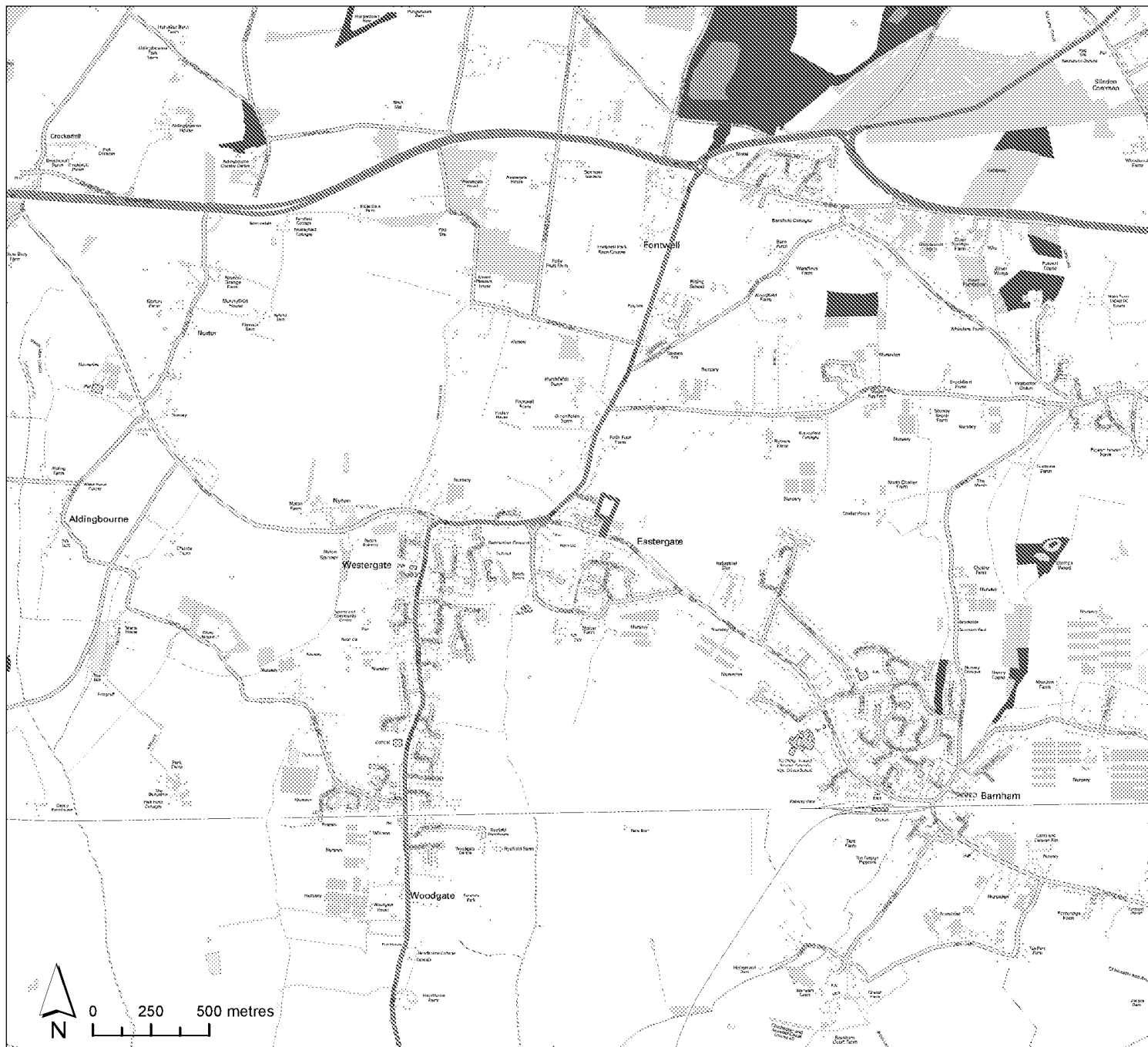
- *if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- *proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site’s notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of Sites of Special Scientific Interest;*
- *development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;*
- *opportunities to incorporate biodiversity in and around developments should be encouraged;*
- *planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged*



or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; and

- *the following wildlife sites should be given the same protection as European sites:*
 - *potential Special Protection Areas and possible Special Areas of Conservation;*
 - *listed or proposed Ramsar sites; and*
 - *sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites. The presumption in favour of sustainable development does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined.”*





The Croft Medical Centre Eastergate

Site location

-  site boundary
-  Site of Special Scientific Interest (SSSI) - none present within area shown
-  Local Nature Reserve (LNR) - none present within area shown
-  Ancient & semi-natural woodland
-  Ancient replanted woodland

Figure 1.1

Map Scale @ A4: 1:25,000

Surveyed by: RJH

Survey date: n/a

Drawn by: RJH

Checked by: DP

Status: Final



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ARUN DISTRICT COUNCIL EG/47967EL

2 Survey Approach & Findings

Survey Approach

- 2.1 A habitat and protected species walkover survey of the site was undertaken by experienced AEL ecologist Rob Hutchinson (RH) MCIEEM on 16 June 2016.
- 2.2 It is of note that an ecological appraisal of the site, including a biological record search undertaken by Sussex Biodiversity Records Centre (SxBRC) and a habitat and protected species walkover, was undertaken by AEL (RH) in 2009. The SxBRC 2009 data search did not highlight any significant potential concerns in relation to designated wildlife sites, and a new data search has not been commissioned as part of the current appraisal. A verification check for statutory wildlife sites and Ancient Woodland in relation to the site has however been undertaken using the data downloaded from Natural England's website.
- 2.3 The habitats present have been recorded and described using standard Phase 1 habitat survey categories¹. A list of the plant species present has also been recorded together with an estimate of their individual relative abundance according to the DAFOR scale².
- 2.4 All physically accessible ground within the site boundary was walked and carefully investigated for evidence of the presence of animal species protected by wildlife law or covered by biodiversity planning initiatives. In the absence of field evidence, a professional judgement assessment of habitat suitability for such species was made based on the habitats present, their extent and connectivity, and with consideration to existing species records.

Survey Findings

Designated Sites and Protected Species Records

- 2.5 No statutorily designated wildlife sites or Ancient Woodland occur within 1km of the site as shown by **Figure 1.1**. Based on the 2009 SxBRC data search, only one non-statutory wildlife site, namely Fontwell Park Racecourse Site of Nature Conservation Importance (SNCI) is present within a 1km buffer and is located 600m to the north of the site. In addition, a section of protected road verge occurs along Barnham Road, around 45m west of the site's entrance. Fontwell Park Racecourse SNCI and the protected road verge would not be directly or indirectly impacted by the proposed development.
- 2.6 With the possible exception of hedgehog, for which there were two on-site or nearby records from 1997/8, none of the protected species records provided by SxBRC as part of the 2009 data search appeared to relate to the site itself. However, a range of species, including great crested newt, slow-worm, common lizard, grass snake, adder, pipistrelle bat and hazel dormouse, have been recorded from within the wider search area, and comments on the likely presence of these species are provided below.

¹ JNCC (1993) *Handbook for Phase 1 Habitat Survey – A technique for Environmental Audit*. JNCC. Peterborough.

² Where: D = Dominant, A = Abundant, F = Frequent, O = Occasional, and R = Rare.



Habitats and Plants

- 2.7 A list of the plant species recorded during the 2016 walkover survey is provided in **Appendix 1**, and a selection of site photographs are provided in **Figure 2.1**.
- 2.8 The site was formerly part of a large commercial market garden that has been unmanaged and derelict for the last 25 years. The site occupies the southern part of a neglected field (around 90 x 65m) and supports a mix of rank grassland and bramble patches, with a north-south orientated linear car-park on its southern side, off Barnham Road.
- 2.9 The site is bordered to the south and west by residential houses and gardens and to the east by an unmanaged species-poor hawthorn *Crataegus monogyna* hedge with trees. A large area of woody scrub and grassland is located beyond the eastern boundary (as identified from aerial photographs), which also apparently formed part of the former market garden site. To the north, the site adjoins a contiguous area of rank grassland and bramble scrub that is also owned by the Croft Medical Practice, but lies outside the current application area.
- 2.10 As described above, the southernmost part of the site consisted of a north-south orientated linear hard-standing car-park, with gated access into the wider open field (**Photos 1 & 2**). The site had been cut in advance of the February 2009 survey, but appears to have been unmanaged since this time, comprising a rank semi-improved sward of false oat-grass *Arrhenatherum elatius*, Yorkshire-fog *Holcus lanatus*, rough-meadow grass *Poa trivialis*, nettle *Urtica dioica* and field horse-tail *Equisetum arvense*, interspersed with dense patches of bramble (**Photos 3 & 4**).
- 2.11 Small areas of ephemeral / short perennial vegetation are present on areas of former hard-standing and over footprints of dismantled buildings (**Photo 5**) and support a range of ephemeral and disturbed ground species, such as perforate St John's-wort *Hypericum perforatum*, lesser swine-cress *Coronopus didymus*, ground-ivy *Glechoma hederacea*, sticky mouse-ear *Cerastium glomeratum*, common couch *Elytrigia repens* and annual meadow-grass *Poa annua*.

Protected Animal Species

Overview

- 2.12 An Arun District Council Biodiversity Checklist has been completed and is provided in **Appendix 2**, and should be read in conjunction with this appraisal report.
- 2.13 The closest pond to the site, as shown by the 1:25,000 Ordnance Survey map, is located around 700m to the west, and therefore given this distance is beyond normal great crested newt (GCN) commuting range, potential impacts on GCN are not anticipated.
- 2.14 No evidence of badger activity in the form of their setts, foraging, paths or latrines, was seen during the 2009 or 2016 walkover surveys. However, patches of dense bramble could not be physically searched and it is therefore recommended that a watching brief for badger setts is maintained during site clearance.
- 2.15 No buildings or mature trees with the potential to support roosting bats are present within the site and therefore no impacts on roosting bats are anticipated.



- 2.16 Given the site lacks mature woodland, and contains only relatively small and relatively isolated patches of dense bramble (a sub-optimal habitat for dormice) the presence of dormice is considered highly unlikely.

Reptiles

- 2.17 No reptiles were observed during the 2009 or 2016 walkover surveys. However, the mix of rank grassland, bramble scrub and open ground is considered suitable for reptiles and their presence / absence would need to be confirmed by specific survey.
- 2.18 If a reptile presence were confirmed, the proposal would be to use the adjoining northern land area (**Photo 6**), which is also under the ownership and control of the Croft Medical Practice, as a reptile receptor site (**Figure 2.2**). The northern receptor area would be enhanced through select bramble clearance and hibernacula creation in order to increase its reptile carrying capacity, with related long-term management.
- 2.19 It is of note that a substantial area of meadow grassland, connected to the northern receptor area, would be provided as part of the post-construction landscaping works around the new Medical Centre and would create additional habitat for reptiles in the long-term.

Breeding birds

- 2.20 A number of common garden bird species were noted during the 2009 and 2016 walkovers, including black bird, blue tit, great tit, carrion crow and wood pigeon. None of the bird species recorded, or the habitats present, indicate that the site is likely to support significant bird assemblages or high numbers of breeding birds. No ground nesting bird species (e.g. skylarks) were evident at the time of survey.
- 2.21 No further survey work for birds is considered necessary, but specific measures to reduce the risk of killing and/or injuring nesting birds during site clearance are recommended.

Hedgehog

- 2.22 No hedgehogs were recorded during the walkover survey. However, two records (from 1997-8) for locations within or very close to the site were provided by SxBRC in 2009. No further survey work is considered necessary to quantify the hedgehog population, but mitigation is recommended that aims to minimise the risk of harm to this species during site clearance.





Photo 1



Photo 2



Photo 3



Photo 4

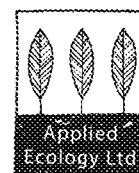


Photo 5



Photo 6

The Croft Medical Centre, Eastergate
Figure 2.1: Site photographs



The Croft Medical Centre Eastergate

Site boundary and northern land area

-  site boundary
-  northern land area (potential reptile receptor site)

Figure 2.1

Map Scale @ A4: 1:2,000

Surveyed by: RJH

Survey date: n/a

Drawn by: RJH

Checked by: DP

Status: Final



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3 Conclusions and Recommendations

Conclusions

- 3.1 The site supports a mix of neglected rank grassland and bramble patches that are of limited value in botanical and habitat terms.
- 3.2 The presence of reptiles cannot be discounted. If reptile presence is confirmed appropriate mitigation could be delivered by using the land area to the north of the site as a reptile receptor area. This land area is also owned by the Croft Practice, and would be subject to habitat enhancement in order to increase its reptile carrying capacity prior to reptile translocation, and a commitment made to its long-term management.
- 3.3 A precautionary approach to breeding birds and badgers would also need to be followed during site clearance as outlined below.

Recommendations

Protection of Site Ecology

- 3.4 The following recommendations should be followed in order to protect the site's existing ecology:
 - A reptile survey of the site and adjoining northern land area is to be undertaken (and is underway) in order to confirm the presence / absence of reptile species. An appropriate and deliverable mitigation strategy has been outlined above, and if reptile presence is confirmed further details of this strategy could in our opinion be dealt with by a specific planning condition.
 - All dense ground vegetation (e.g. dense grass and bramble / woody scrub) should be cleared outside of the bird nesting period (which should be considered to be March to August inclusive), or following confirmation by an ecologist that habitats to be cleared are free of breeding birds.
 - Efforts should be made to ensure that site clearance operations, particularly the clearance of dense vegetation should be undertaken in such a manner as to avoid accidental killing and injury of hedgehogs that might be sheltering within the Site. All dense ground vegetation should be cleared by hand outside of the bird nesting period (as described above) and the ground checked by an ecologist to ensure that it is free of hedgehogs before machinery is allowed to break the ground surface. Any hedgehog that is found should be relocated to a safe sheltered part of the northern land area. All cut vegetation should be chipped on site or, preferably, removed from site and not stored in heaps that could prove attractive to hedgehogs for shelter unless the intention is to leave them as permanent habitat piles for wildlife.

Ecological Enhancements

- 3.5 The landscape proposal plans (**Appendix 3**) incorporate a number of ecological enhancements, principally:



- A substantial area of new meadow grassland (Emorsgate EM5 Meadow mixture for loamy soils) to be created and managed by annual late summer cutting with arisings removed.
- Native hedgerow planting to be provided along eastern boundary, including hawthorn *Crataegus monogyna*, dogwood *Cornus sanguinea*, hazel *Corylus avellana*, spindle *Euonymus europaeus*, holly *Ilex aquifolium*, wild privet *Ligustrum vulgare*, blackthorn *Prunus spinosa* and guelder-rose *Viburnum opulus*.
- New tree planting (around 48 individual trees) including oak *Quercus robur*, rowan *Sorbus aucuparia*, field maple *Acer campestre*, silver birch *Betula pendula*, crab apple *Malus sylvestris*, hornbeam *Carpinus betulus* and wild cherry *Prunus avium*.



Appendix 1

Plant species list



Plant species recorded in June 2016

Latin name	English name	Relative abundance
<i>Arrhenatherum elatius</i>	false oat-grass	Abundant
<i>Poa trivialis</i>	rough meadow-grass	Abundant
<i>Rubus fruticosus</i> agg.	bramble	Locally abundant
<i>Cirsium arvense</i>	creeping thistle	Frequent
<i>Dactylis glomerata</i>	cock's-foot	Frequent
<i>Equisetum arvense</i>	field horsetail	Frequent
<i>Urtica dioica</i>	common nettle	Frequent
<i>Anthoxanthum odoratum</i>	sweet vernal-grass	Occasional
<i>Bromus hordeaceus</i>	common soft-brome	Occasional
<i>Cerastium fontanum</i>	common mouse-ear	Occasional
<i>Cerastium glomeratum</i>	sticky mouse-ear	Occasional
<i>Cirsium vulgare</i>	spear thistle	Occasional
<i>Coronopus didymus</i>	lesser swine-cress	Occasional
<i>Crataegus monogyna</i>	hawthorn	Occasional
<i>Elytrigia repens</i>	common couch	Occasional
<i>Galium aparine</i>	cleavers	Occasional
<i>Geranium dissectum</i>	cut-leaved crane's-bill	Occasional
<i>Glechoma hederacea</i>	ground-ivy	Occasional
<i>Heracleum sphondylium</i>	hogweed	Occasional
<i>Holcus lanatus</i>	Yorkshire-fog	Occasional
<i>Medicago lupulina</i>	black medick	Occasional
<i>Myosotis arvensis</i>	field forget-me-not	Occasional
<i>Plantago lanceolata</i>	ribwort plantain	Occasional
<i>Ranunculus repens</i>	creeping buttercup	Occasional
<i>Rumex acetosa</i>	common sorrel	Occasional
<i>Rumex obtusifolius</i>	broad-leaved dock	Occasional
<i>Sambucus nigra</i>	elder	Occasional
<i>Trifolium pratense</i>	red clover	Occasional
<i>Vicia sativa</i>	common vetch	Occasional
<i>Vicia sepium</i>	bush vetch	Occasional
<i>Vicia tetrasperma</i>	smooth tare	Occasional
<i>Alliaria petiolata</i>	garlic mustard	Rare



Latin name	English name	Relative abundance
<i>Anagallis arvensis</i>	scarlet pimpernel	Rare
<i>Anthriscus sylvestris</i>	cow parsley	Rare
<i>Arabidopsis thaliana</i>	thale cress	Rare
<i>Arctium minus</i>	lesser burdock	Rare
<i>Ballota nigra</i>	black horehound	Rare
<i>Brachypodium sylvaticum</i>	false-brome	Rare
<i>Buddleja davidii</i>	butterfly-bush	Rare
<i>Carex otrubae</i>	false fox-sedge	Rare
<i>Clematis vitalba</i>	traveller's-joy	Rare
<i>Crepis capillaris</i>	smooth hawk's-beard	Rare
<i>Dipsacus fullonum</i>	wild teasel	Rare
<i>Epilobium hirsutum</i>	great willowherb	Rare
<i>Fumaria officinalis</i>	common fumitory	Rare
<i>Hypericum perforatum</i>	perforate st john's-wort	Rare
<i>Juncus inflexus</i>	hard rush	Rare
<i>Lamium purpureum</i>	red dead-nettle	Rare
<i>Picris hieracioides</i>	hawkweed oxtongue	Rare
<i>Potentilla sterilis</i>	barren strawberry	Rare
<i>Ranunculus ficaria</i>	lesser celandine	Rare
<i>Rosa rugosa</i>	Japanese rose	Rare
<i>Scrophularia auriculata</i>	water figwort	Rare
<i>Senecio erucifolius</i>	hoary ragwort	Rare
<i>Senecio vulgaris</i>	groundsel	Rare
<i>Stellaria media</i>	common chickweed	Rare
<i>Tanacetum vulgare</i>	tansy	Rare
<i>Trifolium repens</i>	white clover	Rare
<i>Veronica persica</i>	common field-speedwell	Rare



Appendix 2

Biodiversity Checklist





BIODIVERSITY CHECKLIST

Please complete this form having regard to the Biodiversity Checklist Notes, which can be found at:

<http://www.arun.gov.uk/biodiversity-checklist>

If you tick Yes, you must provide supporting information/statement with the application. If you do not the application will be held as invalid until you do so.

Site Address/Application Reference Number:

THE CROFT MEDICAL CENTRE
EASTGATE

Bats

YES

NO

Has the site been surveyed for bats?

☐☒

Are there any structures on site which have the potential to support roosting bats?

☐☒

Structures with high potential include all agricultural buildings, buildings with weather boarding, tunnels, mines, ice houses, bridges, cliff faces with crevices and woodland. Further guidance can be found in 'Bat Surveys: Good Practice Guidelines' available from www.bats.org.uk and the Bat Mitigation Guidelines available from:

<http://www.naturalengland.org.uk/ourwork/regulation/wildlife/species/bats.aspx>

Are there any trees on the site which have the potential to support roosting bats?*

☐☒

Trees with high potential to support roosting bats include old and veteran trees and any tree with cracks or crevices. Where appropriate, foraging and commuting routes should be incorporated into the design of the scheme. Further guidance can be found in 'Bat Surveys: Good Practice Guidelines'.

Barn Owls

YES

NO

Has the site been surveyed for barn owls?*

☐☒

Is there any evidence of barn owls nesting on or near the site or are there suitable nesting areas on the development site?*

☐☒

Barn owls often nest in farm buildings, dovecotes, bale stacks, hollow trees and a wide variety of derelict buildings. Barn owls require habitat which supports high number of small mammals including pasture, hedgerows and woodland. Further information can be found at <https://www.gov.uk/guidance/construction-near-protected-areas-and-wildlife>

Breeding birds

YES

NO

Has the site been surveyed for breeding birds?*

☐☒

Will areas of hedgerow/scrub/woodland/trees or other features likely to be used by nesting birds be affected by the proposal?*

☒☐

If 'Yes' then mitigation measures to ensure occupied nests are protected should be included with the application.

Badgers

YES

NO

Has the site been surveyed for badgers?*

☒☐

Is there any evidence of badgers on or near the application site?*

☐☒

Are badgers commuting through the site to foraging areas?*

☐☒

Badgers use a wide variety of habitats and setts can be found in hedgerows, woodlands, scrub and field margins. Where appropriate, safe routes to foraging areas should be incorporated into the development proposals. Further information can be found in 'Badgers and Development' available at:

<http://www.naturalengland.org.uk/ourwork/regulation/wildlife/species/badgers.aspx>

Updated 11/05/16

Dormice

YES

NO

Has the site been surveyed for dormice?*

☐☒

Is there suitable habitat for dormice on, or close to the application site?*

☐☒

Dormice are found in a variety of habitats including ancient semi-natural woodland, scrub, young plantations (both broadleaved and coniferous) and hedgerows. Occasionally they are recorded in gorse scrub, heathland and alder trees in reedbeds.

<https://www.gov.uk/guidance/hazel-dormice-protection-surveys-and-licences>

Great crested newts

YES

NO

Has the site been surveyed for great crested newts?*

☐☒

Is there suitable habitat for great crested newts on, or close to the application site?*

☐☒

Great crested newts are often recorded in ponds, reedbeds, ditches and mineral workings. Terrestrial habitat used by newts is varied and includes semi-natural grassland, woodland, hedgerows and pasture and are often found in urban sites including gardens. Further guidance on great crested newts can be found in the Great Crested Newt Mitigation Guidelines from:

<https://www.gov.uk/guidance/great-crested-newts-protection-surveys-and-licences>

Reptiles

YES

NO

Has the site been surveyed for reptiles?*

☐☒

Is there suitable habitat on the site for reptiles?*

☒☐

Reptiles use a variety of habitats including rough grassland, heathland, allotments, scrub, brownfield sites, field margins and abandoned gardens. Further information can be found at:

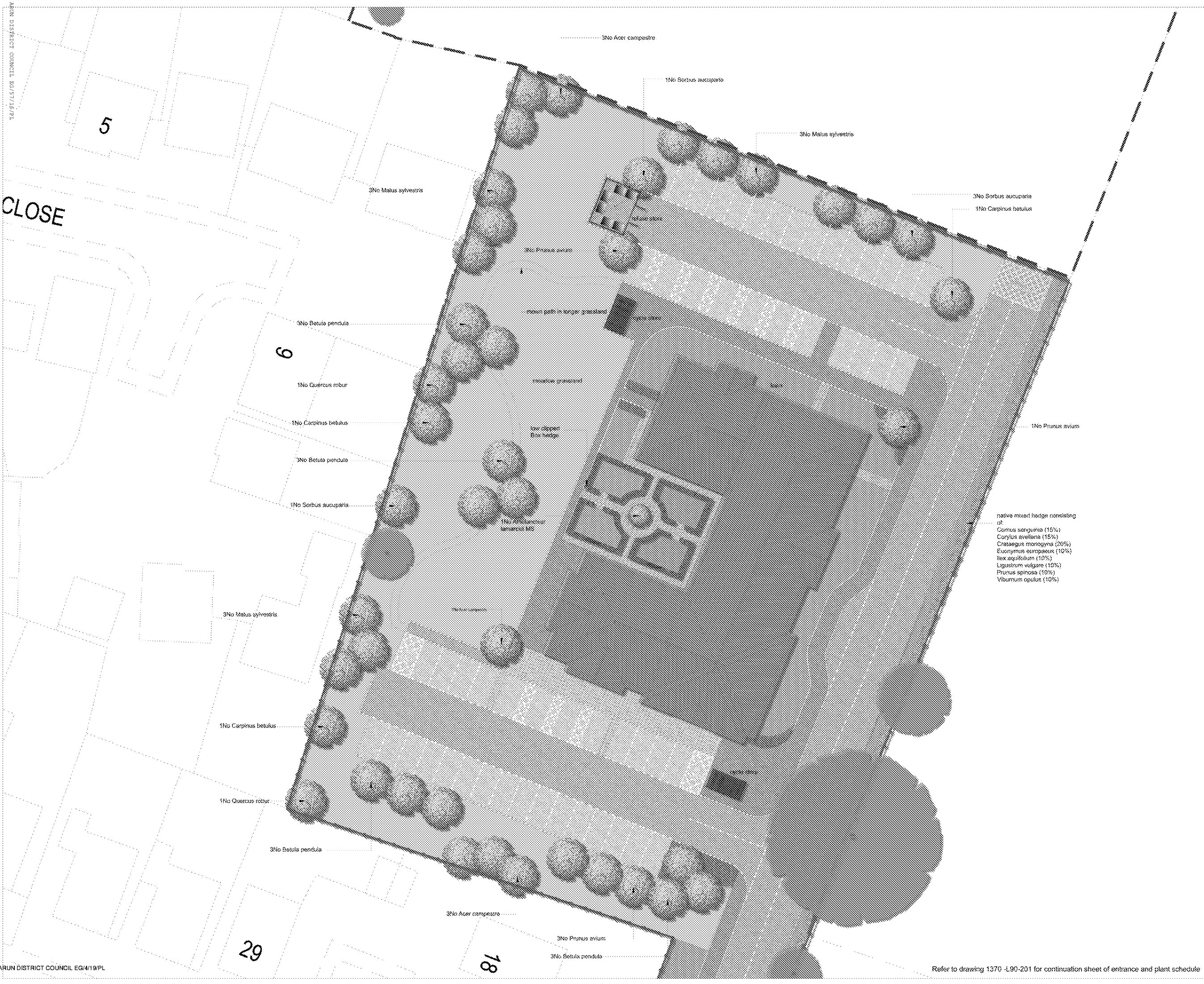
<https://www.gov.uk/guidance/reptiles-protection-surveys-and-licences>

Appendix 3

Landscape proposal plans



CLOSE



Contractors are not to scale dimensions from this drawing

Revision Date

- Legend
- existing trees retained
 - tree planting
 - 1.8m High Close boarded fence
 - coloured Tarmacadam (colour: buff gravel)
 - Tarmacadam for roads
 - Tarmacadam for footpaths
 - Tegula setts (colour: Traditional)
 - Saxon paving flags (colour: natural)
 - proposed amenity grass areas
 - proposed meadow grass areas
 - proposed shrubs and ground cover
 - proposed Box hedge
 - proposed native mixed hedge

landscape perspective
Chartered Landscape Architects

The Studio
21 Pine Tree Hill
Woking
Surrey GU22 8LZ
T: 01483 714114
www.landscaperspective.co.uk

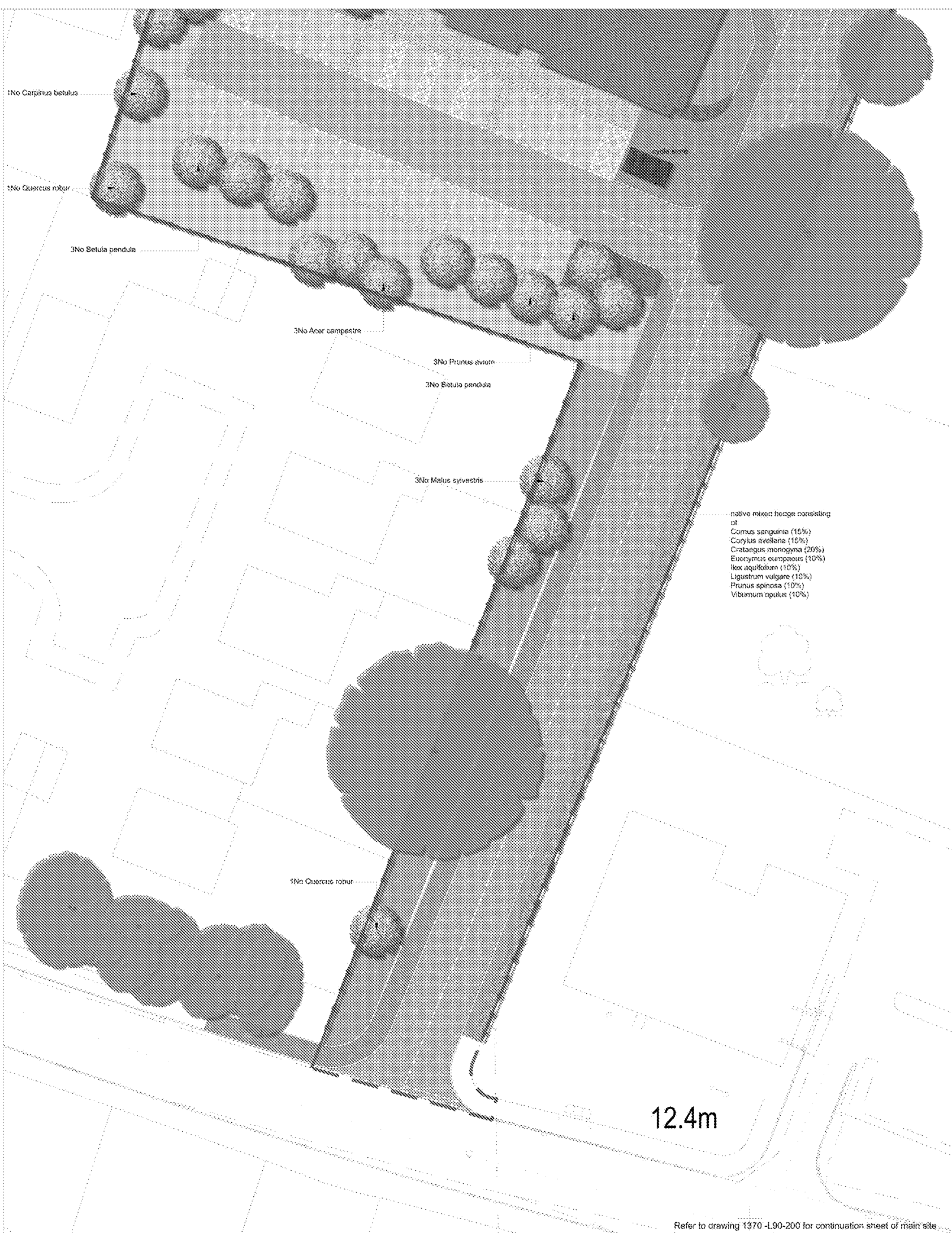
Client
The Croft Medical Centre
Project
The Croft Medical Centre, Barnham
Title
Landscape details sheet 1 of 2

Status
for planning
Scale
1:200
Job number
1370
Drawn
AR
Drawing number
L90-200
Date
Feb 2018
Revision

Refer to drawing 1370 -L90-201 for continuation sheet of entrance and plant schedule

Typical planting Schedule				
Name	Form	size/height	Condition	Density
		(cm girth /		
		metres high)		
Trees				
Amelanchier lamarckii	MS	2.5-3.0m high	br	as shown
Acer campestre	standard	10-12cm girth	br	as shown
Betula pendula	standard	12-14cm girth	br	as shown
Carpinus betulus	EHS	16-18cm girth	br	as shown
Malus sylvestris	standard	12-14cm girth	br	as shown
Prunus avium	standard	12-14cm girth	br	as shown
Quercus robur	EHS	16-18cm girth	br	as shown
Sorbus aucuparia	standard	12-14cm girth	br	as shown
Native hedgerow				
Cornus sanguinea (15%)	Transplant	30-60cm	Br	Planted in staggered
Corylus avellana (15%)	Transplant	30-60cm	Br	double row - 5 plants
Crataegus monogyna (20%)	Transplant	30-60cm	Br	per m
Euonymus europaeus (10%)	Transplant	30-60cm	Br	
Ilex aquifolium (10%)	Transplant	30-60cm	Br	
Ligustrum vulgare (10%)	Transplant	30-60cm	Br	
Prunus spinosa (10%)	Transplant	30-60cm	Br	
Viburnum opulus (10%)	Transplant	30-60cm	Br	
Amenity shrub planting				
Buxus sempervirens	hedge	20-30cm	1L cg	5/lin m
Cistus 'Silver Pink'	Bush	20-30cm	5L cg	4/m ²
Choisya ternata 'Sundance'	Bush	40-60cm	5L cg	3/m ²
Hebe 'Autumn Glory'	Bush	20-30cm	5L cg	4/m ²
Hebe 'Emerald Green'	Bush	20-30cm	5L cg	4/m ²
Lonicera 'May Green'	Bush	20-30cm	5L cg	4/m ²
Photinia 'Little Red Robin'	Bush	30-40cm	5L cg	4/m ²
Prunus laurocerasus 'Otto Luyken'	Bush	40-60cm	5L cg	5/m ²
Skimmia 'Olympic Flame'	Bush	40-60cm	5L cg	4/m ²
Vinca minor 'Variegata'	Bush	20-30cm	3L cg	5/m ²

Planting specification Turfed: All soft landscape areas to be raised through to a minimum depth of 450mm, or as necessary to relieve compaction and avoid the positive drainage, prior to topsoiling. Soft landscape areas to be raised to a minimum depth of 150mm in curved areas and 450mm topsoil in slope planting areas. Finished topsoil levels to be level with adjoining paving and kerbs, and to planted areas 50 mm below adjoining paving and kerbs. Finished topsoil levels to be a minimum 100 mm below the top of adjoining buildings. All topsoil to conform to BS 5882: 2007 'Allpurpose' or better. If existing topsoil is reclaimed one stored on site for re-use in soft landscape areas, obtain an independent analysis in accordance with BS 5882, Annex E, and ameliorate soil in accordance with recommendations. Barfing: Turf to be laid ideally in Spring or Autumn, or may be laid at other times if the weather conditions are suitable. Do not lay when persistent cold or drying winds are likely to occur or when soil is frost bound, waterlogged or excessively dry. Areas to be barfed to be cleared of weeds by hand weeding. Persistent weeds to be treated with selective contact herbicide. Turf to be cultivated to avoid: blowing conditions and ensure over 25mm dia. removed. A clear release pre-sent fertilizer to be incorporated into the top 25mm 3-5 days before barfing. Areas to be cultivated to bring to a fine blh immediately prior to barfing. Turf to be 'Rooted' 'Mazzell' or equal approved and laid within 24 hours of delivery. Turf to be laid from places and placed with back to back, well tucked up. Do not stretch turf. Edges to be formed with wheel bar, smoothed to a true line. Laid turf to be lightly firmed without using rollers. Fill any joints with fine soil or sandy loam. Complete turf to be thoroughly watered immediately after laying. First cut to take place when grass is reasonably dry and height of initial growth is 60-75 mm. Grass to be collected and removed from site. Cut and maintain to a height of 20-50mm. Collect and remove weeds from site. Seeding for meadow grasses: Seeding: Sow in autumn or spring but can be sown at other times of the year if there is sufficient warmth and moisture. Seed must be sown evenly and can be applied by machine or broadcast by hand. Divide the seed into two or more parts and sow in overlapping sections. Do not incorporate or cover the seed, but firm in with a roller, or by beating, to give good seed/soil contact. Prepare seed bed & remove weeds using repeated cultivation or a herbicide. Plough to dig to bury the surface vegetation, remove or rake to produce a medium blh, and roll, or board, to produce a fine surface. Loamy soils are easily worked and can usually be prepared for seeding in either the autumn or spring. Meadow grassland area to be seeded with <i>Emmagine</i> 240s - Meadow mixture for loamy soils, 50% grasses, 20% wildflowers sown at 4g/m². Planting - general Planting to take place at the chosen time of year, ie late October to late March, and when the weather conditions are suitable and the ground is moist and friable. Do not plant when the ground is waterlogged, frozen or snow covered, or during strong winds. Plants to be true to name and specification, and to the relevant part of BS 3098. Substitutions will not be accepted unless agreed in writing. Plant handling to be to the HTA's Standard 'Handling and establishing landscape plants'. Plants shall be covered during transport. Bulk deliveries shall be in pallets or sealed containers with the plants kept upright and protected to avoid damage. Shrub and herbaceous planting: Planting areas to be cleared of weeds by hand weeding. Persistent weeds to be treated with selective contact herbicide prior to mulching. Planting areas to be cultivated to a depth of 200mm incorporating 30mm depth of organic compost to F&S 100. Do not use peat based products. Cultivate to avoid: areas are firm up not into patches at 2-5 cm and leave surface regular and even. Remove viable weed roots, and large stones with any dimension exceeding 50 mm. Do not dig or cultivate soil within root spread of trees and shrubs to be retained. Slow release fertilizer (Sphero Emerald CRF or similar) to be incorporated into the top 25mm at the rate of 40g/m² 3-5 days before planting. Planting densities to be as per schedule and plants set out evenly across beds. Planting pits for shrubs to be 150mm wider than roots when fully spread and 200mm deep. Planting pits to be backfilled using previously excavated material and lightly firmed in. Planting beds to be marked with untreated bark mulch, or wood chip mulch for native boundary hedge planting only, to a depth of 75mm being care not to bury stems of low growing plants. Planting beds to be mulched in a weed free condition up to practical completion and any debris, including shell and mulch, during this period to be made good. Native hedge: Remove existing vegetation from line of hedge and create trench for planting, 600mm wide x 400mm deep. Hedge to be planted with standard Tudor style shelter 600mm high in double staggered row, 50% m with rows 450mm apart. Add plenty of peat-free organic compost as you back-fill with the source soil around the roots.	Tree planting: All trees to be provided with a preformed plastic integral pipe, 50 mm diameter, positioned to form a collar above and around either of rootball, and filled with a plastic and cap. Advanced Nursery Stock trees to be double staked with two stakes 2.1m long x 75mm dia (10% driven into the ground to either side of the rootball. Top of stakes to be 750mm above finished soil level. Standard trees to be single staked with a stake 1.8m long x 50mm dia (10% driven into the ground used to the rootball on the windward side of the tree. Top of stake to be 600mm above finished soil level. If we attached to stakes with a 'Tomb' tree or similar approved. Ties to be attached to stakes with galvanized flat headed nails. Trees pits to be backfilled using previously excavated material mixed three parts to one with 10% CRF, or similar approved, and formed in 150mm layers, ensuring tree and stakes remain vertical. Trees in grass areas to have a root free ring formed 1.0m diameter, and to be mulched with an ornamental bark mulch to a depth of 75mm on completion. Maintenance and defects liability period: All landscaped areas to be maintained for a period of 12 months following practical completion and to be subject to a 12 months defects liability period. Advanced Nursery Stock, Heavy Standard trees to be subject to a 24 months defects liability period. Maintenance visits to be carried out weekly during the growing season and fortnightly during the winter. Grass: Ensure that trees and shrubs are not damaged by use of mowers. Arrangements to be established and removed from site. - Turfed lawns: mow 13-14 cuts per annum. Ensure no tufts or tufts left standing above the cut height of the sward. Remove clippings during periods of high growth. Collect clippings during periods of low growth and remove off site. Firm edges abutting hard areas, shrub beds, manholes, etc. Reform edge annually as required. Weed control as necessary. Rooted 'Invasive' plants areas are required. - Seeded meadow grassland: mow 3 cuts per annum: first in early Spring in end of February (height 40-75mm), a hay cut mid-summer in mid-August to September (height 50-75mm), then two autumn cut in end October (40-75mm). Hay cutting shall take place while in flower in order to maximize the bird sowing available to wildlife. All cuttings should be removed to prevent smothering of sward/soil seedlings and to prevent nutrient build up, which can encourage competitive species. The use of fertilizers in meadows should be avoided to maximize species diversity in the long term. - Mown grassy paths: Maintain to a height of 75mm (approximately monthly cuts) throughout the growing period in March to October. Hedges: Box hedges to be cut twice a year to maintain clipped form. First cut should be done around late May or mid-June, after the first growth spurt. Second cut in September or October. Grass established native hedge to be trimmed during the winter half with regard to berries and flowers which should be allowed to fully develop in order to maximise food availability and cover for wildlife. In particular trimming operations during the first nesting period shall be avoided. It is an offence to disturb nesting wild birds and their nests under the Wildlife and Countryside Act 1981 (see amended) generally between March to August inclusive. In all cases, check an area prior to any work to ensure no birds nesting in the area of operation. Trim front of a hedge at a time to avoid disturbance areas for wildlife. Keep hedge line weed free by hand weeding and mulching. Shrub and herbaceous planting areas and tree rings: - To be maintained in a weed free condition by hand weeding taking care not to damage the roots. - Remove later than hand and soft landscape areas including grass. - Check condition of tree stakes, ties, guys and guards. Replace broken or missing ties and adjust to prevent rubbing and to accommodate growth. Check for wind rock particularly after strong winds and firm in / adjust stakes. - All trees and planting areas to be thoroughly watered as required in each maintenance visit. In the event of water restrictions seek guidance from the employer. - Much to be topped up to 75mm depth at the end of the defects liability period. - Leave the works to a decent tidy condition at completion and remove all debris after next maintenance visit. Defects: - Any defects, other than theft or malicious damage, occurring during the defects liability period to be made good. - Any plants that die or fail to establish in the first five years after planting should be replaced to the employer and replaced with identical species. Failure occurring after satisfactory moving goes at the end of the defects liability period are the Employer's responsibility. All tree stakes and ties to be removed 24 months after planting. In the case of replacement trees, or areas requiring continuing support, these are to remain and checked again after 12 months. All stakes and ties are to be removed as soon as the trees are able to support themselves.
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