

# **Broomfield, Chelmsford, Essex**

## **Extended Phase 1 Habitat Survey Report**



**On Behalf of Bloor Homes**

**V4 April 2018**

This report does not purport to provide legal advice. This report provides baseline ecological conditions for the aforementioned site and is considered relevant for a period of no more than 12 months.



## Document Control

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# Contents

<b>1</b>	<b>Introduction .....</b>	<b>8</b>
1.1	Terms of Reference .....	8
1.2	The Site .....	8
1.3	Proposals.....	8
<b>2</b>	<b>Methods of Assessment .....</b>	<b>9</b>
2.1	Desk Study.....	9
2.2	Extended Phase 1 Habitat Survey .....	9
2.3	Limitations to Survey .....	10
<b>3</b>	<b>Existing Conditions and Evaluation.....</b>	<b>12</b>
3.1	Designated Sites of Nature Conservation Value .....	12
3.1.1	Statutory Sites.....	12
3.1.2	Non-Statutory Sites.....	12
3.2	Habitats Recorded Within the Site .....	15
3.2.1	Arable .....	15
3.2.2	Defunct Species-rich Hedge and Trees .....	15
3.2.3	Semi-improved Neutral Grassland .....	16
3.2.4	Standing Open Water .....	16
3.2.5	Unimproved Neutral Grassland and Dense Scrub Mosaic .....	17
3.2.6	Dense Scrub .....	18
3.2.7	Tall Ruderal.....	18
3.2.8	Scattered Broad-leaved Trees .....	18
3.2.9	Scattered Coniferous Trees.....	18
3.2.10	Species-poor intact Hedgerow.....	18
3.2.11	Dry Ditch .....	19
3.2.12	Buildings .....	19
3.2.13	Hardstanding.....	19
3.3	Habitats Recorded Within the Wider Survey Area .....	19
3.3.1	Arable .....	19
3.3.2	Semi-natural Broad-leaved Woodland.....	19
3.3.3	Broad-leaved Plantation Woodland .....	19
3.3.4	Amenity Grassland.....	19






3.3.5	Standing Open Water .....	19
3.4	Protected and Notable Species.....	20
3.4.1	Otter, Water Vole and White-Clawed Crayfish .....	20
3.4.2	Badgers.....	20
3.4.3	Bats.....	20
3.4.4	Reptiles .....	24
3.4.5	Dormice .....	25
3.4.6	Great Crested Newts.....	26
3.4.7	Birds.....	29
3.4.8	Invertebrates .....	29
3.4.9	Invasive Species.....	30
3.4.10	Notable Plants.....	30
3.4.11	Other Species.....	30
<b>4</b>	<b>Mitigation and Further Survey .....</b>	<b>32</b>
4.1	Non-Statutory Sites of Nature Conservation.....	32
4.2	Habitats.....	32
4.3	Species.....	33
4.3.1	Badgers.....	33
4.3.2	Bats.....	33
4.3.3	Reptiles .....	34
4.3.4	Great Crested Newt.....	36
4.3.5	Birds.....	39
4.3.6	Invasive Species.....	39
4.3.7	Other Species.....	40
<b>5</b>	<b>Enhancement measures .....</b>	<b>42</b>
<b>6</b>	<b>Summary.....</b>	<b>43</b>
<b>7</b>	<b>References.....</b>	<b>44</b>
<b>Appendix 1- Vision Plans .....</b>		<b>Error! Bookmark not defined.</b>
<b>Appendix 2- Extended Phase 1 Habitat Plan.....</b>		<b>45</b>
<b>Appendix 3- Badger Survey Information.....</b>		<b>46</b>
<b>Appendix 4- HSI Results .....</b>		<b>48</b>
<b>Appendix 5- Survey Timetable.....</b>		<b>49</b>














## Ecological Risk Assessment

The following ecological risk assessment (Eco RA) provides an infographics summary of the recommendations made following an Extended Phase 1 Habitat Survey at a parcel of land north of Woodhouse Lane, Broomfield, Chelmsford. This Eco RA is not intended as a substitute for reading the full report as set out in the proceeding pages.






Risk Code Key		
	High Risk- Likely foreseen issue	Further survey work and mitigation recommended
	Moderate Risk- Some potential foreseen issue	Low level mitigation required, no further survey work recommended
	Low Risk- No foreseen issue	No further action required

Risk Code	Factor	Comments and Actions Required	Timings
	Habitats	Further surveys are required between June and July to compile exhaustive plant species lists and to assess the status of the grassland habitats. A Hedgerow Regulations assessment should be undertaken on the species-rich hedge and trees within the site to determine whether the hedgerows are protected under these regulation prior to any removal or management works. A tree survey should be undertaken by an experienced arboriculturalist to assess the value and health of trees around the site. Construction Environmental Management Plan (CEMP) to be produced.	Botanical- June to July
	Reptiles	Seven presence/absence surveys to be undertaken depending on local conditions, prior to site clearance.	March to June or September to October.
	Badgers	Please refer to Appendix 3.	NA



Risk Code	Factor	Comments and Actions Required	Timings
	Bats	An aerial inspection of PRFs on TN2, TN3 and TN4 is required, as well as a detailed scoping survey of all remaining trees to identify any further PRFs. Fixed point, static bat detector surveys also to be undertaken between April and October to establish importance of the network of hedgerows on site as commuting routes.	April to October
	Great Crested Newts	An HSI assessment to be undertaken on all remaining ponds within 500m (Ponds 3-18) to determine their suitability and requirement for further survey. Great crested newt presence/absence surveys to then be undertaken on all suitable ponds.	Mid-March and mid-June (with two surveys between mid-April to mid-May).
	Birds	Breeding bird surveys following the methodology for 'Common Bird Census' (CBC) devised by the British Trust for Ornithology (BTO) to be undertaken between March and August to determine the breeding bird community and estimate the abundance of the breeding bird species within the site.	March to August
	Dormice	Presence/absence surveys required.	April to November
	Invasive Species	Japanese Knotweed Management Plan to be produced and implemented for off-site growth.	ASAP
	Non-statutory Designated Wildlife Conservation Sites	Retain hedgerows within the site and enhance local ecological networks within the development design. Implement all recommendations provided in relation to Habitats. Incorporate SUDs into the development design. Consult with the landowners/ managing agents of Local Wildlife Sites Sparrowhawk Wood and Broomfield – Little Waltham Chelmer Mosaic and Little Waltham Village Meadow.	ASAP



Risk Code	Factor	Comments and Actions Required	Timings
	NERC Mammals	<p>Hedgehog and polecat assumed to be present and habitat connectivity to be retained in development design.</p> <p>Harvest Mouse Survey required.</p> <p>Any small mammals encountered during site clearance works should either be allowed to flee the area naturally or be safely translocated to the perimeter of the site to reduce the risk of killing or injury.</p>	<p>Design Phase</p> <p>October to March</p>
	Invertebrates	No further surveys for invertebrate are deemed necessary at this stage, although this may need to be revised following further surveys to establish status of grassland habitats on site.	
	Otter, Water Vole, WCCF	No further recommendations required.	
	Notable Plants	No further recommendations required.	
	Statutory Designated Wildlife Conservation Sites	No further recommendations required.	



## 1 Introduction

### 1.1 Terms of Reference

- 1.1.1.1 Practical Ecology Ltd was commissioned by Bloor Homes to undertake an Extended Phase 1 Habitat Survey of a parcel of land north of Woodhouse Lane, Broomfield, Chelmsford (herein referred to as 'the site') to inform a proposal for residential housing development.
- 1.1.1.2 This report presents ecological information gathered during a desk study and an Extended Phase 1 Habitat Survey of the site undertaken in April 2016.
- 1.1.1.3 The purpose of this report is to provide ecological baseline information pertaining to the site along with recommendations for further surveys, mitigation and enhancement as deemed appropriate.
- 1.1.1.4 Ecological baseline information for the site is essential so that the impacts of the proposed development of the site upon flora and fauna can be suitably managed. Enhancement measures are recommended so that the biodiversity of the site can be enhanced whilst taking into account legal requirements and best practice with regards to protected species and/or habitats.

### 1.2 The Site

- 1.2.1.1 The proposed development site lies immediately to the west of the B1008 and north of Broomfield Hospital, covering an area of around 28 Ha. (central OS grid reference: TL 70336 11849, postcode: CM1 7EU). The site comprises predominantly arable land and a network of hedgerows and a large water body formed by historic quarrying activity. Other habitats within the site include dry ditches, grassland, scrub, tall ruderal vegetation, scattered trees, buildings and hardstanding.
- 1.2.1.2 In the wider landscape, to the north is more arable land containing two small woodland blocks, while to the east is D&B Scaffolding Ltd premises, Broomfield Allotments and the B1008. To the south, meanwhile, is land associated with Broomfield Hospital which also includes a small woodland block and residential land and to the west is a large recreational playing field.

### 1.3 Proposals

- 1.3.1.1 Current vision plans are to build a new village on site based on 'healthy living' principles. This would deliver up to 630 new homes, as well as a range of necessary facilities and infrastructure.
- 1.3.1.2 Plans are to incorporate green infrastructure within new development to provide opportunities for wildlife. This would include retaining and enhancing the existing quarry pond, as well as the extensive network of hedgerows throughout the site. Woodland planting is also proposed, as well as creating a network of SuDS ponds, and additional areas of green space. The ecological recommendations in this report will therefore help to inform the design process for the scheme.
- 1.3.1.3 Current concept plans are included in Appendix 1.



## 2 Methods of Assessment

### 2.1 Desk Study

- 2.1.1.1 A search for statutory sites of nature conservation importance within 2km of the site was undertaken using the Multi Agency Geographical Information for the Countryside (MAGIC) website ([www.magic.gov.uk](http://www.magic.gov.uk)). Ordnance Survey maps and aerial photographs from several online sources were consulted to identify the presence of any water bodies within 500m of the site.
- 2.1.1.2 Protected and notable species records for within 1km of the site were requested from The Essex Field Club<sup>1</sup> as part of this desk based study. Records provided by the field club that are more than ten years old will only be reported on if they are deemed to still be relevant. A search was made for non-statutory sites of nature conservation interest for within 1km of the site on the Essex Wildlife Trust Biological Records Centre<sup>2</sup> website.
- 2.1.1.3 The relevant Local Biodiversity Action Plan (LBAP)<sup>3</sup>, Essex BAP, was consulted to determine whether species and habitats identified (by both the desk study and the field survey) on and around the site are subject to specific action plans. Although succeeded by The JNCC and Defra UK Post-2010 Biodiversity Framework in July 2012, the list of UK Biodiversity Action Plan (UK BAP)<sup>4</sup> species was also consulted as this still remains an important reference source.

### 2.2 Extended Phase 1 Habitat Survey

- 2.2.1.1 An ecological survey of the site was undertaken on 26<sup>th</sup> April 2016 by Sam Mardell who has over 2 years' survey experience and a BSc (Hons) in Ecology.
- 2.2.1.2 This survey assessed the value of onsite habitats and the sites potential to support protected or notable species within the survey area. Habitats were classified according to the criteria set out in the Handbook for Phase 1 Habitat Survey (2010)<sup>5</sup>. A Phase 1 Habitat Plan for the site is included in Appendix 2.
- 2.2.1.3 Notable species and habitats are those which are legally protected, are nationally or locally rare or endangered, or are identified as a Species or Habitat of Principal Importance in England under Section 41 of the NERC Act and/or Local Biodiversity Action Plan (LBAP). Also worth noting is that these species and habitats are material considerations in local planning decisions.
- 2.2.1.4 The site survey sought to identify evidence of the presence of legally protected and notable species and make assessments of the habitats within the site to support them, in particular:

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<sup>1</sup> <http://www.essexfieldclub.org.uk/>

<sup>2</sup> <http://www.essexwtrecords.org.uk/dataset/LoWS>

<sup>3</sup> <http://www.essexbiodiversity.org.uk/biodiversity-action-plan>



- Rare or notable plant species, such as red data list species<sup>6</sup>, priority species or those of Principal Importance;
- An appraisal of habitats on site for their suitability to support legally protected and notable species such as great crested newt (*Triturus cristatus*), bats (all species), badger (*Meles meles*), reptiles, dormice (*Muscardinus avellanarius*), white-clawed crayfish (*Austropotamobius pallipes*), otter (*Lutra lutra*), and water vole (*Arvicola amphibius*);
- An assessment of the potential value of trees and buildings as roosting sites for bat using the protocol set out in Collins (2016). This included a search from the ground for evidence of use by bats (including the use of torches and binoculars to allow for an external inspection of the trees and buildings, as well as an internal inspection of buildings, searching for signs such as staining and/or droppings often found around roost entrances);
- A search for evidence of the presence of badgers on site (e.g. setts, paths, prints, foraging signs and latrines);
- An appraisal of habitats on site for their suitability to support rare or notable invertebrates or diverse invertebrate assemblages; and
- An assessment of the potential of habitats on site to support nesting birds.

2.2.1.5 A search was also made for evidence of the presence of invasive plant species listed on Schedule 9 of the Wildlife & Countryside Act 1981, as amended, as they are subject to strict legal control.

## 2.3 Limitations to Survey

2.3.1.1 Due to seasonal behaviour of animals and the seasonal growth patterns of plants, ecological surveys may be limited by the time of year in which they are undertaken. This survey was undertaken in April when plants are just coming into leaf, so therefore, this may not provide a complete list of the plants and animals that may be present, or may seasonally utilise the site.

2.3.1.1 In addition to these restrictions, the following limitations were encountered on the day of the survey: The survey was carried out outside the optimal time of year to identify the status of the grassland habitats on site and dense scrub and vegetation limited the search for badger activity.

2.3.1.2 It was also difficult to identify potential bat roost features on trees within the site given that they were in full leaf.

<sup>4</sup> <http://jncc.defra.gov.uk/page-5717>

<sup>5</sup> <http://www.jncc.gov.uk/pdf/JNCC%20A4%20Handbook%20for%20Phase%201%20habitat%20survey%20April%202008.pdf>

<sup>6</sup> [Cheffings, C. and Farrell, L. \(Amended 2006\) The Vascular Plant Red Data List for Great Britain](#)





2.3.1.3 However, the information gathered for this ecological survey has facilitated an evaluation of the habitats on site and the likely use of the site by legally protected and notable species. This survey has also given appropriate baseline data for the determination of the requirement for further surveys and/or mitigation and enhancement works.



### 3 Existing Conditions and Evaluation

#### 3.1 Designated Sites of Nature Conservation Value

##### 3.1.1 Statutory Sites

3.1.1.1 No statutory designated sites were identified within 2km of the site and the site does not fall within any Impact Risk Zones (IRZ) for local statutory sites. As a result, no further recommendations are necessary.

##### 3.1.2 Non-Statutory Sites

3.1.2.1 11 non-statutory designated sites were identified within 2km of the site. The details of these sites are provided in Table 1 below.

**Table 1 – Non-Statutory Designated Sites within 2km of the Proposed Development**

Site Name	Designation	Distance and Direction from Proposed Development Site	Description
Ch57 Sparrowhawk Wood	Local Wildlife Site	105m N	c. 3.6ha of ancient woodland, dominated by hornbeam ( <i>Carpinus betulus</i> ) and hazel ( <i>Coryllus avellana</i> ) with ash ( <i>Fraxinus excelsior</i> ) and pedunculate oak ( <i>Quercus robur</i> ). Good ground flora diversity.
Ch76 Broomfield – Little Waltham Chelmer Mosaic	Local Wildlife Site	400m E	Incorporates the Essex Wildlife Trusts of Newland Grove, Alder Carr and Little Waltham Meadows. Newland Grove supports ash-dominated woodland with a blackthorn scrub layer and diverse understorey. The wet alder ( <i>Alnus glutinosa</i> ) woodland of the site is a national Biodiversity Action Plan habitat and has a particularly diverse marsh flora including pond sedges ( <i>Carex</i> spp.), reed sweet grass ( <i>Glyceria maxima</i> ), marsh marigold ( <i>Caltha palustris</i> ), and creeping jenny ( <i>Lysimachia rumularia</i> ). There are also areas of species-rich grassland and the banks of the Rover Chelmer support rare poplar trees ( <i>Populus nigra</i> var. <i>betuifolia</i> ).
Ch67 Little Waltham Village Meadow	Local Wildlife Site	450m NE	A 5.7ha meadow in the village of Little Waltham. Good grassland species diversity: sweet vernal grass ( <i>Anthoxanthum odoratum</i> ), crested dog's-tail ( <i>Cyanosurus cristatus</i> ), meadow barley ( <i>Hordeum secalinum</i> ), fescues ( <i>Festuca</i> spp.) and bent grasses ( <i>Agrostis</i> spp.).



Ch71 St Martins Church, Little Waltham	Local Wildlife Site	750m NE	0.5ha area of species rich grassland. Meadow saxifrage ( <i>Saxifraga granulata</i> ), harebell ( <i>Campanula rotundifolia</i> ) and Lady's bedstraw ( <i>Galium verum</i> ) are locally abundant.
Ch47 Border Wood	Local Wildlife Site	900m W	0.9ha woodland with ancient woodland characteristics. Dominated by hornbeam coppice and oak ( <i>Q. robur</i> ) standards. Wild service tree ( <i>Sorbus torminalis</i> ).
Ch54 Langleys Deer Park	Local Wildlife Site	990m N	Large area of open grassland with scattered trees and woodland plantation along the route of the River Chelmer. Parkland trees include horse chestnut ( <i>Aesculus hippocastanum</i> ), sweet chestnut ( <i>Castanea sativa</i> ) and common lime ( <i>Tilia x europaea</i> ).
Ch62 St Mary's Church Broomfield	Local Wildlife Site	1020m S	Designated for its floral interest. Supports species such as lesser calaminth ( <i>Clinopodium calamintha</i> ), black spleenwort ( <i>Asplenium adiatum-nigrum</i> ), maidenhair spleenwort ( <i>Asplenium trichomanes</i> ) and six species of waxcaps ( <i>Hygrocybe</i> spp.)
Ch44 Border Wood Lake	Local Wildlife Site	1100m W	12ha former quarry site. Lake has flooded willow ( <i>Salix</i> sp.) margins. Slopes around the lake margins vary in gradient and offer different opportunities for a variety of flora and fauna. Woodland noted to provide good habitat as 'sheltered/foraging' habitat for birds.
Ch83 Channels Golf Course	Local Wildlife Site	1250m SE	Designated due to its significant population of great crested newts ( <i>Triturus cristatus</i> ) which use the numerous ponds on the site for breeding and rough grassland for foraging.
Ch46 Bushy Wood, Chignall	Local Wildlife Site	1550m SW	Ancient woodland, mostly hornbeam coppice and occasional oak standards.
Ch77 Sheepcoates Wood	Local Wildlife Site	1850m NE	Ancient coppice woodland containing hornbeam, penduculate oak and wild-service tree.



- 3.1.2.2 All of the non-statutory sites within 2km of the development are Local Wildlife Sites (LWSs) and the majority have been notified for either their woodland or grassland habitats. The best examples of these habitats in the LWSs identified in the search have characteristics of ancient woodland and species-rich grassland, both Essex Biodiversity Action Plan priority habitats.
- 3.1.2.3 None of the LWSs are located within or immediately adjacent to the proposed development site. The closest LWSs are Sparrowhawk Wood, Broomfield – Little Waltham Chelmer Mosaic and Little Waltham Village Meadow which are 105m, 400m and 450m from the proposed development site respectively and, as such, are most likely to be affected by the proposed development. The remaining LWSs are located more than 750m away and given their locations and nature of the habitats they support are unlikely to be affected by the proposed development and therefore are not considered further.
- 3.1.2.4 Sparrowhawk Wood is north of the proposed development site, on the northern side of part of an arable field. An overgrown hedgerow extends north from the north-western corner of the proposed development site and may act a wildlife corridor to and from the proposed development site for more mobile species. There is a public footpath which runs across the arable field from the proposed development site to the eastern edge of the Wood and then runs north/south along the eastern side of the Wood.
- 3.1.2.5 Broomfield – Little Waltham Chelmer Mosaic and Little Waltham Village Meadow LWSs are located more than 400m from the proposed development site on the eastern side of the A1088 and are managed by Essex Wildlife Trust. These sites are adjacent to each other and encompass the majority of the channel and floodplain of the River Chelmer which runs north to south c.350m east of the boundary of the proposed development site. The topography of the proposed development site and its location relative to the River Chelmer valley mean that it is likely that proposed development site lies within the drainage catchment of the River Chelmer and so is hydrologically connected. In addition, at the north-eastern corner of the proposed development site there is a public footpath which extends east from the A1088 to network of footpaths in the River Chelmer valley.
- 3.1.2.6 The development site does not contain woodland or grassland habitats similar to those of Sparrowhawk Wood, Broomfield – Little Waltham Chelmer Mosaic or Little Waltham Village Meadow LWSs. However, the series of connected large overgrown hedgerows on the site and those off-site, particularly the connection to Sparrowhawk Wood, provide a functional links to LWSs and also contribute to the local ecological network. As such, the loss or severance of hedgerows on the site could change the way that mobile species (bats, terrestrial mammals, invertebrates and birds) access and utilise the LWSs and therefore affect their ecological integrity.
- 3.1.2.7 In addition, footpath links could mean that the proposed development could result in an increase in disturbance of the Sparrowhawk Wood, Broomfield – Little Waltham Chelmer Mosaic or Little Waltham Village Meadow LWSs.



- 3.1.2.8 Given these potential effects of the development, recommendations are provided in Section 4 of this report with regards to non-statutory sites of nature conservation.

## 3.2 Habitats Recorded Within the Site

### 3.2.1 Arable

- 3.2.1.1 The majority of the site comprises two large arable fields planted with oilseed rape. Arable land has no intrinsic ecological value as a habitat in its own right, being manmade, common and widespread.

### 3.2.2 Defunct Species-rich Hedge and Trees

- 3.2.2.1 The site supports a network of hedgerows that border the arable fields (see Photo 1 below). All of the hedgerows supported over five structural (woody) species per 30m which means that they meet the criteria of 'species-rich' under the Hedgerow Regulations (1997). The hedgerows also supported mature and semi-mature trees which characterise them as 'hedge and trees' under the JNCC Phase 1 classification. The hedgerows also contain several gaps which classify them as defunct.
- 3.2.2.2 Tree species included; mature oak (*Quercus robur*) and ash (*Fraxinus excelsior*) while hedgerow species included; wych elm (*Ulmus glabra*), hazel (*Corylus avellana*), field maple (*Acer campestre*), elder (*Sambucus nigra*), hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*) and dog rose (*Rosa canina*). Ground flora species comprised predominantly nettle (*Urtica dioica*), cleavers (*Galium aparine*) and cow parsley (*Anthriscus sylvestris*).
- 3.2.2.3 Some of the hedgerows also existed within dry ditch lines which is a feature associated within the criteria for 'Important' hedgerows under Hedgerow Regulations (1997). Given this, and the species richness of the hedgerows, the hedgerows on site may meet the criteria to be considered 'Important' under Hedgerow Regulations. Recommendations with regards to further assessment of this habitat are therefore provided in Section 4.

**Photo 1- Defunct Species-rich Hedge and Trees**



### 3.2.3 Semi-improved Neutral Grassland

- 3.2.3.1 A field thought to comprise semi-improved neutral grassland was noted in the south east corner of the site covering an area of around 3 ha (see Photo 2 overleaf). The grassland was thought to be neutral due to the absence of acid or calcareous grassland indicator species, although the survey was carried out outside of the optimal time of year to survey for indicator species.
- 3.2.3.2 Grass species included; Yorkshire fog (*Holcus lanatus*), cock's-foot grass (*Dactylis glomerata*), rough meadow grass (*Poa pratensis*), timothy-grass (*Phleum pratense*) and perennial ryegrass (*Lolium perenne*), while herb species included; meadow buttercup (*Ranunculus acris*), common vetch (*Vicia sativa*), doves foot cranesbill (*Geranium molle*), hogweed (*Heracleum sphondylium*) and yarrow (*Achillea millefolium*).
- 3.2.3.3 The grassland was long and tussocky at the time of survey and had developed an interesting sward due to the lack of recent management. Semi-improved grassland was also noted along the road verges as well as the margins of the arable fields. Recommendations with regards to this habitat are provided in Section 4.

**Photo 2- Semi-Improved Grassland**



### 3.2.4 Standing Open Water

- 3.2.4.1 A large waterbody formed by former quarrying activity was noted in the eastern aspect of the site (see Photo 3 below). The water body was around 3000m<sup>2</sup>, circular shaped, with a complete lack of aquatic vegetation likely attributed to the presence of wildfowl. This water body is discussed further in the relevant protected species section that follow.





**Photo 3- Standing Open Water**



### **3.2.5 Unimproved Neutral Grassland and Dense Scrub Mosaic**

- 3.2.5.1 A mosaic habitat of unimproved neutral grassland and dense scrub was noted around the banks of the large quarry pond (see TN1 on the Habitat Plan in Appendix 2, as well as Photo 4 overleaf). Again, the grassland was thought to be neutral due to the absence of acid or calcareous grassland indicator species, although the survey was carried out outside of the optimal time of year to survey for indicator species. Grassland species recorded comprised a similar composition to the semi-improved grassland field, while scrub species comprised bramble, elder, hawthorn, blackthorn, bramble (*Rubus fruticosus L. agg*) and self-set ash saplings. Recommendations with regards to this habitat are provided in Section 4.

**Photo 4- Unimproved Neutral Grassland and Dense Scrub Mosaic**



### 3.2.6 Dense Scrub

- 3.2.6.1 Dense scrub was noted along the northern site boundary. Species included; blackthorn and bramble. Dense scrub has low value as a habitat type but is referred to in the relevant species sections below.

### 3.2.7 Tall Ruderal

- 3.2.7.1 Tall ruderal vegetation was noted around the field margins and understorey of hedgerows on site. Species included; teasel (*Dipsacus fullonum*), nettle, cleavers and cow parsley. Tall ruderal has low value as a habitat type but is referred to in the relevant species sections below.

### 3.2.8 Scattered Broad-leaved Trees

- 3.2.8.1 Scattered broad-leaved trees were noted within the semi-improved grassland field as well as along the verge with Woodhouse Lane. Specimens ranged from semi mature to mature with one oak tree noted to be dead. Species included; oak, field maple, ash and holly (*Ilex aquafolium*).
- 3.2.8.2 These trees are mentioned in the relevant species sections that follow but have no distinct value as habitat in their own right, being widespread and common.

### 3.2.9 Scattered Coniferous Trees

- 3.2.9.1 A mature giant redwood (*Sequoiadendron giganteum*) was noted within the semi-improved grassland field. Recommendations with regards to this tree are provided in Section 4.

### 3.2.10 Species-poor intact Hedgerow

- 3.2.10.1 A hedgerow measuring around 70m in length and comprising entirely hawthorn was noted along part of the south west site boundary with residential land. The hedgerow has low value as a habitat type but is referred to in the relevant species sections below.



### 3.2.11 Dry Ditch

- 3.2.11.1 A network of dry ditches were noted within the site. The ditches were all part of boundary/linear features with the hedge and trees. The ditches lacked any vegetation that would suggest they held water intermittently. The ditches have low value as a habitat type but is referred to in the relevant species sections below.

### 3.2.12 Buildings

- 3.2.12.1 The buildings on site include a large farm building and a collection of smaller agricultural buildings on the east boundary of the site, owned by Montpelier Farm. The buildings have no ecological value as a habitat in their own right but are dealt with in the appropriate species sections that follow.

### 3.2.13 Hardstanding

- 3.2.13.1 Hardstanding was confined to the farmyard around the buildings. Hardstanding has no ecological value. Hardstanding has no ecological value although it may be used by basking reptiles if present in the wider area.

## 3.3 Habitats Recorded Within the Wider Survey Area

### 3.3.1 Arable

- 3.3.1.1 There is further arable land beyond the northern site boundary planted with a grain crop.

### 3.3.2 Semi-natural Broad-leaved Woodland

- 3.3.2.1 Two small woodland blocks were noted beyond the site boundaries. These included Sparrowhawk Wood to the north and Puddings Wood to the site. Sparrowhawk Wood comprised predominantly of hornbeam (*Carpinus betulus*), beech (*Fagus sylvatica*) and hazel, while Puddings Wood comprised mainly oak and ash.

### 3.3.3 Broad-leaved Plantation Woodland

- 3.3.3.1 A small block of plantation woodland borders the site to the north. Species included; wild cherry (*Prunus avium*), field maple, hawthorn and blackthorn.

### 3.3.4 Amenity Grassland

- 3.3.4.1 Broomfield recreational ground, comprising amenity grassland, borders the site to the west.

### 3.3.5 Standing Open Water

- 3.3.5.1 A large pond over-shaded with trees was noted just beyond the southern boundary. This pond is also discussed further in the relevant protected species section that follows.



### 3.4 Protected and Notable Species

#### 3.4.1 Otter, Water Vole and White-Clawed Crayfish

##### Desk Study

- 3.4.1.1 No records of otter, water vole or white-clawed crayfish were returned within 1km of the site by the local biological records centre.

##### Field Survey

- 3.4.1.2 The existing quarry pond on site is unlikely to form any regular territory for otter or water vole given the distance and isolation from any other suitable water courses such as the River Chelmer which is located around 600m east of the site at its closest point.
- 3.4.1.3 The pond is also unsuitable for white clawed crayfish who are generally found in stony streams with calcareous waters.
- 3.4.1.4 Given these reasons and that the quarry pond is proposed to be retained and enhanced, no further recommendations with regards to either of these species are deemed necessary.

#### 3.4.2 Badgers

- 3.4.2.1 Badger field survey information is available in Appendix 3. This is kept as a separate appendix for reasons of confidentiality as this species may be subject to persecution.

#### 3.4.3 Bats

##### Desk Study

- 3.4.3.1 Records of a common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*) roost were returned around 400m from the site by the local biological records centre. The location of these roost sites however is unknown.
- 3.4.3.2 In addition, records of brown long eared (*Plecotus auritus*) and Natterers bat (*Myotis nattereri*) were also returned. These records though were bat detector records of either foraging or commuting bats and not of roosting sites.



## Field Survey

- 3.4.3.3 The habitats on site were assessed for their potential to support commuting, foraging and roosting bats using guidelines set out in Collins<sup>7</sup> (2016) (see Table 2 below).

**Table 2- Guidelines for assessing the Suitability of Proposed Development Sites for Bats**

Suitability	Description Roosting habitats	Commuting and foraging habitats
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.
Low	A structure or tree with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat.
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or

## Buildings

- 3.4.3.4 The buildings on site include a large farm building and a collection of smaller agricultural buildings on the east boundary of the site.
- 3.4.3.5 All of the buildings were assessment externally and, where possible, internally for features and evidence of roosting bats.

<sup>7</sup> Collins, J (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3<sup>rd</sup> edition, Bat Conservation Trust.



- 3.4.3.6 The large farm building (Building 1) was an open-sided steel barn which contained a single skin single breeze block hut with a single pitched corrugated metal roof (see Photo 5 below). The barn also had a small flat roofed office extension built out from its northern aspect (see Photo 6 below).
- 3.4.3.7 An external and internal assessment of this collection of buildings revealed no suitable roosting features or evidence of bats and it was therefore considered that the buildings have negligible suitability to support roosting bats.

**Photo 5- Large Farm Building (B1)**



**Photo 6- Northern Office Extension of B1**



- 3.4.3.8 The remaining agricultural buildings on site comprised a polytunnel (Building 2), a small single skin, flat roofed brick storage shed (Building 3), a container (Building 4) and a large single skin wooden storage shed. All of these structures were assessed as having negligible suitability to support roosting bats. As a result, no further recommendations with regards to any of the buildings on site and roosting bats are deemed necessary.

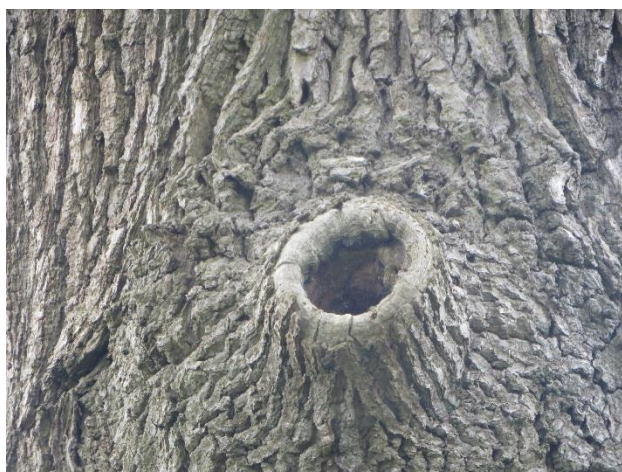
### ***Trees***

- 3.4.3.9 Three trees within the site were assessed as having low to moderate suitability to support roosting bats.
- 3.4.3.10 A dead oak tree located in the semi-improved grassland field in the south east corner of the site was noted to a potential roost feature (PRF) in the form of a small knot hole on its northern aspect (see TN2 on Habitat Plan in Appendix 2 as well as Photo 7 overleaf).



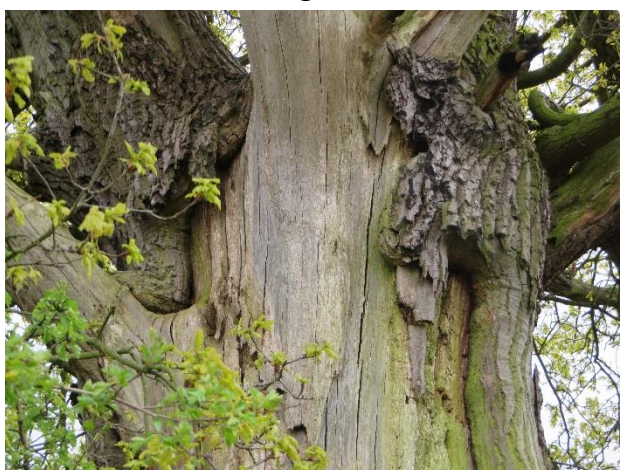


**Photo 7- Small Rot Hole on TN2**



- 3.4.3.11 A mature oak tree, set within a hedgerow close to the southern site boundary, was noted to contain multiple PRFs features including an area of delamination resulting from a lightning strike and several large woodpecker holes on its western aspect (see TN3 on Habitat Plan in Appendix 2 as well as Photo 8 and 9 below).

**Photo 8- Flaking Bark on TN3**



**Photo 9- Large Woodpecker Holes on TN3**



- 3.4.3.12 A mature ash tree set within a hedgerow close to the centre of the site was also noted to feature several woodpecker holes on its southern aspect (see TN4 on Habitat Plan in Appendix 2 as well as Photo 10 overleaf).



**Photo 10- Woodpecker Holes on TN4**



- 3.4.3.13 No PRFs were noted on the red wood tree in the south of the site although it was very difficult to assess the whole of the tree as it was very large and evergreen.
- 3.4.3.14 Further recommendations with regards to bats and trees are therefore provided in Section 4.

#### ***Habitats***

- 3.4.3.15 The network of hedgerows within the site were assessed as having high suitability for foraging and commuting bats, given that they are continuous and well connected to features in the wider landscape which includes slate/pantile roof buildings, woodland blocks and arable land.
- 3.4.3.16 Recommendations to safeguard some of these habitats for foraging and commuting bats, along with measures to reduce any potential impact of new lighting on bats are therefore provided in Section 4. Additional recommendations to enhance the site for bats are also provided in Section 5.

### **3.4.4 Reptiles**

#### **Desk Study**

- 3.4.4.1 No records of reptiles were returned within 1km of the site by the local biological records centre.

#### **Field Survey**

- 3.4.4.2 The semi-improved grassland field in the south east corner of the site, as well as the mosaic habitat of unimproved neutral grassland and dense scrub around the large quarry pond could potentially provide habitat for common lizard and slow worm, with grass snake potentially present in the vicinity of open water.



- 3.4.4.3 Furthermore, the network of hedgerows containing features such as mammal burrows and dead wood potentially provide suitable habitat for reptile hibernation as well as acting as corridors for reptile movement.
- 3.4.4.4 The arable fields on site meanwhile represents less suitable habitat for reptiles, although they may commute across it to use more suitable habitats.
- 3.4.4.5 The site is also well connected to other features in the wider landscape that are also suitable for reptiles, including allotments, grassland and woodland blocks.
- 3.4.4.6 Recommendations with regards to reptiles are therefore provided in Section 4.

### 3.4.5 Dormice Desk Study

- 3.4.5.1 No records of dormice (*Muscardinus avellanarius*) were provided within 1km of the site by the local biological records centre.

#### Field Survey

- 3.4.5.2 The network of hedgerows on the site and connected off-site woodland habitats Puddings Wood to the south and Sparrowhawk Wood to the north, have some suitability for dormice. Whilst historical research into the species habitat preferences suggest that dormice need hedgerows to be connected to woodlands greater than 20ha in size to support a viable population, research has been undertaken by the Essex and Suffolk Dormouse Group indicates that dormice in East Anglia hold territories in hedgerows in this region. As such, dormice could be present in the on and off-site hedgerows and also in Puddings Wood and Sparrowhawk Wood.
- 3.4.5.3 As such, recommendations with regards to dormice are provided in Section 4.



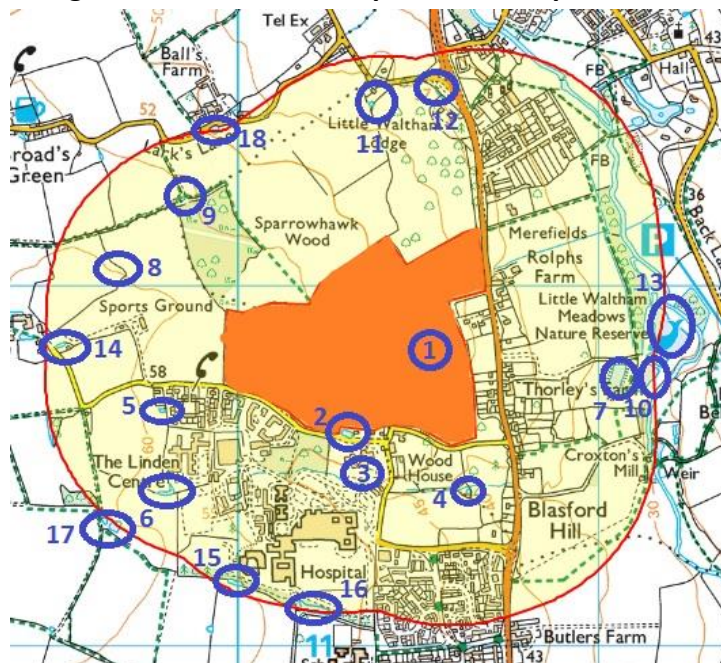


### 3.4.6 Great Crested Newts

#### Desk Study

- 3.4.6.1 One record of great crested newt (*Triturus cristatus*) was returned around 400m south-west of the site in a farmland pond in 1999.
- 3.4.6.2 Eighteen waterbodies were identified by the desk study and field survey within 500m of the proposed development site. The waterbodies have been marked on Figure 1 overleaf to show where they lie in relation to the proposed development site. The red circle represents a 500m radius of the proposed development site, the proposed development site is marked in orange and the blue circles and numbers represent the ponds identified within this area.

Figure 1 – Ponds and Proposed Development Site



## Field Survey

### Ponds

- 3.4.6.3 During the site visit, a habitat suitability assessment was undertaken on all accessible waterbodies using the Habitat Suitability Index (HSI)<sup>8</sup> scoring system, which gives an indication of the suitability of a water body to support breeding great crested newts. A habitat suitability score of 0 indicates unsuitable habitat, 1 represents optimal habitat.
- 3.4.6.4 Table 4 below gives the distance of each waterbody from the proposed development site, whether or not any potential barriers to great crested newt dispersal exist between the pond and the site, whether the pond was surveyed and the resulting HSI score (if applicable). The HSI form for all surveyed ponds is available for reference in Appendix 4.

**Table 4 – Ponds within 500m of the site**

Pond number	Distance and direction from site	Barriers?	Surveyed ?	HSI Score
1	On site	NA	Yes	0.41-poor suitability
2	5m S	None – arable land	Yes	0.65-average suitability
3	116m S	None – buildings grassland, lane	No	N/A
4	121m S	None – grassland, hedgerows, lane	No	N/A
5	195m W	Significant- hospital buildings and hardstanding	No	N/A
6	320m SW	Significant- hospital buildings and hardstanding	No	N/A
7	327m E	None significant- buildings, B road, grassland	No	N/A
8	360m NW	None – woodland, arable land	No	N/A
9	376m NW	None – woodland, arable land	No	N/A
10	382m E	None significant- buildings, B road, grassland	No	N/A
11	390m N	None – arable land	No	N/A
12	391m N	None – arable land	No	N/A
13	474m E	None significant- buildings, B road, grassland	No	N/A
14	478m W	None – amenity grassland	No	N/A
15	480m S	Significant- hospital buildings and hardstanding	No	N/A
16	495m S	Significant- hospital buildings and hardstanding	No	N/A
17	498m S	Significant- hospital buildings and hardstanding	No	N/A

<sup>8</sup>Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). *Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus)*. Herpetological Journal 10 (4), 143-155



18	499m NW	Significant- hospital buildings and hardstanding	No	N/A
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### ***Terrestrial habitats***

- 3.4.6.5 The semi-improved grassland field in the south east corner of the site, as well as the network of hedgerows, tall ruderal and scrub habitats could potentially provide habitat for foraging great crested newts.
- 3.4.6.6 The semi-improved grassland field in the south east corner of the site, as well as the mosaic habitat of unimproved neutral grassland and dense scrub around the large quarry pond could potentially provide habitat for foraging great crested newts.
- 3.4.6.7 Furthermore, the network of hedgerows containing features such as mammal burrows and dead wood potentially provide suitable hibernation habitat as well as acting as corridors for great crested newt movement.
- 3.4.6.8 The arable fields on site meanwhile represents less suitable habitat for great crested newts, although they may commute across it to use more suitable habitats.
- 3.4.6.9 Further recommendations with regards to great crested newts are therefore provided in Section 4.





### 3.4.7 Birds

#### Desk Study

3.4.7.1 All of the records of birds returned by the local biological records centre were degraded to 1km grid square references and as such their relevance to the site is low.

#### 3.4.7.2 Field Survey

3.4.7.3 Magpie (*Pica pica*), blackbird (*Turdus merula*), blue tit (*Cyanistes caeruleus*), long-tailed tit (*Aegithalos caudatus*), great tit (*Parus major*), wood pigeon (*Columba palumbus*), skylark (*Alauda arvensis*), crow (*Corvus corone*), chiffchaff (*Phylloscopus collybita*) and wren (*Troglodytes troglodytes*) were all either heard or seen on the site during the survey.

3.4.7.4 The habitats within the proposed development site have good suitability for nesting birds. In particular, the network and hedgerows, trees and scrub habitats have good suitability for a wide range of nesting bird species, from common species such as wood pigeon and blackbird to less frequent species such as yellowhammer (*Emberiza citrinella*). Similarly, the semi-improved grassland and arable fields also have suitability for ground nesting bird species such as skylark and lapwing (*Vanellus vanellus*). In addition, the semi-improved grassland field also has suitability as foraging habitat for raptors such as kestrel (*Falco tinnunculus*) and barn owl (*Tyto alba*).

3.4.7.5 The buildings on site however have limited suitability for nesting birds.

3.4.7.6 Further recommendations with regards to birds are therefore provided in Section 4.

### 3.4.8 Invertebrates

#### Desk Study

3.4.8.1 No records of invertebrates were returned within 1km of the site by the local biological records centre.

#### Field Survey

3.4.8.1 The network of hedgerows, trees, grassland, scrub and tall ruderal habitats within the site all have suitability to support a range of common invertebrates. However, given that the site comprises a low diversity of common habitats consisting predominately of arable land, it is unlikely that the site supports any rare or notable invertebrate populations or a diverse invertebrate assemblage.

3.4.8.2 No further surveys for invertebrate are therefore deemed necessary at this stage, although this may need to be revised following further surveys to establish status of grassland habitats on site.



### 3.4.9 Invasive Species

#### Desk Study

- 3.4.9.1 No records of invasive species were returned within 1km of the site by the local biological records centre.

#### Field Survey

- 3.4.9.2 A stand of Japanese knotweed (*Fallopia japonica*) is present, just off-site at NGR: TL703115 on a bank alongside Woodhouse Lane. The bank is subject to management by Highways England and the current regime of vegetation flailing/cutting could cause the plant to spread.
- 3.4.9.3 Given the discovery of the invasive plant close to the site boundary, recommendations are provide in Section 4.

### 3.4.10 Notable Plants

#### Desk Study

- 3.4.10.1 A record of mistletoe (*Viscum album*) was returned within 1km of the site by the local biological records centre.
- 3.4.10.2 Mistletoe is recognised as both a UK and Essex BAP species.

#### Field Survey

- 3.4.10.3 No notable species were noted on site during the survey although the survey was carried out outside of the optimal time of year to survey for grassland indicator species and flowering plants. As a result, further surveys to assess the status of the grassland habitats on site are recommended in Section 4 'Habitats'.

### 3.4.11 Other Species

#### Desk Study

- 3.4.11.1 No records of other species were returned within 1km of the site by the local biological records centre.
- 3.4.11.2 Records held by Essex Field Club suggest that polecat have undergone a range expansion, and are now present throughout the majority of North Essex.

#### Field Survey

- 3.4.11.3 A common shrew (*Sorex araneus*) was heard within the semi-improved grassland field. The grassland, hedge, trees and dense scrub habitats within site have suitability for shrews as well as other small mammals.



- 3.4.11.4 Of the mammals listed as priority species for conservation in England under the Natural Environment and Rural Communities Act 2006 which have not already been discussed in this report, the site has suitability for hedgehog (*Erinaceous europaeus*), harvest mouse (*Micromys minutus*) and polecat (*Mustela putorius*).
- 3.4.11.5 Further recommendations therefore with regards to small mammals are provided in Section 4. Enhancement measures to benefit them are also provided in Section 5.



## 4 Mitigation and Further Survey

### 4.1 Non-Statutory Sites of Nature Conservation

- 4.1.1.1 Firstly, it is recommended that the hedgerows of the site are retained, protected and enhanced within the development to benefit local ecological networks on and off-site. Further recommendations provided in the Section 4.2 relating to Habitats below must also be implemented and form part of a mitigation strategy for the potential effects of the proposed development on Local Wildlife Sites (Sparrowhawk Wood and Broomfield – Little Waltham Chelmer Mosaic and Little Waltham Village Meadow LWSs).
- 4.1.1.2 It is recommended that Sustainable Drainage Systems (SUDS) are incorporated into the design of the proposed development to collect and attenuate the flow of surface water run-off to mitigate potential hydrological effects on Broomfield – Little Waltham Chelmer Mosaic and Little Waltham Village Meadow LWSs in the River Chelmer valley. Where possible, planting schemes to benefit wildlife should be incorporated into the SUDs design and include species which reflect the character of the nearby wildlife sites. Tree species could include alder and poplar, and the water margins could be planted with native wetland plants such as sedges, reed sweet grass, marsh marigold, and creeping jenny.
- 4.1.1.3 With regards to potential increased visitor pressure Sparrowhawk Wood and Broomfield – Little Waltham Chelmer Mosaic and Little Waltham Village Meadow LWSs, it is recommended that the relevant landowners/managing agents including Essex Wildlife Trust are consulted to fully determine the potential effects of the proposed development and how can they be suitably mitigated.
- 4.1.1.4 Potential options for workable mitigation for managing perceived visitor pressure could include, but are not limited to, the following:
- Creating open space and recreational facilities within the proposed development i.e. a circular walk; and
  - Contributions to visitor management resources, where appropriate i.e. provision of appropriate signage/interpretation boards on and off-site.

### 4.2 Habitats

- 4.2.1.1 Further surveys are required to compile exhaustive plant species lists and to assess the status of the grassland habitats, these surveys should be undertaken between June and July (see Survey Timetable in Appendix 5).
- 4.2.1.2 A Hedgerow Regulations assessment should be undertaken on the species-rich hedge and trees within the site to determine whether the hedgerows are protected under these regulation prior to any removal or management works.



- 4.2.1.3 A tree survey should be undertaken by an experienced arboriculturalist to assess the value and health of trees around the site.
- 4.2.1.4 From an ecological perspective, the mature tree specimens within the site should be retained if possible with suitable tree and root protection measures (in line with British Standard for trees in relation to construction BS 5837:2012).
- 4.2.1.5 A Construction Environmental Management Plan (CEMP) should be produced to outline construction methods that will avoid, minimise and mitigate effects on the environment and surrounding area such as the nearby woodland blocks.
- 4.2.1.6 In line with recommendations put forth in the Government's National Planning Policy Framework 2012<sup>9</sup> to promote biodiversity, as well as the habitat enhancement recommended above other enhancement measures are provided in Section 5.

## 4.3 Species

### 4.3.1 Badgers

- 4.3.1.1 Please refer to Appendix 3 for badger information.

### 4.3.2 Bats

- 4.3.2.1 All species of bat and their breeding sites or resting places (roosts) are protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2010 and Section 9 of the Wildlife and Countryside Act 1981. It is an offence to intentionally kill, injure or handle a bat, to possess a bat (whether live or dead), disturb a roosting bat, or sell or offer a bat for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by bats for shelter, whether they are present or not.
- 4.3.2.2 **PRF Inspections-** The PRFs on trees TN2, TN3 and TN4 should be subject to an aerial inspection by a licensed bat worker using a mobile elevated working platform (MEWP) (where possible) to determine the suitability of the feature and search for any evidence of roosting bats.
- 4.3.2.3 In addition, a detailed scoping survey of all remaining trees on site should be undertaken to determine any additional trees with suitable roost features. Any trees with PRFs that are required to be removed would then be subject to aerial inspection which would include seven visits throughout the course of the year to assess the feature fully. Further emergence/re-entry surveys would then be required on the tree should a roost be confirmed.

<sup>9</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/6077/2116950.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf)



- 4.3.2.1 **Fixed Point Static Detector Surveys-** The network of hedgerows within the site provide valuable linear routes between features in the wider landscape such as slate/pantile roof buildings and woodland blocks where bats are likely to forage and roost. Fixed point static detector surveys are therefore recommended to determine which species of bat are using the hedgerows and the importance of the commuting routes in terms of the number of bats using the route. Surveys should be carried out between April and October (see Survey Timetable in Appendix 5). The information collected from these surveys would be used in design of green corridors, categorising hedgerows in terms of their importance for foraging and commuting bats and helping to decide which hedgerows should be retained.
- 4.3.2.2 Any new proposed lighting for the scheme will incorporate LED lights and downward facing deflectors, hoods or baffles to reduce any light spill on the retained hedges and trees. This recommendation is not in relation to the protection afforded to bats or their roost under the legislation cited above but rather to reduce the risk of adversely affecting bat corridors and foraging habitat as part of ecological best practice.

### 4.3.3 Reptiles

- 4.3.3.1 All six of the UK's reptile species are protected under the Wildlife and Countryside Act 1981 (as amended). Of the more common reptiles it is illegal to intentionally kill or injure common lizard (*Zootoca vivipara*), slow worm (*Anguis fragilis*), adder (*Vipera berus*) and grass snake (*Natrix natrix*).
- 4.3.3.2 Given the suitability of the site for foraging and hibernating reptiles, further surveys for reptiles should be undertaken to establish the presence/absence of reptiles within the site. As large areas of suitable reptile habitat will be cleared, a precautionary approach to site clearance with regards to reptiles does not seem appropriate to mitigate risk to reptiles if present. Loss of areas of habitats with such suitability for reptiles (if present) could have an effect on the local population, through loss of foraging resource. As such presence/absence surveys are recommended to ascertain if reptiles are present within the site and, if so, relative abundance. This information can then be used to devise appropriate mitigation. The methodology for presence/absence surveys is set out below.
- 4.3.3.3 **Reptile Presence/absence Survey Methodology-** surveys normally take place over a period of seven days in suitable weather conditions at a suitable time of year, the optimum time being April–June and then September using a combination of half metre squared tiles as artificial refugia and corrugated metal tins. Surveys can be carried out from March to June or from September to October depending on local conditions (see Survey Timetable in Appendix 5).



- 4.3.3.4 If reptiles are found to be present, then it may be necessary to undertake further surveys to determine relative abundance of reptiles. In accordance to CIEEM guidelines, if a significant number of reptiles are recorded during the presence/absence surveys, then a minimum six additional survey visits at suitable times of year and weather conditions are required to estimate population size.
- 4.3.3.5 Should reptiles be found then suitable mitigation measures would have to be put in place following the abundance survey and liaison with Natural England.
- 4.3.3.6 The information obtained from the reptile surveys would also inform the detailed design and location of the retained green areas, as well as tailor the design of specific on site habitat creation and biodiversity enhancement.





#### 4.3.4 Dormice

4.3.4.1 Dormice are afforded full protection under the Wildlife & Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulation 2010.

4.3.4.2 Under Regulation 41 of the Conservation of Habitats and Species Regulations 2010 it is illegal to:

- Deliberately capture, injure or kill a dormouse;
- Deliberately disturb dormice (affecting ability to survive, breed or rear young) – disturbance of animals includes in particular any disturbance which is likely to impair their ability to survive, breed or reproduce, or to rear or nurture their young;
- Deliberately disturb dormice impairing ability to hibernate or affecting their local distribution and abundance; and
- Damage or destroy a breeding site or resting place of a dormouse.

4.3.4.3 Under the Wildlife and Countryside Act 1981 (as amended) it is illegal to:

- Recklessly or intentionally kill, injure or take any dormice;
- Recklessly or intentionally damage or destroy, or obstruct access to any structure or place which dormice use for shelter or protection;
- Recklessly or intentionally disturb great crested newts while occupying a structure or place which it uses for shelter or protection.

4.3.4.4 Given that there are suitable habitats on and off-site for dormice and the proposed development has the potential to result in the loss of dormice habitats in the form of hedgerows or loss of connectivity to off-site habitats it is recommended that a survey is undertaken to establish the presence/absence of the species from the site and off-site woodland blocks Puddings Wood and Sparrowhawk Wood (subject to access permission being granted).

4.3.4.5 **Dormouse Survey Methodology** - comprises the 3 following approaches:

1. Nut Searches – where hazel is present in the on and off-site habitats a suitably experienced ecologist should search for the gnawed hazel nuts in accordance with the survey guidance set out in The Dormouse Conservation Handbook<sup>10</sup>. Dormice leave distinctive smooth round openings in the discarded shells, therefore this method will detect the presence/absence of dormice.

<sup>10</sup> Bright, P. et al 2006. The Dormouse Conservation Handbook. 2<sup>nd</sup> Edition. English Nature, Peterborough, UK.



2. Nest Boxes and Nest Tubes – involves a suitably experienced ecologist setting out a suite of dormouse nest boxes and nest tubes within the habitats suitable for dormice in accordance with the guidance set out in The Dormouse Conservation Handbook. The nest boxes and tubes should be checked by an ecologist once per month between April and November for signs of dormouse occupation, until a suitable total index of probability of finding dormice score has been achieved in accordance with the guidance of the Conservation Handbook.
3. Footprint Tubes – involves supplementing the nest boxes and tubes with an array of footprint tubes. This is a relatively new survey technique which is used to provide an additional and potentially rapid method of determining presence/absence of the species. The tubes should be checked twice monthly by a suitably experienced ecologist for the distinctive footprint of dormice.

4.3.4.6 If the survey confirms that dormice are absent from the site and the surrounding connected and suitable habitats, then no further surveys recommendations with regards to the species will be required.

4.3.4.7 However, if dormice are found to be present on-site and/or in the connected off-site habitats then the effects of the development will need to be considered along with assessment of the need for an appropriate mitigation strategy. If the proposed development cannot avoid contravening the protection afforded to the species, as outlined at the start of this report section, then a European Protected Species Mitigation Licence will be required to facilitate the development. This will need to detail the location and timing of works which may affect dormice and a specification for compensatory habitat provision if a loss of habitat is anticipated.

#### 4.3.5 Great Crested Newt

4.3.5.1 Great crested newts are afforded full protection under the Wildlife & Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulation 2010.

4.3.5.2 Under Regulation 41 of the Conservation of Habitats and Species Regulations 2010 it is illegal to:

- Deliberately capture, injure or kill a great crested newt
- Deliberately disturb great crested newts (affecting ability to survive, breed or rear young) – disturbance of animals includes in particular any disturbance which is likely to impair their ability to survive, breed or reproduce, or to rear or nurture their young.
- Deliberately disturb great crested newts impairing ability to hibernate or affecting their local distribution and abundance and
- Damage or destroy a breeding site or resting place of a great crested newt.

4.3.5.3 Under the Wildlife and Countryside Act 1981 (as amended) it is illegal to:



- Recklessly or intentionally kill, injure or take any great crested newts.
- Recklessly or intentionally damage or destroy, or obstruct access to any structure or place which great crested newts use for shelter or protection.
- Recklessly or intentionally disturb great crested newts while occupying a structure or place which it uses for shelter or protection.

- 4.3.5.4 Given that a historic record of a great crested newt was returned, that there are a large number of ponds within 500m of site and that the site contains suitable great crested newt terrestrial habitat, further surveys for newts are required.
- 4.3.5.5 This is because the loss of, or disturbance to, potential terrestrial habitat for great crested newts, within the site and in close proximity to potential breeding ponds (Ponds 1-18,) presents a risk of an offence under the Habitats Regulations and Wildlife and Countryside Act.
- 4.3.5.6 A Habitat Suitability Index (HSI) survey should therefore be undertaken on all remaining ponds within 500m (Ponds 3-19), to assess their suitability to support breeding great crested newts.
- 4.3.5.7 Following this assessment, all suitable ponds will be subject to further surveys to establish presence/absence of great crested newts. The methodology for these surveys are set out below.
- 4.3.5.8 **Great Crested Newt Survey Methodology** - Great crested newt presence/absence surveys must be carried out by a licensed individual in accordance with the Natural England Great Crested Newt Mitigation Guidelines (August 2001)<sup>11</sup> which stipulate that a range of survey techniques must be employed over a minimum of four visits to detect presence/absence.
- 4.3.5.9 Two of these visits must be conducted between mid-April and mid-May which is the peak breeding period for great crested newt activity within ponds (see Survey Timetable in Appendix 5). If great crested newts are identified during the four survey visits, an additional two survey visits must be undertaken to determine the size of the local great crested newt population. If after four visits no great crested newts are identified, then it is considered unlikely that they will occur in the local area.
- 4.3.5.10 If great crested newts are confirmed to be breeding within 500m of the site, the data from the surveys would be used to determine a suitable mitigation strategy before habitat clearance/management works onsite proceed. This may include applying for a European Protected Species Mitigation (EPSM) licence from Natural England, along with a mitigation package for this species.
- 4.3.5.11 The information obtained from the great crested newt surveys would also inform the detailed design and location of the retained green areas, as well as tailor the design of specific on site habitat creation and biodiversity enhancement.



#### 4.3.6 Birds

- 4.3.6.1 The Wildlife and Countryside Act 1981 (as amended) makes it an offence to intentionally kill, injure or take any wild bird; intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built; intentionally take or destroy the nest or eggs of any wild bird. [Special penalties are liable for these offences involving birds listed on Schedule 1].
- 4.3.6.2 Given that large areas of suitable nesting habitat will be cleared to facilitate the development, breeding bird surveys are required to determine the breeding bird community and estimate the abundance of the breeding bird species within the site.
- 4.3.6.3 The survey should follow the methodology for 'Common Bird Census' (CBC) devised by the British Trust for Ornithology (BTO). This technique records the location and movements of individual birds present within a defined survey area.
- 4.3.6.4 Up to five visits should be undertaken during the breeding bird season (March to August) in suitable weather conditions, between the hours of 7am and 10.30 am, when birds are most active (see Survey Timetable in Appendix 5).
- 4.3.6.5 A pre-determined transect route should be devised throughout the site to include all field boundaries. Records should be made of birds singing or calling, repeated territorial calls, territorial aggression, displaying, adults carrying food or nesting material, juvenile birds and family groups.
- 4.3.6.6 The surveys will assess the likelihood of any impacts upon the breeding bird community in association with the proposed development, as well as to inform the detailed design and location of retained green areas, specific onsite habitat creation and biodiversity enhancement.

#### 4.3.7 Invasive Species

- 4.3.7.1 Japanese Knotweed is listed in Schedule 9, Section 14(2) of the Wildlife and Countryside Act 1981, making it an offence to plant or otherwise cause the species to grow in the wild.
- 4.3.7.2 Although the Japanese knotweed is not within the site boundary given its proximity to the site and its potential to spread rapidly, it is recommended that a suitably experienced ecologist or experienced invasive weed contractor is commissioned to produce a Japanese Knotweed Management Plan, complete with a fully georeferenced survey. The plant should then be treated in line with the management plan.



### 4.3.8 Other Species

- 4.3.8.1 Although no records of hedgehog, harvest mice or polecat were returned in the data search and no signs of their presence on the site were found during the site visit, these species are often present at low densities in the landscape and may be present on the site given the habitats present.
- 4.3.8.2 These species are listed as priority species in Section 41 of the Natural Environment and Rural Communities Act 2006 which makes it a duty of statutory bodies to prioritise their conservation in England. As such, it will be important to demonstrate that the development will achieve a neutral or positive effect on these species i.e. no net loss.
- 4.3.8.3 Hedgehogs are considered likely to be present, however no further survey is deemed necessary. Instead it is recommended that mitigation measures provided in the Section 4.2 in relation to 'Habitats' are implemented in full to ensure no net loss of hedgerow features on the site. Recommendations provided in Section 4 of this report must also be considered in the design of the development to ensure the creation of habitat connectivity for this species across the site.
- 4.3.8.4 It is considered possible that polecats are transiently present on the site. Given the large size of their home ranges and in line with survey and mitigation guidance<sup>12</sup>, it is recommended that they are assumed to be present and no further survey for their presence/absence is undertaken. As for hedgehogs, it is recommended that the mitigation measures provided in the Section 4.2 in relation to 'Habitats' are implemented in full to ensure no net loss of hedgerow features as these are likely to be used by polecats to move between foraging and refuge habitats.
- 4.3.8.5 Like badgers, polecats are vulnerable to road traffic accidents, therefore it is also recommended that the need for roads to pass through hedgerows is minimised and where it is necessary for roads to intersect hedgerows within the development, that suitable mammal underpasses are incorporated.
- 4.3.8.6 In addition, recommendations provided in Section 4 of this report must also be considered in the design of the development to ensure habitat connectivity across the site.
- 4.3.8.7 Harvest mouse have more specific habitat requirements than hedgehogs and polecats and the proposed development is less likely to be compatible with their long term survival on the site, if they are present. Therefore, it is recommended that a harvest mouse survey is undertaken to determine their presence/absence from the site.

#### **Harvest Mouse Survey Methodology – Nest Search**

- 4.3.8.8 Between October and March i.e. the end of the harvest mouse breeding season, a suitably experienced ecologist should undertake a nest search of the habitats on site with suitability for harvest mouse i.e. the narrow grassy field margins next to the hedgerows and the grassland in the south-eastern corner of the site.



- 4.3.8.9 If harvest mice are found to be absent from the site, then no further recommendations with regards to the species will be required.
- 4.3.8.10 If they are present, then it will be necessary to devise a suitable mitigation strategy to minimise the effects of the development on the species i.e. timings of works, methods of vegetation removal. If in the long term the effects of the development on harvest mice can not be sufficiently mitigated via on-site measures and as such the on-site population is considered unviable, then it may be necessary to consider including a translocation to a suitable nearby receptor site as part of mitigation. Further advice on suitable mitigation must be provided in the survey report.
- 4.3.8.11 During construction, any small mammals encountered during site clearance works should either be allowed to flee the area naturally or be safely translocated to the perimeter of the site to reduce the risk of killing or injury. This avoidance measure should be incorporated into the Construction Environmental Management Plan for the proposed development.
- 4.3.8.12 Although recently withdrawn from use in December 2015, all works should follow advice given in the Environment Agency's Pollution Prevention Guidelines (PPGs) document, as it still remains a valuable reference point. Particular reference should be given to the following:
- PPG01 General guide to the prevention of pollution;
  - PPG06 Working on construction and demolition sites;
  - PPG21 Pollution incident response planning; and
  - PPG22 Dealing with spills.
- 4.3.8.13 This document can now be found in the National Archives, available at: <http://webarchive.nationalarchives.gov.uk/20140328084622/http://www.environment-agency.gov.uk/business/topics/pollution/39083.aspx>.

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<sup>12</sup> Creswell et al. 2012. UK BAP Mammals: Interim Guidance for Survey Methodologies, Impact Assessment and Mitigation. The Mammal Society, Southampton, UK.



## 5 Enhancement measures

5.1.1.1 The details of biodiversity enhancement measures for the project will be informed by the results of Phase 2 surveys and developments in the design and layout of the scheme.

5.1.1.2 At present, more general enhancement measures should include;

- Creation and management of green corridors and 'wildlife' areas;
- Retention of deadwood resource as a result of any tree felling that may be required;
- Over seeding of retained or newly established grassland areas on site to improve species biodiversity;
- Enhance the network of SuDS ponds to benefit wildlife. This could include partly planting the ponds with common reed (*Phragmites australis*) to improve water quality.
- Provision of a number of bird, bat and insect boxes throughout the site:
- Creation of a wild orchard area;
- Broad-leaved and coniferous tree planting;
- Create a wildlife area with a BMX/mountain bike track;
- Woodland planting;
- Plant native wildlife attracting native plants;





## 6 Summary

This section provides a summary of all mitigation and recommendations for further surveys for the proposed for the scheme at this stage. For a comprehensive list please refer to each section in turn in the preceding report. Additional mitigation measures, further surveys and adjustments to detailed design of biodiversity enhancement may be required following the further surveys specified in this report.

- **Non-statutory Designated Sites** – Retain hedgerows within the site and enhance local ecological networks within the development design. Implement all recommendations provided in relation to Habitats. Incorporate SUDs into the development and design to benefit wildlife. Consult with the landowners/ managing agents of on Local Wildlife Sites Sparrowhawk Wood and Broomfield – Little Waltham Chelmer Mosaic and Little Waltham Village Meadow;
- **Habitats** – Further surveys are required between June and July to compile exhaustive plant species lists and to assess the status of the grassland habitats. A Hedgerow Regulations assessment should be undertaken on the species-rich hedge and trees within the site to determine whether the hedgerows are protected under these regulation prior to any removal or management works. A tree survey should be undertaken by an experienced arboriculturalist to assess the value and health of trees around the site. Construction Environmental Management Plan (CEMP) to be produced;
- **Badgers** – Please refer to Appendix 3 for badger information;
- **Bats** – An aerial inspection of PRFs on TN2, TN3 and TN4 is required, as well as a detailed scoping survey of all remaining trees to identify any further PRFs. Fixed point, static bat detector surveys also to be undertaken between April and October to establish importance of the network of hedgerows on site as commuting routes;
- **Reptiles** - Seven presence/absence survey visits to be undertaken on the grassland habitats within the site from March to June and from September to October depending on local conditions;
- **Dormice** – presence/absence survey of on-site hedgerows and off-site woodland habitats required;
- **Great Crested Newts** – An HSI assessment to be undertaken on all remaining ponds within 500m (Ponds 3-18) to determine their suitability and requirement for further survey. Great crested newt presence/absence surveys to then be undertaken on all suitable ponds between mid-March and mid-June (two of which must be between mid-April to mid-May);
- **Birds** – Breeding bird surveys following the methodology for ‘Common Bird Census’ (CBC) devised by the British Trust for Ornithology (BTO) to be undertaken between March and August to determine the breeding bird community and estimate the abundance of the breeding bird species within the site;



- **Invasive Species** – Japanese Knotweed Management Plan to be produced and implemented for off-site growth;
- **Other species** – Hedgehog and polecat assumed to be present and habitat connectivity to be retained in development design. Harvest Mouse survey required. Any small mammals encountered during site clearance works should either be allowed to flee the area naturally or be safely translocated to the perimeter of the site to reduce the risk of killing or injury and;
- **General** - All works should follow advice given in the Environment Agency's Pollution Prevention Guidelines (PPGs).

## 7 References

Bright, P. et al 2006. The Dormouse Conservation Handbook. 2nd Edition. English Nature, Peterborough, UK

Cresswell, W & Whitworth R (2004). An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt *Triturus cristatus*. English Nature Research Reports No.576. English Nature, Peterborough.

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Collins, J (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd edition, Bat Conservation Trust.

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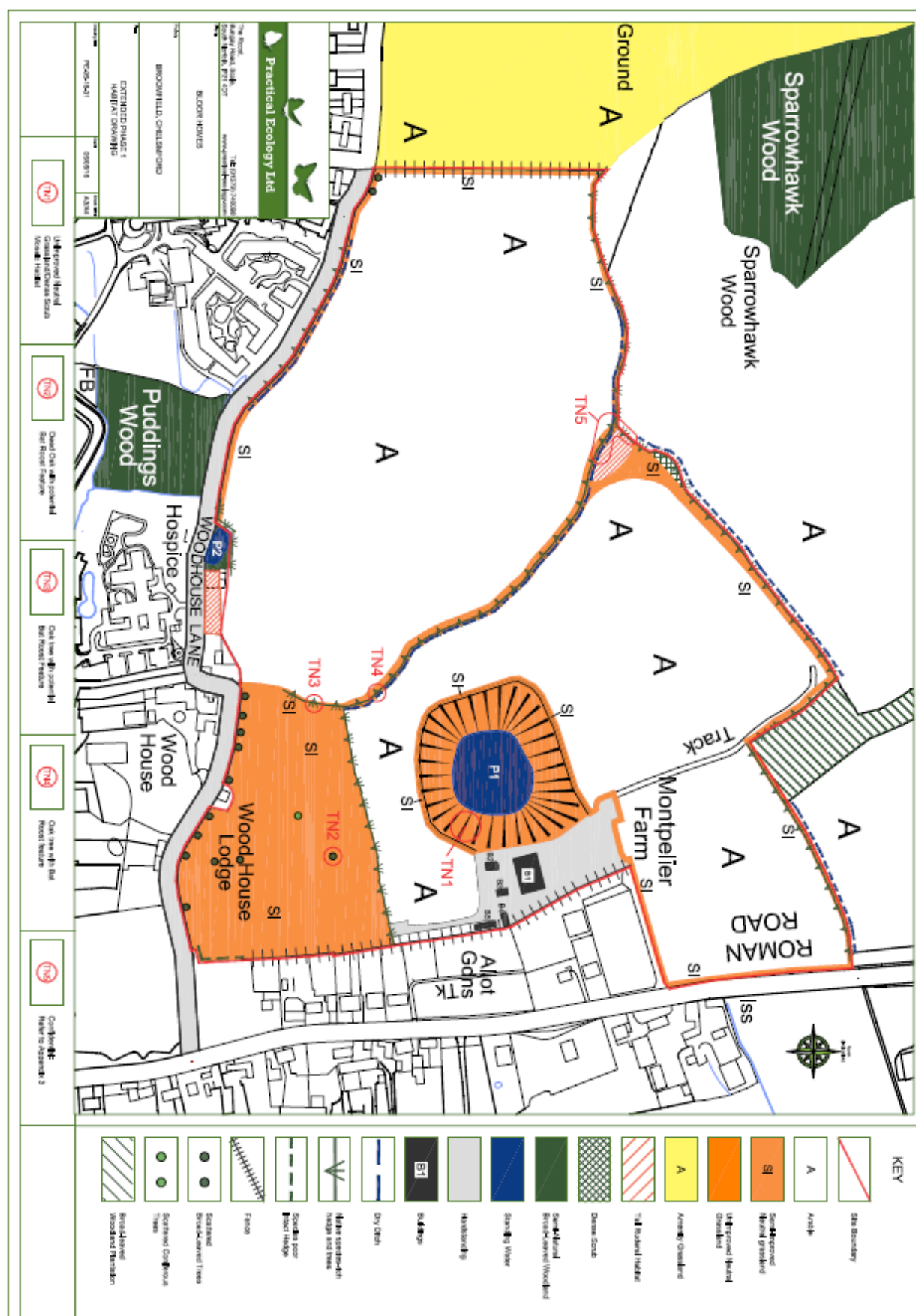
JNCC (2010). Handbook for Phase 1 habitat survey: a technique for environmental audit (revised reprint). JNCC, Peterborough.

JNCC and Defra (on behalf of the Four Countries' Biodiversity Group). 2012. UK Post-2010 Biodiversity Framework. July 2012.


National Planning Policy Framework (2012).



## Appendix 1- Extended Phase 1 Habitat Plan



## Appendix 2- Badger Survey Information

Risk Code	Factor	Comments and Actions Required	Timings
	Badgers	Proposals to be designed to accommodate retention and safeguarding of badger sett (TN5). If this is not possible, further monitoring will be required to determine whether the sett is active. An updated walkover over the rest of the site is also recommended within 3 months of the start of construction to ensure that no new evidence of badger activity exists within a 30m buffer of proposed construction areas.	Within 3 months of the start of construction.

### 7.1.1 Existing Conditions and Evaluation

#### Desk Study

- 7.1.1.1 Two records of badger were returned within 1km of the site by the local biological records centre in 2009. The location of these records however are unknown.

#### Field Survey

- 7.1.1.2 A badger sett was identified close to the northern boundary of the site (see TN5 on Habitat Plan in Appendix 2, as well as Photo 11 and 12 below). A total of five sett entrances were noted, although the presence of dense scrub and tall ruderal vegetation limited this search. The entrances were clear of leaf debris and the spoil piles appeared clear of vegetation which suggest that the sett is active. No footprints, hairs or latrines were noted however, although these may have been washed away from recent rainfall or hidden in the dense scrub.
- 7.1.1.3 The site offers suitable foraging opportunities for badgers. The grassland and tall ruderal habitats within the site have suitability for badgers. Earthworms, gathered from grassland such as these, can represent as much as 60% of a badgers diet. In addition to this, the hedgerows and dry ditches provide further opportunities for sett creation, while the hedgerows also provide connectivity to habitats within the wider area, such as the recreational ground and woodland blocks.



**Photo 11 and 12- Badger Sett**

7.1.1.4 Given that a badger sett was noted on site, further recommendations with regards to badgers are provided below.

### 7.1.2 Recommendations

7.1.2.1 Badgers are protected under the Protection of Badgers Act 1992, making it an offence to wilfully kill, injure or take a badger, or attempt to do so. It is also an offence to intentionally or recklessly interfere with a badger sett by (a) damaging a sett or any part of one; (b) destroying a sett; (c) obstructing access to or any entrance of a sett; (d) causing a dog to enter a sett; or (e) disturbing a badger when it is occupying a sett.

7.1.2.2 The Act defines the term “badger sett” as “any structure or place which displays signs indicating current use by a badger”. Disturbance to, or exclusion of badgers from the sett, is not legally permitted except under licence from Natural England.

7.1.2.3 If the badger sett noted close to the northern boundary of the site (TN5) falls within a 30m radius of any construction areas, further monitoring will be required to determine whether the sett is active so that appropriate mitigation can be determined. If the sett is active and proposals cannot be revised to accommodate retention of the sett, further surveys will be required to determine the size and status of the sett. This data would then be used to prepare a Natural England badger license application and mitigation strategy to permit the works.

7.1.2.4 An updated walkover is also recommended for the rest of the site within 3 months of the start of construction to ensure that no new evidence of badger activity exists within a 30m buffer of proposed construction areas.

7.1.2.5 In addition, the connectivity to the surrounding habitats such as the recreational ground and woodland should be retained to allow badgers to commute between seasonal foraging sites.





### Appendix 3- HSI Results

Pond no.:	Distance to Site (m):	Visited	
1	On site	Yes	
<b>Habitat Suitability Index</b>			
SI1. Map location	A/B/C	A	SI value 1.00
SI2. Surface area	rectangle/ellipse/irregular		
	length (m)		
	width (m)		
	OR estimate (m <sup>2</sup> ) if irregular		
	area (m <sup>2</sup> ) =	3500	0.55
SI3. Dessication rate	never/rarely/sometimes/frequently	never	0.90
SI4. Water quality	good/moderate/poor/bad	poor	0.33
SI5. Shade	% of margin shaded 1m from bank	50	1.00
SI6. Waterfowl	absent/major/minor	major	0.01
SI7. Fish population	absent/possible/minor/major	possible	0.67
SI8. Pond density	number of ponds within 1km	18	1.00
SI9. Terrestrial habitat	good/moderate/poor/isolated	good	1.00
SI10. Macrophyte cover	%	0	0.31
HSI =			0.45
provisional			
HSI =			0.41
Use provisional HSI value if above 0.75			
Poor			

Pond no.:	Distance to Site:	Visited	
2	5m S	Yes	
<b>Habitat Suitability Index</b>			
SI1. Map location	A/B/C	A	SI value 1.00
SI2. Surface area	rectangle/ellipse/irregular		
	length (m)		
	width (m)		
	OR estimate (m <sup>2</sup> ) if irregular		
	area (m <sup>2</sup> ) =	400	0.80
SI3. Dessication rate	never/rarely/sometimes/frequently	sometimes	0.50
SI4. Water quality	good/moderate/poor/bad	poor	0.33
SI5. Shade	% of margin shaded 1m from bank	75	0.70
SI6. Waterfowl	absent/major/minor	minor	0.67
SI7. Fish population	absent/possible/minor/major	absent	1.00
SI8. Pond density	number of ponds within 1km	18	1.00
SI9. Terrestrial habitat	good/moderate/poor/isolated	moderate	0.67
SI10. Macrophyte cover	%	0	0.31



Use provisional HSI value if above 0.75	HSI =	0.65	Average
	provisional HSI =	0.62	

## Appendix 4- Survey Timetable

	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Badgers												
Bats	Building and tree assessments											
					Activity surveys							
Breeding Birds												
Botanical												
Invasive plants												
Reptiles						°C				°C		
Great crested newts					eDNA surveys							

°C - Surveys limited by temperature

	Optimum survey period
	Surveys can be undertaken (although not optimum period)
	No survey





# Education Report

Land at North Broomfield,  
Chelmsford, Essex

Bloor Homes

Draft

**BEN HUNTER**  
**BA DipMS**

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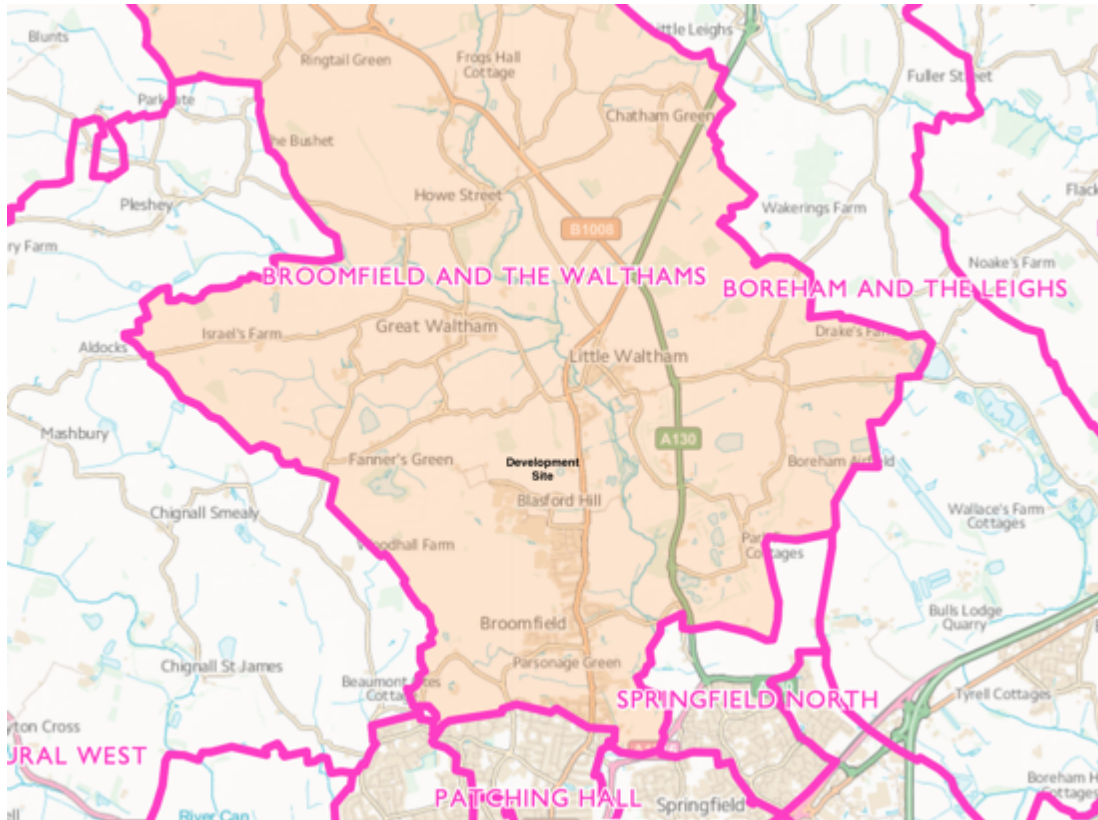
## 1.0 Introduction

1.1 This report relates to a proposed development of at least 450 dwellings on land to the north of Broomfield, Chelmsford, Essex. Broomfield is a village and suburb in the City of Chelmsford. The approximate development outline can be seen in the Map below:



*Map 1: Development Outline*

1.2 The development is located in the Broomfield and the Walthams Ward (“the Ward”) within the Chelmsford City Council (“CCC”) planning area. The Education Authority for the area is Essex County Council (“ECC”). The Ward boundaries, and the development’s location within the Ward, can be seen below in Map 2:

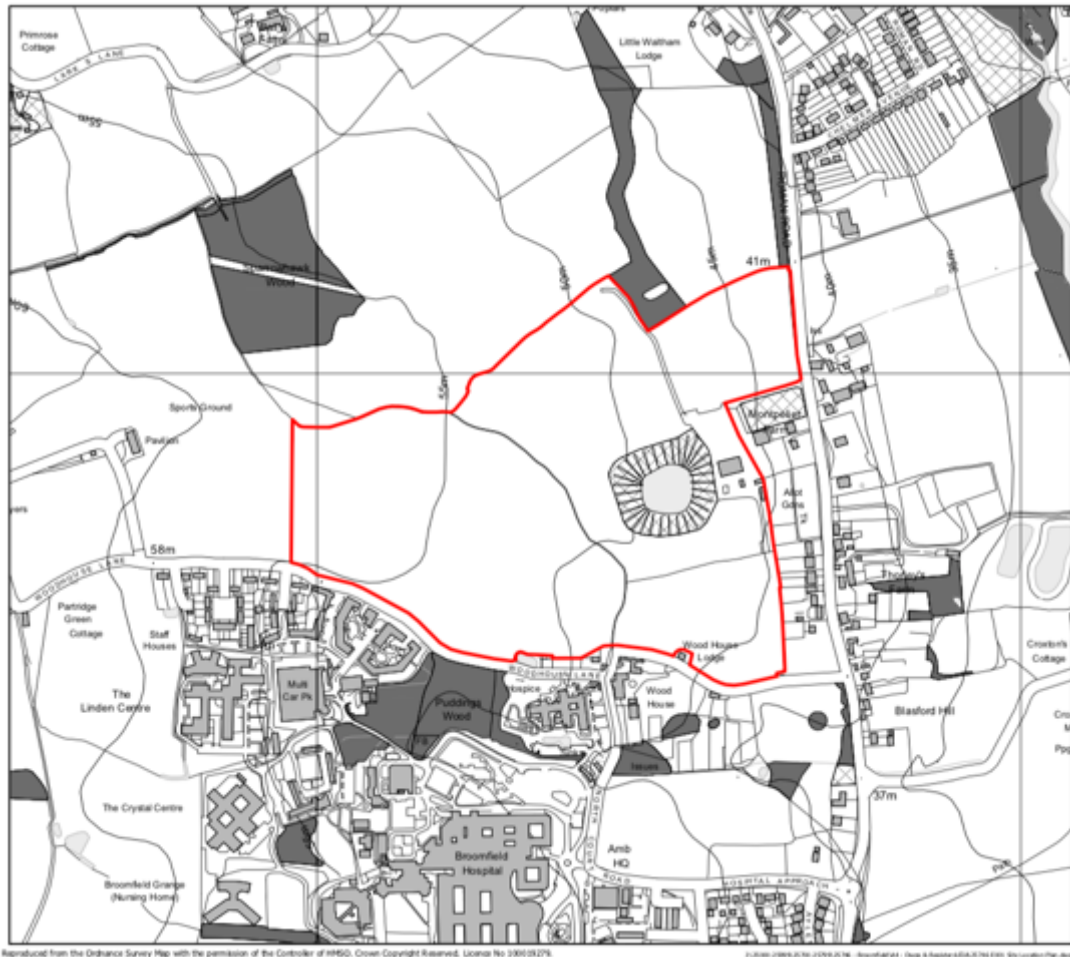


Map 2: Ward Boundaries

1.3 This note looks in detail at the trends in dwelling delivery, of births and the age of the population over the last decade to create a context for this proposed development. The history of dwelling delivery identifies the likely proportion of new households, which are characterised by a younger population. The trend in birth numbers, too, is often linked to dwelling delivery and, if rising, to younger populations. Births also indicate the future demand for school places. Finally, the trend in the median age of the population is an indicator of the nature of the area and how sustainable it is. The assumption is that the population should reflect national norms, which includes its ageing. When the balance of dwelling delivery does not maintain the median age of the population at around the national norm, there are implications for social infrastructure.

1.4 Existing local schools are identified and mapped with Google Earth, providing the approximate walking distances from the proposed development. The relevant schools, having been sorted by distance, are then described for capacity, numbers of pupils by age, and occupancy levels.

1.5 This development is being promoted through the Chelmsford City Council Local Plan. The original intention was for the site to accommodate in the region of 800 units, however the emerging allocation has the development delivering 450 dwellings, which is what this report will assess. The implications on Education of an 800 dwelling development is discussed in Section 10 of this report:



Map 3: Site Location Plan

1.6 CCC is a Community Infrastructure Levy ("CIL") charging authority for new development. They adopted a CIL in 2014, which rises every year using an index based on inflation. Education is included on the Regulation 123 ("R123") List, which means that elements of new Education provision/infrastructure will be funded via the CIL. The Education elements on the R123 can be seen below in Table 1:

Education	
Project of Infrastructure Type	Exclusions
Additional Primary and Pre-School provision to serve Chelmsford City Council area	Excluding proposed new schools within North Chelmsford Area Action Plan to be secured through S106
Additional Secondary provision and post 16 provision to serve Chelmsford to be located at Greater Beaulieu Park School	Greater Beaulieu Park School itself is being secured through S106

Table 1: CCC R123 List

1.7 What this indicates is that Education infrastructure is likely to be secured through CIL. Accordingly, this report will proceed on that basis.

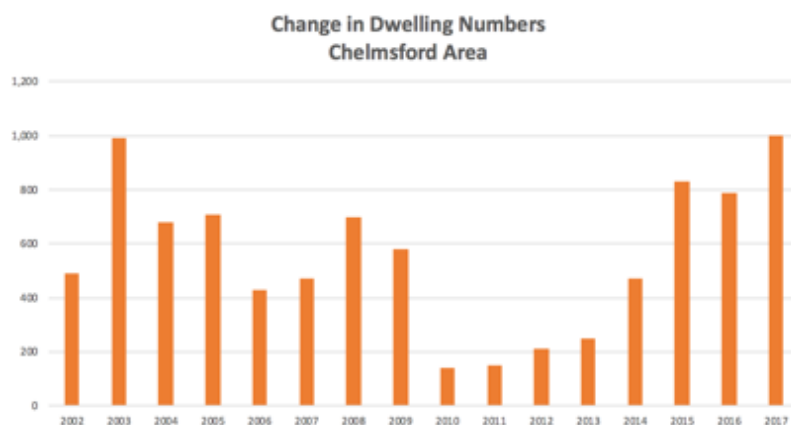
## 2.0 Dwellings

2.1 The CCC area comprised, at the end of 2017, of 74,800 occupied dwellings. There has been an increase of 8,890 occupied dwellings (13.5%) in the area over the seventeen-year period shown in Table 2. This is an average of 556 new dwellings per annum across Chelmsford:

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
65,910	66,400	67,390	68,070	68,780	69,210	69,680	70,380	70,960	71,100	71,250	71,460	71,710	72,180	73,010	73,800	74,800

Table 2: Occupied dwelling numbers (Council Tax Returns published by ONS from VOA data)

2.2 The increase in the number of dwellings in the review period can be seen below in Graph 1. It can be seen that housing delivery has been inconsistent and subject to considerable changes across the review period. Housing delivery was high in 2003 (990 dwellings) and consistent between 2004 and 2009. Following this there was a steep decline in new occupied dwellings in 2010 (140); the lowest number achieved in the review period. Housing delivery stayed low until 2014, when it started increasing rapidly, so that by 2017 new dwelling delivery reached 1,000; the highest in the review period.



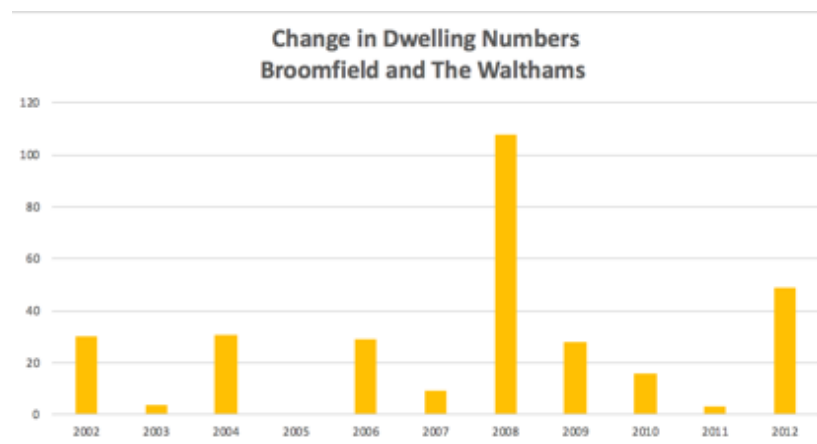
*Graph 1: Occupied Dwellings*

2.3 From a Ward perspective, between 2001 and 2012 the numbers of occupied dwellings in the Ward changed sporadically, and at a much lower level than compared to the CCC area, as shown in Table 3:

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
3,128	3,158	3,162	3,193	3,178	3,207	3,216	3,324	3,352	3,368	3,371	3,420

*Table 3: Change in Occupied Dwellings – The Ward*

2.4 Graph 2 demonstrates the change across the review period. It shows very low levels of change in occupied dwellings in ten of the eleven years, with 2008 being the anomaly. The average number of dwellings delivered across the previous decade was eleven per year. 2008 saw 108 dwellings delivered; significantly more than the average before dropping back to ‘normal’ levels:



*Graph 2: Change in Dwelling Numbers – The Ward*



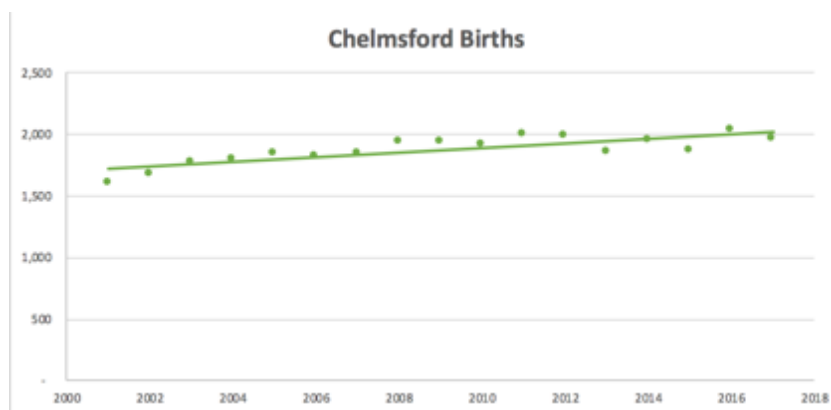
### 3.0 Births

3.1 There has been an average of 1,875 births per year in the Chelmsford area in the seventeen-year review period shown below in Table 4. Births peaked in 2016 at 2,039, and were at their lowest in the review period in 2001 at 1,612.

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1,612	1,679	1,773	1,794	1,850	1,818	1,853	1,938	1,947	1,924	1,997	1,995	1,857	1,957	1,876	2,039	1,970

Table 4: CCC Births

3.2 Graph 3 charts the births in the CCC area in the 17-year review period. It demonstrates that the trend is a rising one, with the current decade seeing proportionately more births than the preceding decade, year-on-year:



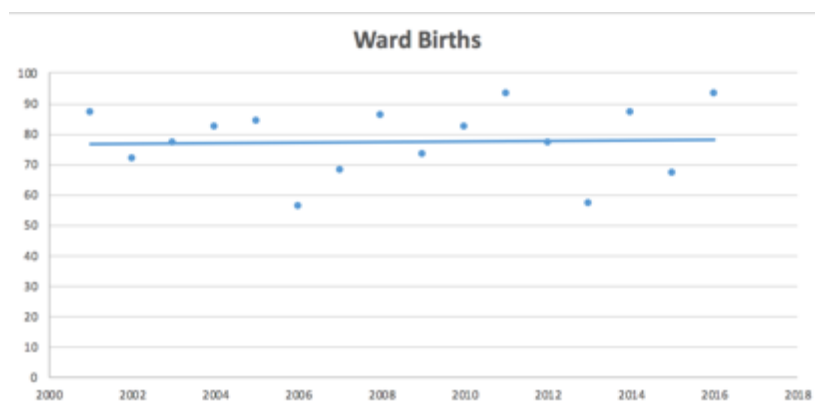
Graph 3: CCC Births

3.3 The Broomfield and the Walthams Ward has seen lower but consistent birth numbers over the previous 16-year period. Births in the Ward have averaged 78 per annum. The peak, consistent with the wider CCC area, was 2016 with 93. The lowest number seen in the review period is 2006 with 56.

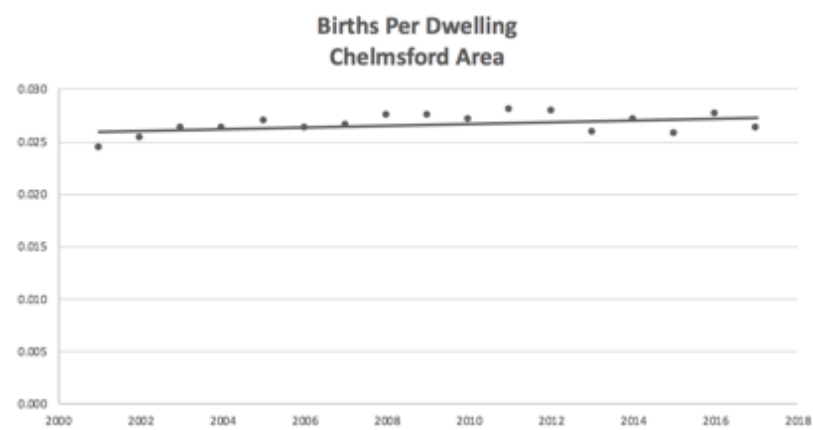
2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
87	72	77	82	84	56	68	86	73	82	93	77	57	87	67	93

Table 5: Ward Births

3.4 Graph 4 charts the births within the Ward boundaries, and demonstrates a consistent trend:

*Graph 4: Ward Births*

3.5 The number of births relative to the number of dwellings within the CCC administrative area is shown in Graph 5. This shows a relatively consistent trend, but slightly rising:

*Graph 5: Births Per Dwelling - CCC*

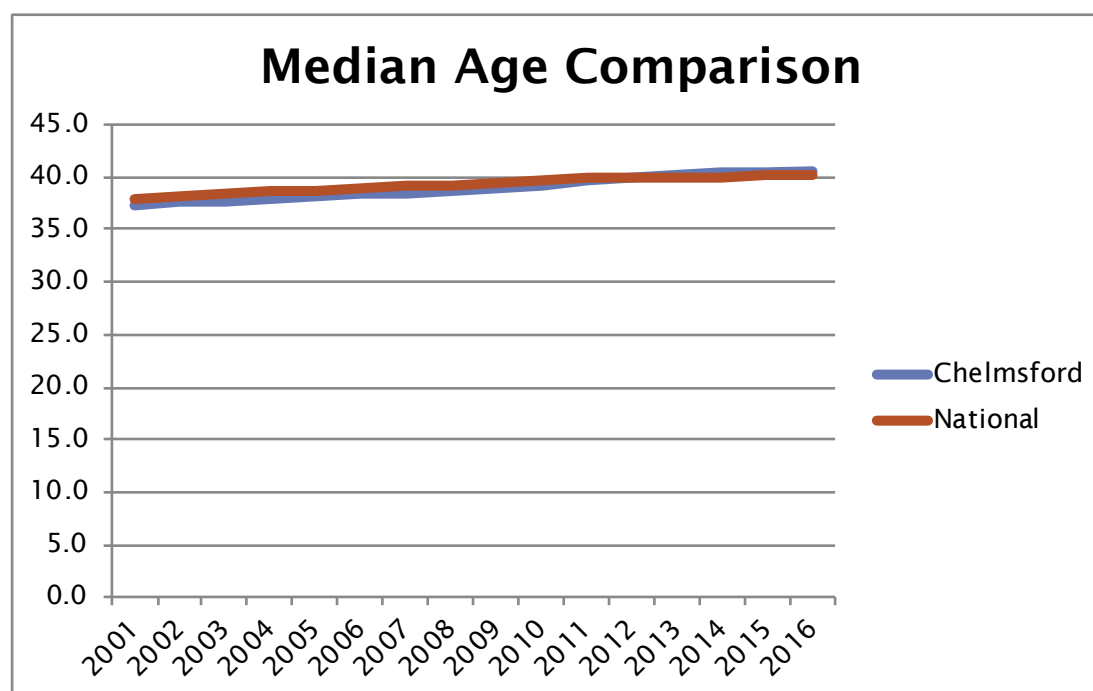
## 4.0 Age

4.1 From the Census in 2001, the median age of the population of the CCC area was comparable with the national picture, with a difference of 0.6 years (CCC 37.3 v National 37.9). Throughout the period reviewed the median age of CCC aged marginally faster than that of the national picture, so that by 2016 the median age was 0.4 years older (40.6 v 40.2). Again though, this is a very minor difference meaning that the CCC area is a good reflection of the age profile of the nation as a whole:

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Chelmsford	37.3	37.5	37.8	37.9	38.1	38.3	38.5	38.7	38.9	39.1	39.8	40.0	40.3	40.4	40.5	40.6
National	37.9	38.1	38.4	38.6	38.8	39.0	39.2	39.3	39.5	39.7	39.9	40	40	40	40.2	40.2
Difference	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.1	0.0	-0.3	-0.4	-0.3	-0.4

Table 6: Median Age - CCC

4.2 Graph 6 demonstrates the change over the review period:



Graph 6: Median Age Comparison

4.3 Comparing the median age of the Ward to the CCC area, in 2001 Broomfield and the Walthams had a median age of 41.8, meaning that the profile was considerably older than both the CCC area and the national picture. By 2016, the median age had increased to 43.2. This indicates the Ward was ageing slower than the national picture, as the difference decreased from 3.9 years, to 2 years.

4.4 To summarise the demographic picture, new dwelling delivery in the CCC area is increasing in line with the birth rate, in an area of comparable age to the national picture. From a Ward perspective, dwelling delivery has been historically sporadic, births are low but consistent, and the median age is slightly higher than both the CCC area and nationally.

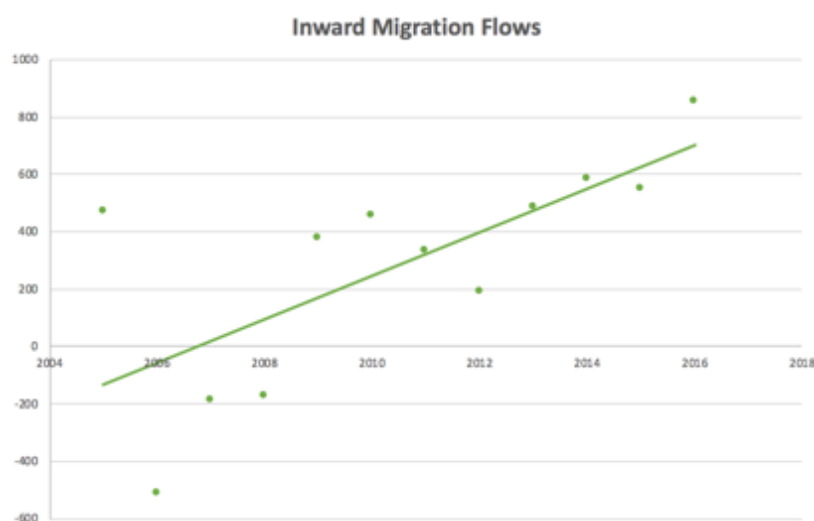
## 5.0 Migration

5.1 ONS estimate that between 2004/05 and 2015/16 the CCC area was, predominantly, a net importer of people. There was a net export of people from the area between the financial years of 2005/06 and 2007/08, with every other year seeing more people come in to the area than vacate. The average across the years is 284 people entering the CCC area per year:

Chelmsford	Mid Year Population Estimate	Long-Term International Migration		Internal Migration (within UK)		Change	
		Inflow	Outflow	Inflow	Outflow		
2004/05	163,570	1,137	887	8,246	8,026	470	0.29%
2005/06	163,879	1,121	1,356	8,231	8,511	-515	-0.31%
2006/07	164,381	985	1,174	8,656	8,658	-191	-0.12%
2007/08	165,047	791	627	7,657	7,995	-174	-0.11%
2008/09	166,208	799	868	7,585	7,138	378	0.23%
2009/10	167,441	815	526	7,622	7,458	453	0.27%
2010/11	168,491	838	731	7,709	7,485	331	0.20%
2011/12	169,335	851	585	7,701	7,777	190	0.11%
2012/13	170,256	708	515	7,820	7,531	482	0.28%
2013/14	171,633	825	356	8,217	8,103	583	0.34%
2014/15	172,638	883	373	8,321	8,284	547	0.32%
2015/16	174,089	957	570	8,686	8,223	850	0.49%

Table 7: Migration Flows CCC

5.2 As discussed, barring the three financial years in the previous decade, the increase in people entering the CCC area has been increasing, as demonstrated in the Graph below:



Graph 7: Migration Trend - CCC

5.3 For individual ages, pre-school and school age, when reviewing the period between 2012 and 2016, CCC on average sees a small inward migration of every age group except 15-year old's. There is an average of 68 pre-school aged children coming in to the area, and 103 Primary school-aged children (0.49 of a form of entry). Secondary school-aged children are fewer in number moving in to the area; approximately 30 per year. What is clear though is that Chelmsford is a net importer of children, especially those of Primary school age:

	NET MIGRATION children						
Age	2011	2012	2013	2014	2015	2016	Average
0	28	11	3	-4	2	11	8.50
1	29	27	9	1	45	22	22.17
2	24	17	57	7	33	29	27.83
3	27	8	25	-15	30	-21	9.00
4	-1	3	10	34	46	27	19.83
5	18	13	5	15	9	24	14.00
6	23	12	9	-5	20	14	12.17
7	-6	-9	11	30	22	5	8.83
8	20	5	11	20	28	14	16.33
9	19	10	15	33	13	9	16.50
10	17	23	17	9	9	19	15.67
11	5	7	18	12	25	6	12.17
12	8	17	3	20	18	9	12.50
13	-1	5	9	15	0	4	5.33
14	13	-2	7	-18	22	3	4.17
15	-2	-20	-19	6	15	-8	-4.67
16	8	8	-9	-2	18	9	5.33
0-3	108	63	94	-11	110	41	67.50
4-10	90	57	78	136	147	112	103.33
11-15	23	7	18	35	80	14	29.50

Table 8: Migration Flows CCC (ONS)

## 6.0 Child Yield

6.1 ECC details their method for pupil generation in their 2016 Developer Guide. ECC calculates Child Yield from a new housing development based on a basic formula that can be seen in Table 9:

Dwelling Type	Primary	Secondary
	Factor	Factor
One bed	0	0
Flats	0.15	0.1
Houses	0.3	0.2

Table 9: ECC Pupil Yield Formula

6.2 When applying this pupil yield to the proposed development, you get the following:

- $450 \times 0.3 = 135$  Primary School Pupils
- $450 \times 0.2 = 90$  Secondary School Pupils

6.3 The figures above represent the ‘worse-case-scenario’ as it does not factor in any one-bedroom dwellings or flats, so the number of pupils ECC may end up suggesting this development generates could be lower.

6.4 When comparing ECC’s child yield to data on the nearby Beaulieu development (which when completed will be 3,600 dwellings) you get a different picture of child yield.

CM1 6AG	E00171002	200908		Albemarle Link		Springfield	CHELMSFORD
CM1 6AJ	E00171002	200908		Desborough Path		Springfield	CHELMSFORD
CM1 6AQ	E00171002	200908		Fleetwood Square		Springfield	CHELMSFORD
CM1 6BG	E00171002	200106		Shardeio Avenue		Springfield	CHELMSFORD
CM1 6BH	E00171002	200106		Clunford Place		Springfield	CHELMSFORD
CM1 6AH	E00171003	200908		Albemarle Link		Springfield	CHELMSFORD
CM1 6AL	E00171003	200908		Ratcliffe Gate		Springfield	CHELMSFORD
CM1 6AP	E00171003	200908		Braganza Way		Springfield	CHELMSFORD

Table 10: Beaulieu development addresses

6.5 The 271 dwellings included in Table 10, on Census day 2011, contained 60 preschool and 122 primary school children. For primary, that equates to 45 primary school children per 100 dwellings; this equates to an increase of 50% on top of the proposed yield ECC is suggesting will come from this development. Comparing the same output areas at mid-2015 ONS population estimate against the Royal Mail address file gives a very similar result. When factoring in that some pupils may attend an independent school, leave the locality to attend a faith-based school, require special education, or be home schooled, a factor of at least 0.35 would be prudent for ECC to factor in to projections.

6.6 EFM’s own forecast trajectory for this development is based on a different methodology and measures the likely number of children resident, whereas the ECC multiplier indicates an area-wide average for new enrolment in local schools. Of course, a proportion of households moving to new developments do not move very far and their children do not change school. In addition, the EFM demographic model identifies the 1-year peak, which persists over the ECC formula result by a varying amount over around a decade. The EFM model serves merely to substantiate that a request from an education authority is reasonable.

6.7 Based on a 450-dwelling development with a nine-year build-out at an average rate of 50 dwellings per annum (this can be altered and refreshed upon request), this development would be expected to generate, at its peak, 155 Primary School age children resident in 2031 (based on a start date of 2020) and 113 Secondary School

age children resident in 2038. The number of 4-year-olds expected to be generated by a development of this size is 23 at its peak, before settling down to 11 per year once the development reaches maturity:

1. Child age distribution - shown as number of children per 100 dwellings

Children can be born at time of migration time of move, based on Census data for development

Age	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
2011	2.61	2.66	2.62	2.58	2.53	2.47	2.41	2.35	2.29	2.23	2.17	2.11	2.05	1.99	1.93	1.87	1.81	1.75	1.69	1.63

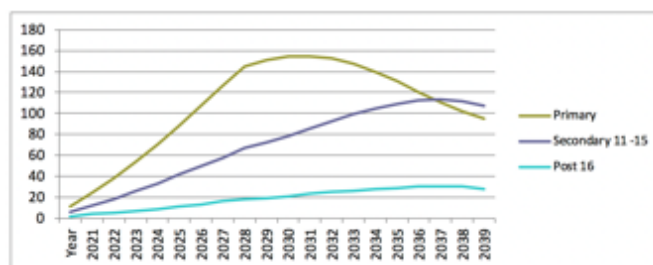
2. Timelines for development at Childhood completions assumed to be Age 2020 Insert year

Year	2021	2022	2023	2024	2025	2026	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Assumed completions over the year to July	50	50	50	50	50	50	50	50	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Assumed completions by July, total	48	48	48	48	48	48	48	48	48	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0

3. Number of Children by age, at July each year

Year	Age of Children	Total people	Completions
	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20+ <td>Pop Sex 16+</td> <td></td>	Pop Sex 16+	
2021	3 3 3 3 2 2 2 2 2 2 2 1 1 1 1 1 1 1 1 1 1	11 6 2	48
2022	6 6 6 6 5 5 5 5 5 5 5 3 2 2 2 2 2 2 2 2 2	16 12 4	48
2023	8 9 9 9 8 8 8 8 8 8 8 4 4 3 3 3 3 3 3 3 3	18 19 5	48
2024	11 11 12 12 11 9 8 7 7 7 7 6 6 5 5 5 5 5 5 5	26 7	48
2025	13 14 14 15 14 12 11 9 8 8 8 7 7 6 6 6 6 6 6 6	33 9	48
2026	14 16 16 17 16 15 14 13 11 10 10 9 8 8 7 7 7 7 7 7	42 11	48
2027	16 17 18 19 16 17 17 16 14 13 11 11 10 10 9 8 8 8 8 8	50 13	48
2028	17 19 20 21 20 20 20 18 17 16 14 13 12 11 11 10 10 10 10 10	58 16	48
2029	19 20 22 23 23 23 22 21 20 19 17 16 14 13 12 12 11 10 10 10	67 18	48
2030	17 19 20 22 23 23 23 22 21 20 19 17 16 14 13 13 12 12 11 10	72 19	0
2031	15 17 19 20 22 23 23 23 22 21 20 19 17 16 14 13 13 12 11 10	78 21	0
2032	14 15 17 19 20 22 23 23 23 22 21 20 19 17 16 14 13 13 12 11	85 23	0
2033	13 14 15 17 19 20 22 23 23 23 22 21 20 19 17 16 14 13 13 12	93 25	0
2034	12 13 14 15 17 19 20 22 23 23 23 22 21 20 19 17 16 14 14 13	99 26	0
2035	12 13 13 14 15 17 19 20 22 23 23 23 22 21 20 19 17 16 14 13	105 28	0
2036	11 12 12 13 14 15 17 19 20 22 23 23 23 22 21 20 19 17 16 15	109 29	0
2037	11 11 12 12 13 14 15 17 19 20 22 23 23 23 22 21 20 19 18	112 30	0
2038	11 11 11 12 12 13 14 15 17 19 20 22 23 23 23 21 20 19	113 30	0
2039	11 11 11 11 12 12 13 14 15 17 19 20 22 23 23 22 21 20	112 30	0
2040	11 11 11 11 11 12 12 13 14 15 17 19 20 22 23 23 22 21	108 28	0
2041	11 11 11 11 11 11 12 12 13 14 15 17 19 20 22 23 23 22	101 27	0
2042	11 11 11 11 11 11 11 12 12 13 14 15 17 19 20 22 23 23	93 25	0
2043	11 11 11 11 11 11 11 11 12 12 13 14 15 17 19 20 22 23	85 23	0
2044	11 11 11 11 11 11 11 11 11 12 12 13 14 15 17 19 20 22	78 21	0
2045	11 11 11 11 11 11 11 11 11 11 12 12 13 14 15 17 19 20	72 19	0
2046	11 11 11 11 11 11 11 11 11 11 11 12 12 13 14 15 17 19	67 18	0
2047	11 11 11 11 11 11 11 11 11 11 11 11 12 12 13 14 15 17	62 17	0
2048	11 11 11 11 11 11 11 11 11 11 11 11 11 12 12 13 14 15	60 16	0
2049	11 11 11 11 11 11 11 11 11 11 11 11 11 11 12 12 13 14	58 15	0
2050	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 12 12 13	57 15	0
2051	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 12 12	56 15	0
2052	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 12	56 15	0
2053	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2054	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2055	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2056	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2057	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2058	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2059	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2060	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2061	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2062	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2063	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2064	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2065	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2066	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2067	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2068	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2069	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2070	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2071	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2072	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2073	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0
2074	11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	56 15	0

Table 11: EFM Development Trajectory Model

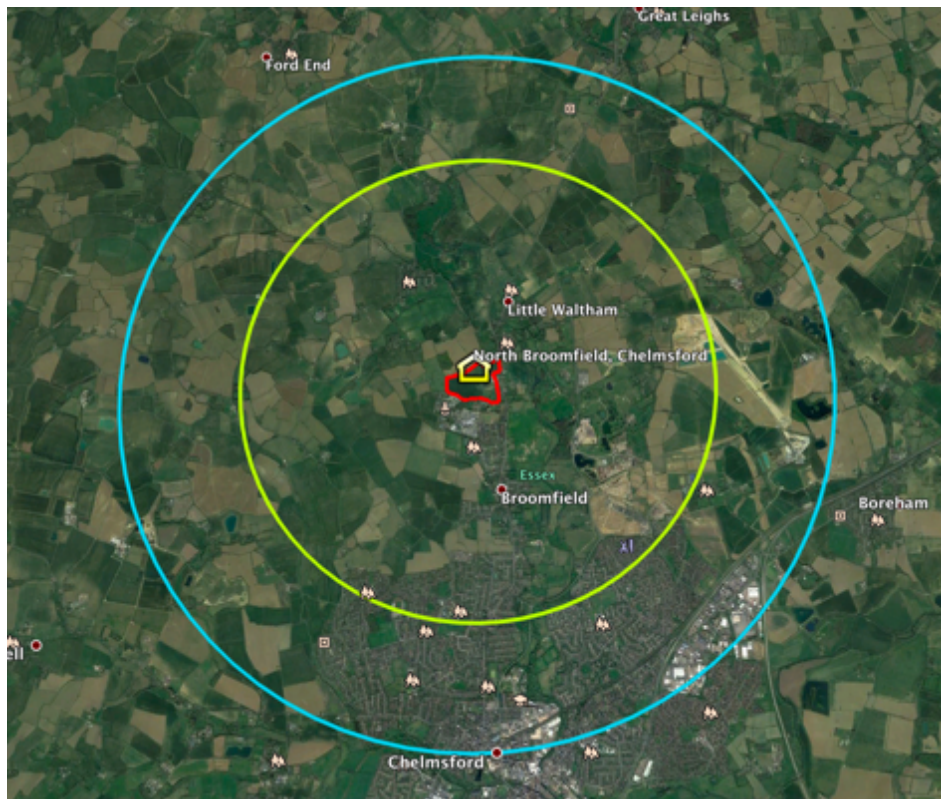




6.8 What this demonstrates is that, according to EFM's trajectory tool, ECC's child yield formula is reasonable.

## 7.0 Education

7.1 In our assessment, we consider all Primary schools within a 2-mile walking distance<sup>1</sup>, and all Secondary schools that lie within a 3-mile walking distance of the development. The 2 and 3-mile criteria are the distances prescribed in the Education Act beyond which local authorities are required to provide/fund transport where the nearest available school is further away. It is the intention of the planning system and the provision of state-funded schools that the ideal mode of travel to and from school is walking or cycling. The NPPF made this plain at paragraph 38. Paragraph 38 has been replaced by paragraph 104A in NPPF2 with an exhortation to minimise the number and length of journeys. The words 'within walking distance of most properties' have been removed.



Map 4: Two and Three-mile boundary around the development site

<sup>1</sup> Distances have been calculated based upon a postcode to the south of the development. Once the development is built, some parts of the site may be further/closer than shown.

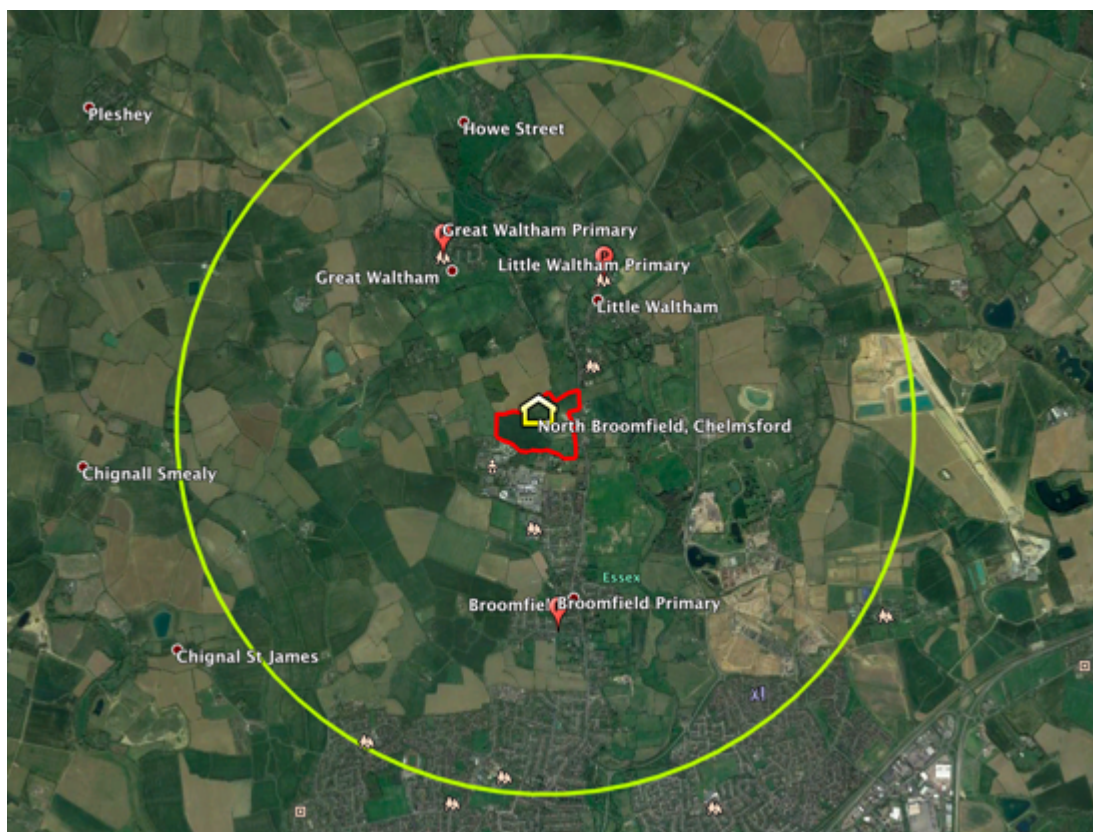
7.2 The authority is required to make pupil forecasts to the Department for Education on a year of age basis by 'school planning area' and identify each school in the cluster and its capacity. The forecasts cover the period for which birth data is available. Forecasts covered by Section 106 agreements are omitted. For primary school age pupils, the current published data runs to 2022/22 and for secondary 2023/24. These are known as the School Capacity ("SCAP") returns. This is how Government allocates its funding for additional school places that are its responsibility to provide.

7.3 Schools should be operationally full to meet the financial audit requirement for best value from public assets. This is demonstrative of a properly functioning school system. School funding is predicated on the number of pupils that are on a school's roll, so is in the best interest of schools to maximise intake within their capacity. Accordingly, many schools take from a wide catchment area and some enroll over capacity.

7.4 The statutory rules on enrolment are that whilst schools may have a catchment area and ordered criteria for admissions, the rules only apply if the school is oversubscribed. Otherwise, whoever applies is admitted irrespective of where they live. This is known as 'More Open Enrolment'. It fosters parental choice of school.

## 8.0 Primary Schools

8.1 There are three schools that have been assessed for capacity that are within a two-mile walking distance of the proposed development site. Map 5 show the location of these schools in relation to the development:



Map 5: Primary Schools within the vicinity of the development

8.2 Table 12 details the current roll at the schools, which are all in the Essex County Council administrative area:

Primary School Name	Postcode	LA Name	Distance (miles)	Capacity	PAN	NoR	Yr R	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
Little Waltham Primary	CM3 3NY	Essex	0.9	210	30	195	34	30	29	30	22	30	20
Broomfield Primary	CM1 7DN	Essex	1.2	315	45	314	45	45	45	45	45	44	45
Great Waltham Primary	CM3 1DF	Essex	1.6	158	22	162	27	22	21	23	23	24	22
<b>TOTAL</b>				<b>683</b>	<b>97</b>	<b>671</b>	<b>106</b>	<b>97</b>	<b>95</b>	<b>98</b>	<b>90</b>	<b>98</b>	<b>87</b>
Suplus							-9	0	2	-1	7	-1	10
Available Surplus %							-9.28%	0.00%	2.06%	-1.03%	7.22%	-1.03%	10.31%

Table 12: Primary School Numbers on Roll January 2018

(NoR = Number on Roll; PAN = Planned Admission Number)

8.3 The nearest school to the development is Little Waltham Primary School, which is less than one-mile walking distance from this development. This is a one form entry ('1FE') school and is essentially full. The school is oversubscribed in Reception Year, full in Years 1, 2, 3 and 5, with minor surplus in Years 4 and 6. Should Little Waltham take a full contingent in Reception Year in September 2018, the surplus capacity will drop even further. There is not close to enough capacity in this school to

accommodate the pupils generated from this development without an expansion project undertaken.

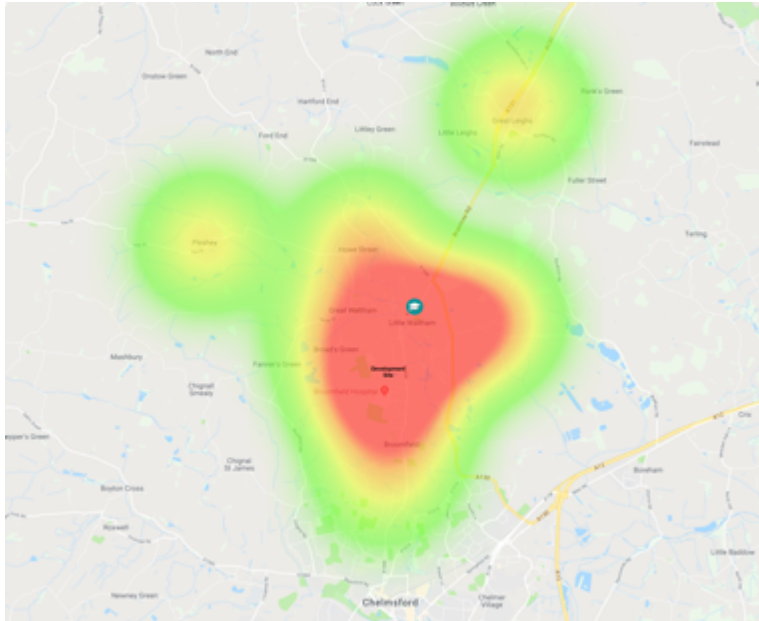
8.4 When looking at whether expansion is possible, the existing site is small – approximately 0.5ha (see Map 6). A 2FE school site is usually in the region of 1.8-2ha, so the current site is undersized even for the level of Primary provision it is currently providing. There are playing fields behind the school, and the site is not landlocked to the east, so there may be the opportunity to procure additional land for an expansion, but that would take more investigation with ECC in order to establish whether they and the school itself had an appetite to grow:



Maps 6 and 7: Little Waltham Primary School Site Maps (via Land Registry / Google Earth)

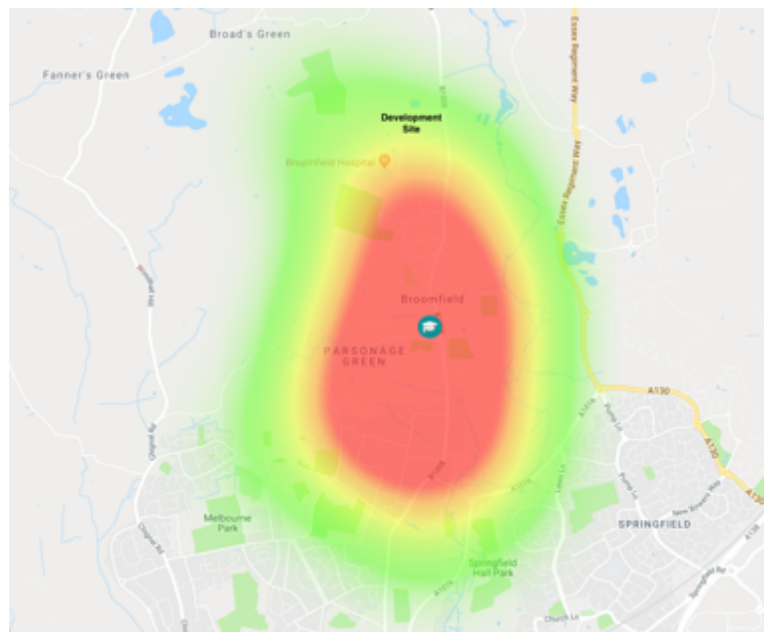
8.5 From a catchment area perspective, this school serves to the north of Chelmsford, predominantly the villages of Broomfield, Little Waltham, Pleshey and Great Leighs. This development is well placed in the centre of the current catchment area:





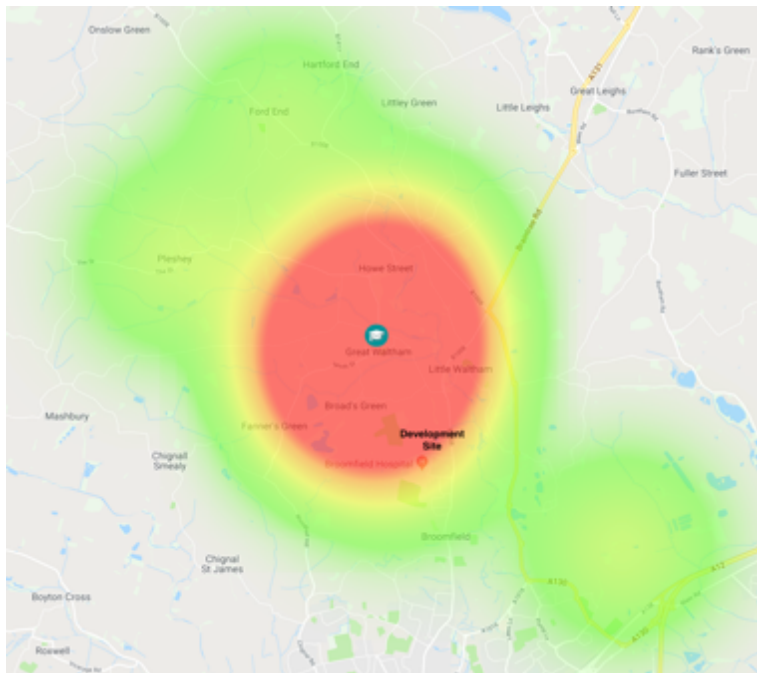
Map 8: Little Waltham Catchment area Heat Map (via schoolguide.co.uk)

8.6 The second nearest school to this development is Broomfield Primary School. This is a 1.5FE school and is full. This school currently serves Broomfield and North Chelmsford; this development is on the catchment's outer edge:



Map 9: Broomfield Primary

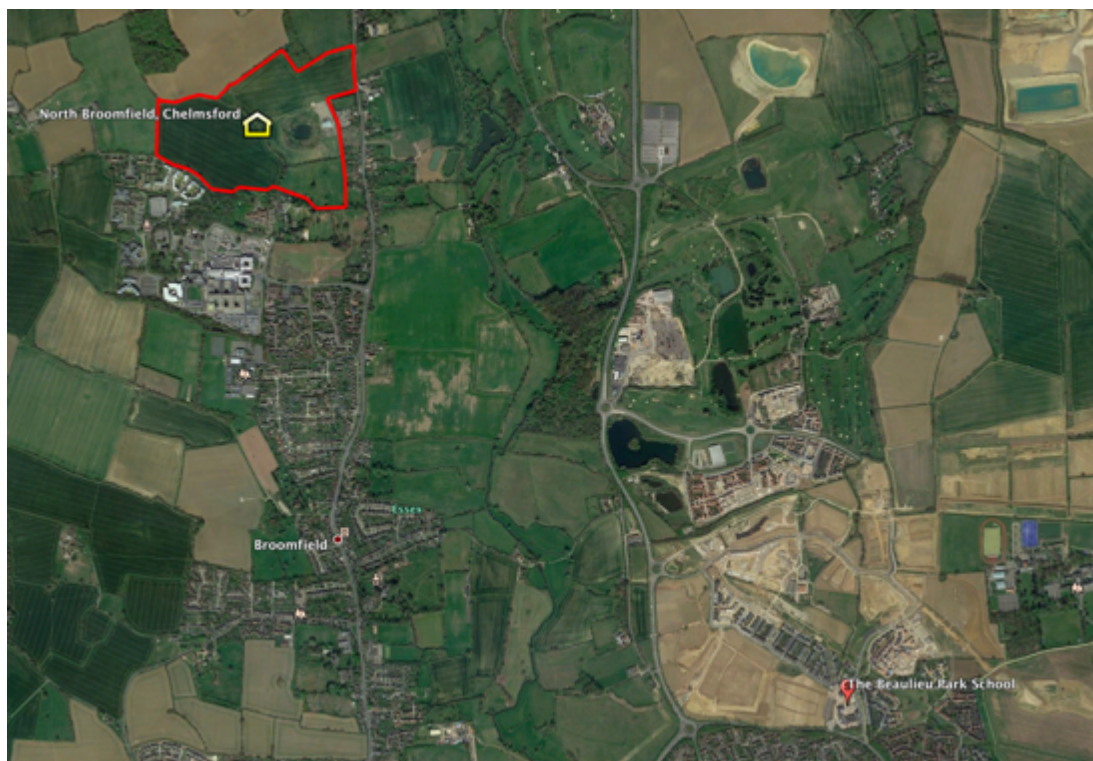
8.7 The third school, and the last within an acceptable distance of the development site to be considered capacity for this development, is Great Waltham Primary School. This school is less than a standard 1FE school, and is oversubscribed. The school predominantly serves Great Waltham, and the villages around the school. Due to the small size of the school, and the distance, this facility does not equate to reliable capacity for this development:



Map 10: Great Waltham Primary

8.8 In addition to the schools discussed, there is a new school on the Beaulieu development opening in September 2018 for the first tranche of 60 Reception aged pupils. The school will then be open as a full 2FE school by no later than September 2024. This is the first of two new Primary schools to serve this development of 3,600 dwellings, of which in excess of 10% are completed and occupied. If you apply the top estimate of ECC's pupil yield to this development, you get 1,080 Primary School pupils, which is over 5FE's worth of Primary pupils. The two schools are therefore likely to need to be expanded to 3FE in order to accommodate the full pupil contingent from this development. However, as discussed in Section 6, the early indications from the Beaulieu development suggest that the development is generating in the region of 0.45 pupils per dwelling. Applying this yield to the full 3,600 dwellings gives total of 1,620 Primary pupils, or almost 8FE. This indicates that the planned number of schools on the site is 50% of what they will actually require. Accordingly, this new school provision cannot be relied upon as capacity for this

development. On the contrary, this development will likely take spare capacity from neighbouring schools:



Map 11: New All-Through School in Chelmsford

8.9 From a projections perspective, the three schools reviewed are grouped with two other schools (Great Leighs and Ford End Primary Schools) to form the CHEP01a – Chelmsford Group Primary Planning Area. The schools have a combined capacity of 990 places:

LA Name	School Name	Phase	May 17 NOR	Net Capacity
Essex	Great Leighs Primary School	PS	223	240
Essex	Great Waltham Church of England Voluntary	PS	158	158
Essex	Ford End Church of England Primary School	PS	69	70
Essex	Little Waltham Church of England Voluntary Aided	PS	176	207
Essex	Broomfield Primary School	PS	314	315

Table 13: CHEP01a Primary Planning Area

8.10 In the 2016/17 academic year, the schools had a roll of 635, which means that the schools had surplus capacity of 55 places. By 2021/22, ECC is forecasting that the schools will have a combined roll of 1,138, meaning that they will be 148 places



over capacity. This indicates that the area will require at least 1FE's worth of new provision, either in a stand-alone facility or through expansion of existing facilities, to accommodate the growth:

<b>LA 881</b>		<b>Area Code 8810511</b>	
<b>LA Name Essex</b>		<b>Area Name CHEP01a - Chelmsford Group</b>	
Year Group	R		
Actual 1617	143	Sum 1617	935
Forecast 1718	151	Sum 1718	975
Forecast 1819	134	Sum 1819	999
Forecast 1920	139	Sum 1920	1022
Forecast 2021	153	Sum 2021	1072
Forecast 2122	157	Sum 2122	1138

Table 14: SCAP Projections ECC

8.11 The new school on the Beaulieu development will be added to the Chelmsford Group Planning Area, which will increase the capacity. However, what is not certain is how much of the new development has been accounted for in the projections, and whether the large number of pupils being generated by the Beaulieu development will add unforeseen pressure on the existing schools.

8.12 From a development mitigation perspective, ECC has a few options. The difference between the financial outlay of the developer between options could be substantial, as will be discussed below:

- i. Expand a local Primary School: this development is CIL liable. At 450 dwellings ECC is forecasting 135 Primary School-aged children on site. ECC could utilise CIL funds in order to provide an additional 1FE's worth of provision at a neighbouring school (Little Waltham would be the ideal candidate if possible). This would provide capacity for this development, with additional capacity left over to serve the wider area;
- ii. Deliver a new school on this development site: as discussed previously, the Beaulieu development is likely to generate considerably more demand for school places than is being delivered on site. There is a lack of capacity in the existing schools, and new provision on this site could not only serve the pupils generated, but provide needed provision for the area as a whole. However, this would mean that in the region of 2ha of land would need to be reserved, and a proportional Section 106 contribution towards the build

(Braiswick Primary is a new 2FE school built in 2015/16 in Essex and cost £6.8m; 32% of this is £2.176m);

- iii. Deliver a new 2FE school<sup>2</sup> on an alternative site/location, and utilise a proportion of the CIL funds collected from this development on the build.

8.13 As demonstrated, options i and iii will incur no further cost to the developer. By paying the CIL, development mitigation can be considered undertaken, and the onus will be on ECC to fulfil their statutory duty of providing school places. Option ii will require a considerable financial outlay, plus land. Clearly there are benefits for new developments including a school on site, and this may be favoured by the developers in order to aid in the advertisement of the new dwellings, and to guarantee (as much as is possible) school places for the new residents if required. There is a clear argument for the need of this provision, as outlined previously. It seems evident that ECC has significantly underestimated the need for school places, and that the existing new provision planned is insufficient.

8.14 Should land be required on this site, it should be located on the masterplan in an area reserved for housing. This will set the land value. 32% of the 2ha site (the equivalent of this development's impact) will need to be provided gratis, while the remaining 68% would be acquired by ECC for at residential plus developer margin value.

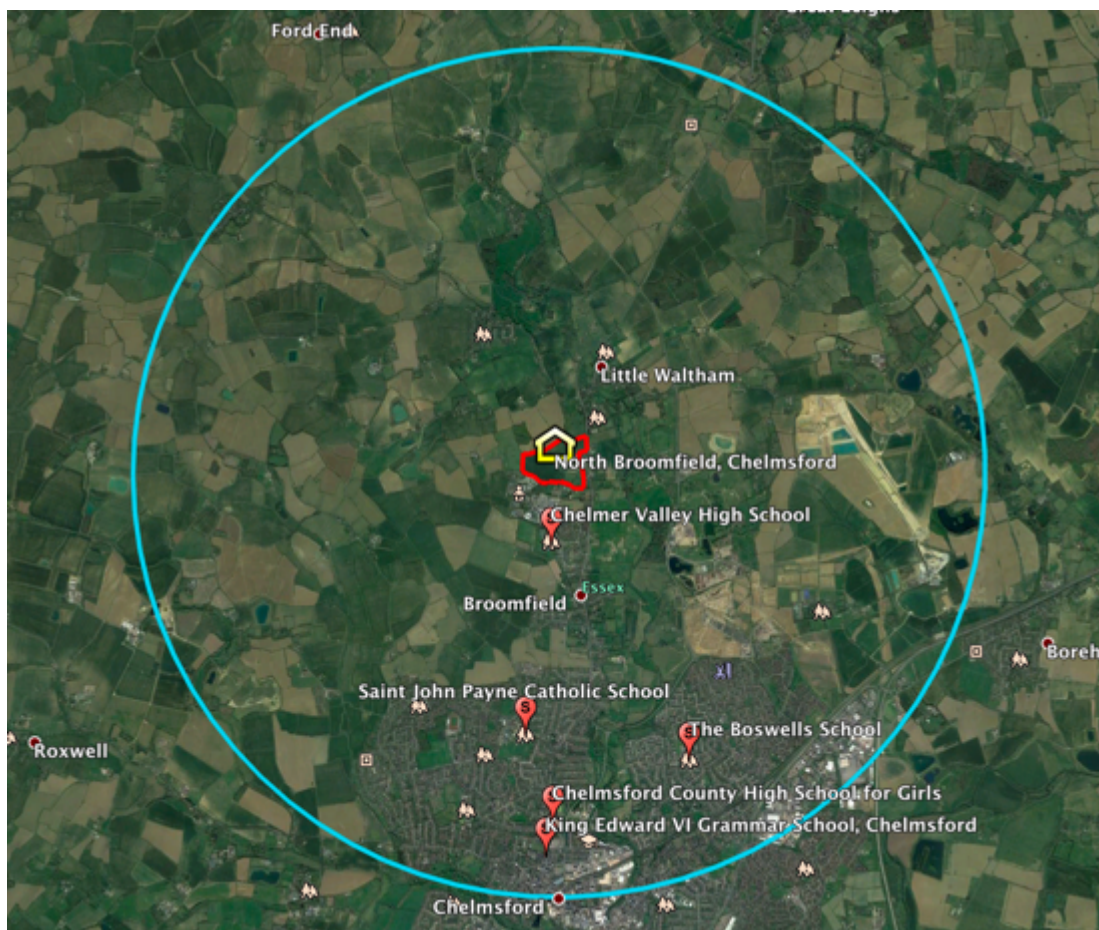
8.15 The recommendation of this report would be to consult ECC at their earliest convenience regarding their plans for development mitigation, as if a new school is required on-site, this will have significant financial implications over provision provided off-site.

## 9.0 Secondary Schools

9.1 Five schools have been assessed for capacity. The first of these schools is the local school to the development, with the remaining four being further afield. The location of these schools in relation to the development site can be seen in the map below:

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<sup>2</sup> The default position for new schools is that they are Academies – independent state-funded schools. To establish a Free School Academy, the local authority seeks an operator and recommends same to the Education Secretary of State. The ESoS then enters into a Funding Agreement with the operator and thereafter provides the operating revenue funding. It is difficult to secure an operator for a 1fe school due to funding levels not meeting operating costs. The Small Schools Budget Uplift used by local authorities to help small schools is not available.



Map 12: Secondary Schools in the vicinity of the development site

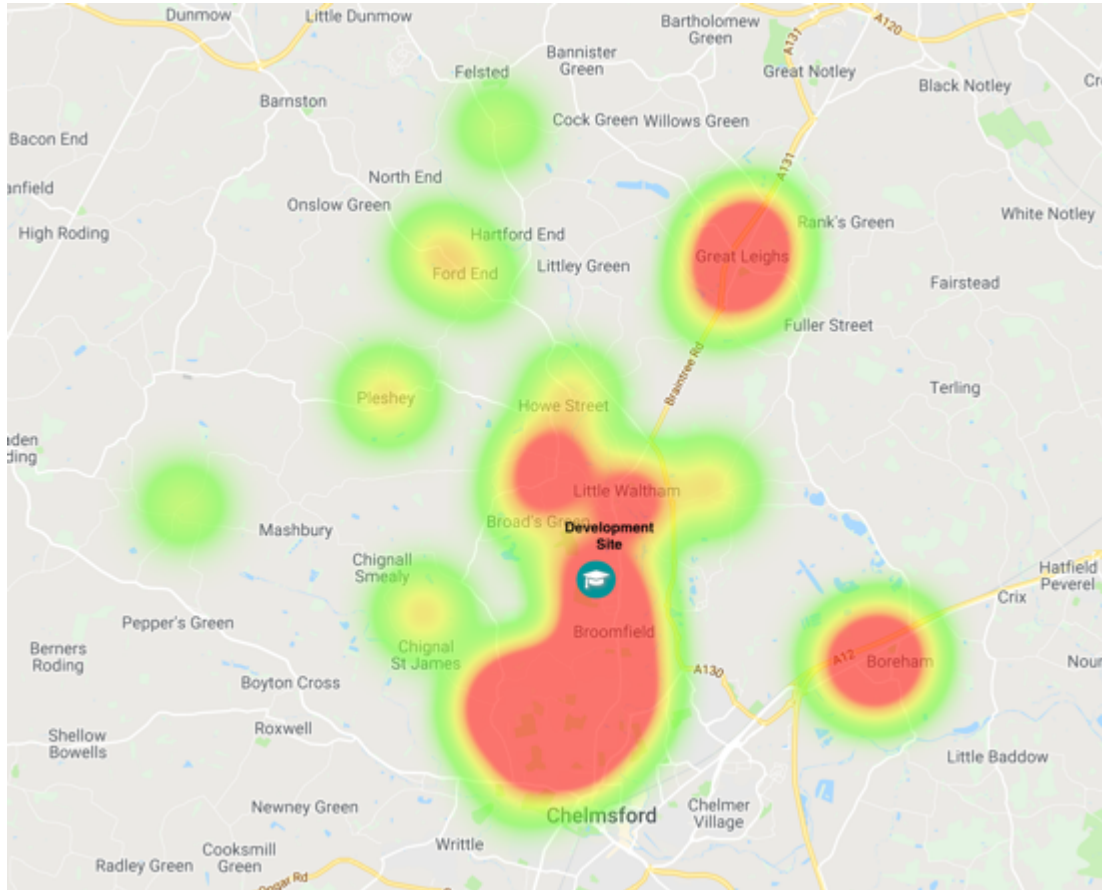
9.2 The current roll at these schools, which are all in the Essex County Council administrative area, can be seen below:

Secondary School Name	Postcode	LA Name	Distance (miles)	Capacity	PAN	NoR 7-11	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Post 16
Chelmer Valley High School	CM1 7ER	Essex	0.7	1168	196	1033	226	196	196	208	207	190
Saint John Payne Catholic School	CM1 4BS	Essex	2.3	1269	190	945	190	191	191	189	184	181
Chelmsford County HS for Girls	CM1 1RW	Essex	2.6	900	150	689	150	150	150	120	119	236
King Edward VI Grammar School	CM1 3SX	Essex	2.9	890	150	689	150	150	150	120	119	376
The Boswell School	CM1 6LY	Essex	3	1431	248	1238	255	249	247	246	241	235
<b>TOTAL</b>				<b>5658</b>	<b>934</b>	<b>4594</b>	<b>971</b>	<b>936</b>	<b>934</b>	<b>883</b>	<b>870</b>	<b>1218</b>
Suplus							-37	-2	0	51	64	
Available Surplus %							-3.96%	-0.21%	0.00%	5.46%	6.85%	

Table 15: Primary School Numbers on Roll January 2018  
(NoR = Number on Roll; PAN = Planned Admission Number)

9.3 This development's local Secondary school is Chelmer Valley High School. The school has a planned admission number of 196 per year, and the school is either full

or oversubscribed in every year group. From a catchment area perspective, the school serves the Broomfield area and the areas to the north, and the north area of Chelmsford and surrounding villages. This development site is ideally placed to be able to gain a space at the school over pupils who travel from further afield:



Map 13: Chelmer Valley Catchment Area Heat Map

9.4 With regards to the four other Secondary Schools, which are each over two-miles walking distance from the development site:

- Saint John Payne Catholic High School is in the region of 6FE with 190 pupils per Year Group. The school is full in Years 7-10, with very minor capacity in Year 11. The school is not ideally placed to be considered capacity for this development as it currently stands, not only from a capacity perspective, but also due to the religious steer of the school;

- Chelmsford County High School for Girls is a 5FE school and is completely full in Years 7-9 with minor capacity in Years 10 and 11;
- King Edward VI Grammar School is not to be relied upon for capacity as it is a selective facility, which means the admissions criteria is based on the results of an examination. While it is an option for parents living on this development, it is not guaranteed provision;
- The Boswell School is full in every year group.

9.5 There is an additional school due to open in September 2018 on the Beaulieu development (see Map 11). This is a 6FE Secondary School (180 places per year group) and will offer additional capacity to the area. The new school will be approximately 2.5 miles from the development site, so there are nearer facilities. What it is likely to do is draw prospective pupils who are considering the other schools away from them, freeing up capacity across all the local schools.

9.6 From a projections perspective, the five schools discussed are grouped with four additional schools (five when the Beaulieu School opens) to form the Chelmsford Secondary Planning Area. From September onwards, these schools will have a combined capacity of 12,087:

LA Name	School Name	Phase	May 17 NOR	Net Capacity
Essex	Great Baddow High School	SS	1400	1413
Essex	Moulsham High School	SS	1462	1613
Essex	St John Payne Catholic School, Chelmsford	SS	1146	1269
Essex	Chelmsford County High School for Girls	SS	874	900
Essex	King Edward VI Grammar School, Chelmsford	SS	1021	890
Essex	The Boswells School	SS	1465	1431
Essex	Chelmer Valley High School	SS	1192	1168
Essex	Hylands School	SS	766	1100
Essex	The Sandon School	SS	1269	1253

Table 16: CHES01 - Chelmsford Secondary Planning Area

9.7 In the academic year of 2016/17, these schools had a combined roll of 10,614, meaning they had a surplus capacity of 413 places. By 2023/24, the roll at these schools is expected to increase to 12,670 places, meaning they will be 583 places over capacity. This will mean an additional Secondary school will be needed to accommodate the projected growth. Additional development will exacerbate this pressure:

<b>LA 881</b>	<b>Area Code 8815511</b>
<b>LA Name Essex</b>	<b>Area Name CHES01 - Chelmsford</b>
<b>Secondary Change 2056</b>	

Year Group	7		
Actual 1617	1818	Sum 1617	10614
Forecast 1718	1864	Sum 1718	10817
Forecast 1819	1856	Sum 1819	11031
Forecast 1920	2014	Sum 1920	11392
Forecast 2021	1966	Sum 2021	11709
Forecast 2122	2014	Sum 2122	12043
Forecast 2223	2158	Sum 2223	12403
Forecast 2324	2101	Sum 2324	12670

Table 17: SCAP Projections ECC

9.8 ECC has the responsibility of providing additional capacity to accommodate the need, as per their statutory duty. Development mitigation is provided via CIL, so nothing further is required from this development.

## 10.0 Implications of 800 Dwellings

10.1 From a new pupil perspective, as discussed in Section 6 of this report, the child yield of an 800-dwelling development will be expected to generate the following:

- $800 \times 0.3 = 240$  Primary School Pupils
- $800 \times 0.2 = 160$  Secondary School Pupils

10.2 The fact that the pupil yield exceeds 1FE's worth of Primary pupils means that a Primary School will definitely be required, and that a 1FE expansion of local provision will not be sufficient. This means that 57% of a 2ha site will be required to be provided gratis, with the remainder acquired by ECC. The financial implication will be in the region of £3.876m (57% of a 2FE facility).

10.3 Additional Secondary provision would still be provided via CIL, although the need for that additional provision would be increased.



## 11.0 Emerging Plans

11.1 As discussed previously, CCC is currently updating their Local Plan of new development to 2026, of which this development will be an allocation in the region of 450 dwellings. CCC's Preferred Options Sustainability Appraisal Report (2017) states the following for North Chelmsford:

### Growth Area 2 - North Chelmsford

5.4.10 This Growth Area represents a major opportunity to create new strategic neighbourhoods and employment opportunities to provide around 5,000 new homes, 45,000 sqm of office/business floorspace and 14 Travelling Showpeople plots. A total of 3,000 new homes is proposed on a large greenfield site in north east Chelmsford which will form a new neighbourhood using Garden City principles and allowing the Chelmsford North East By-pass to be potentially constructed in phases. A further 1,100 new homes would be delivered at Great Leighs (also with an opportunity to adopt Garden City principles), 800 new homes at land in North Broomfield (allowing a new access into Broomfield Hospital and Fairleigh Hospice) and 145 new homes at land east of Boreham. In addition, a Gypsy and Traveller allocation for 10 pitches is proposed at Drakes Lane, Little Waltham.

11.2 Of the developments discussed above, the Garden Village proposal of 3,000 dwellings will be required to deliver Primary provision on site to accommodate the pupils requiring places. The same is true of the Great Leighs development.

11.3 Development in the three growth areas of Chelmsford includes net new homes in the region of 10,875. This breaks down to the following:

- Growth Area 1 – Central and Urban Chelmsford: 3,200
- Growth Area 2 – North Chelmsford: 5,045
- Growth Area 3 – South and East Chelmsford: 1,130

11.4 Within these numbers includes existing commitments of 3,423, leaving 7,452 left to come forward (as of 2017).

11.5 The timetable for the adoption of the Local Plan is as follows:

Submission for Independent Examination (Regulation 22)	29 June 2018
Independent Examination Hearing Sessions	Autumn 2018
Adoption	Late 2018 / Early 2019

Table 18: Local Plan Timetable



11.6 From a child yield perspective, 10,875 dwellings is the equivalent of 3,263 Primary School places (15.5FE – eight new Primary Schools) and 2,175 Secondary places (14.5FE – two new Secondary Schools).

## 12.0 Early Years

12.1 Under the Childcare Act 2006, local authorities have specific duties to secure:

- Sufficient and suitable childcare places to enable parents to work, or to undertake education or training which could lead to employment
- Sufficient and suitable early years places to meet predicted demand
- Free early years provision for all 3 and 4-year olds (and more recently the 40% most vulnerable 2-year olds) of 15 hours per week 38 weeks per year.

12.2 The Childcare Act 2016 includes an extension to the current entitlement and, from September 2017, provides an additional 15 hours (per week 38 weeks per year) of free childcare for 3 and 4-year old children from working families who meet the following criteria:

- Both parents are working (or the sole parent is working in a lone parent family)
- Each parent earns, on average, a weekly minimum equivalent to 16 hours at national minimum wage and less than £100,000 per year.

12.3 Additional Pre-School infrastructure is included on the Regulation 123 List; therefore, any new provision will be funded, either fully or partially, via CCC's CIL. No additional S106 planning obligations are justified.

## 13.0 Special Education Needs

13.1 It is very difficult to establish the need for SEN provision against new development, as SEN vary considerably. Without the establishment of specific requirements, no planning obligations are justified. Should additional SEN infrastructure provision be required, it is more suitable to being funded via CCC's CIL.

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## 14.0 Conclusion

14.1 From a Primary School perspective, this development is expected (at 450 dwellings) to generate the need for 135 Primary places, based on the standard ECC formula. Based on the pupil generation of the neighbouring Beaulieu development, this is likely to be an underestimate. The local schools to this development are all full, meaning more places will be required from the outset. How Primary school provision is mitigated will have significant financial implications to this development. Should a school be delivered on site (which has benefits to the wider area as well as to the development in terms of providing provision within walking/cycling distance of the new dwellings) a proportional payment will be required via Section 106, as this site is identified in the North Chelmsford Area Action Plan (see Table 1). However, should provision be provided offsite (either through school expansion or an alternative school elsewhere), nothing further is required from this development beyond the payment of CIL. It is advisable to consult with ECC at their earliest convenience in order to establish their plans for development mitigation, as if a school site is required, it is important to know this when masterplanning the site.

14.2 From a Secondary, SEN and Early Years perspective, no further mitigation is required beyond the payment of CIL.

# Representations made on behalf of Bloor Homes Eastern

In respect of the Chelmsford Draft Local Plan  
(Regulation 19 – Publication Draft)  
January 2018  
Pre-Submission Document

March 2018

**Representations made on behalf of  
Bloor Homes Eastern**

**In respect of the Chelmsford Draft Local Plan  
(Regulation 19 – Publication Draft)  
January 2018  
Pre-Submission Document**

<b>Project Ref:</b>	25746/A5/P4/JT/SO	25746/A5/P4/JT/SO
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<b>Date:</b>	March 2018	March 2018
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## **CONTENTS**

- 1.0 Introduction
- 2.0 Housing Need & Supply
- 3.0 Consideration of Strategic Growth Site 6 – North of Broomfield
- 4.0 Infrastructure Requirements
- 5.0 Education Capacity and Provision
- 6.0 Summary of Representations

## **APPENDICES**

Appendix 1: Landscape and Visual Appraisal (LVA), dated March 2018

Appendix 2: Characteristics Plan

## 1.0 INTRODUCTION

1.1 These representations are made in respect of land north of Broomfield Hospital, Woodhouse Lane, Broomfield, Chelmsford, on behalf of Bloor Homes Eastern ('Bloor Homes'). The representations are made in respect of the Pre-Submission Chelmsford Draft Local Plan, which is subject to public consultation during the period 31st January 2018 to 14th March 2018.

1.2 This document considers and comments upon the follow policies:

- Strategic Growth Site 6 – Land North of Broomfield Hospital;
- Policy SPA1 – Broomfield Hospital Special Policy Area;
- Strategic Policy S11 – Infrastructure Requirements.

1.3 Representations are submitted on the following key issues:

- The need for greater flexibility in site allocations to support the Local Plan's housing trajectory;
- The role medium sized sites have to play in the overall allocations mix and vital role SGS6 can have in this context. The potential role of SGS6 in addressing primary education capacity in the medium and longer term;
- Support for a masterplan-led consideration of site capacity. The need for maximising developable areas on allocated sites;
- The importance of not placing overreliance on new strategic releases/allocations;
- Clarity and consistency in the policy framework and delivery strategy to enable a Secondary Access to Broomfield Hospital.

1.4 Bloor Homes is well advanced in its assessment of and commitment to Strategic Growth Site (SGS6). Technical studies, highways assessment, baseline studies to support environmental impact assessment (EIA) and masterplanning are in place. This diligent approach has been followed in supporting the interpretation of the site, the master planning response to date, and the drafting of the Local Plan through consideration of site characteristics and context. Thus it has been possible to consider early on site characteristics and opportunities, the capacity of the site and mitigation.

1.5 Bloor Homes is committed to working closely with Chelmsford City Council (CCC), the Parish Councils of Broomfield and Little Waltham and engaging with the Broomfield Neighbourhood Plan and wider community in the evolution of the proposed development

for SGS6. The draft allocation is broadly supported, subject to representations made in this document, and pre-application masterplanning and statutory engagement is underway with a view to an early planning application and delivery of high quality homes, designed in such a way as to maintain and enhance the integrity of the village of Broomfield, early in the plan period.

- 1.6 Bloor Homes wishes to participate within the Examination-in-Public on the matters discussed within these representations.



## **2.0 HOUSING NEED & SUPPLY**

2.1 The following observations are made in respect of the housing need and the plan's capacity for delivery:

- The current Objectively Assessment Housing Need (OAHN) for Chelmsford is 18,515 dwellings over the plan period 2013-2036 (805 dwellings per annum);
- The Council has accounted for the Government's proposed standardised methodology for calculating OAHN. This would increase the housing requirement to 19,600 dwellings in the plan period (980 dwellings per annum);
- The draft Local Plan identifies a total of 21,893 dwellings to be delivered over the plan period;
- According to the Council's Annual Monitoring Report (November 2017), the Council has averaged 595 dwelling completions per annum between 2001 and 2017.

### **Need for Greater Flexibility**

2.2 The Council's housing delivery rate since 2001 is significantly short of the 980 dwellings per annum that the Council would need to achieve under the new local plan. To achieve this ambitious build out rate, the Council will need to allocate a range of sites that are deliverable and support the housing trajectory across the local plan period. In reality, however, housing delivery is often uneven and large sites can have lengthy lead-in times or require significant investment in infrastructure. Failure and delays to delivery can also occur through fragmented ownership, reliance on strategic infrastructure outside of the control of the promoter and economic cycles, to name but a few.

2.3 Whilst the draft Local Plan appears to have a land supply that can in theory deliver the housing requirements, there is no flexibility built in should any of the proposed sites fail to deliver sufficient numbers within the plan period.

2.4 Whilst the logic for allocating major strategic sites is understood, reliance on these to deliver the critical housing needed without adequate flexibility elsewhere in the City is considered unsound.

### **Overreliance on Strategic Sites**

2.5 Policy Strategic Growth Site 4 – North of Chelmsford, provides a draft allocation for a 3,000 home 'Garden Community'. This proposed 'new settlement' is supported by a range of

infrastructure requirements, most notably the Chelmsford North East Bypass. This is seen as critical infrastructure without which the 'Garden Community' is unlikely to come forward within the proposed plan period. Growth Site 4 will inevitably have much longer lead-in times and more complex infrastructure / financing arrangements, meaning it will only deliver housing in the longer term and towards the end of the plan period.

- 2.6 The Council should not rely on this new settlement as one of the principal drivers of housing growth later in the plan period, as the rate of development at the former Boreham Airfield will not be predictable. As such, it is unlikely that all 3,000 homes will be delivered within the proposed plan period. Specifically, the Housing Trajectory identified within the Draft Local Plan identifies 2,450 dwellings within the last 10 years of the plan period (2026-2036). This equates to 245 dwellings per annum, which is a substantial and potentially unachievable delivery rate.
- 2.7 It should also be emphasised that the reality of economic cycles must be factored in to the ability of local plans to deliver. The disproportionate impact of an economic downturn on large strategic sites is widely understood, arising from the impact on the availability and cost of borrowing, build costs and viability, leading to considerable delays. Examples include Northstowe in Cambridgeshire and Wixams in Bedfordshire, both of which have taken decades to deliver meaningful numbers of new homes. Smaller and medium sized sites conversely perform much better in this situation, being more straightforward to deliver and thus less exposed.
- 2.8 Accordingly, there should be sufficient flexibility within the draft Local Plan to allow other more sustainable locations, with less associated risks, to provide additional housing numbers if deemed necessary. Site 6 – North of Broomfield, is available, realisable and deliverable. The site provides for a sustainable form of development, with good public transport connections into Broomfield itself and Chelmsford. Broomfield Hospital, one of the largest employers in Chelmsford, is located adjacent to the site. Accordingly, the site North of Broomfield (SGS6) has the potential to accommodate a number of new homes, safeguarding against the risk of other sites such as Site 4 (Growth Area 2 – North Chelmsford) not coming forward within the plan period.
- 2.9 It is also important to ensure smaller and medium sized sites are not only allocated, but their capacities maximised to deliver early in the plan period. SGS6 provides the right balance as a medium size site in a highly sustainable location, which is deliverable and has the support of a developer in securing and implementing planning permission.

### **3.0 CONSIDERATION OF STRATEGIC GROWTH SITE 6**

- 3.1 Bloor Homes supports in principle the allocation of SGS6, for a residential development. This Site is in a sustainable location, well placed to local services within Broomfield, and will enhance the vitality and sustainability of the existing settlement. Given its proximity to Chelmsford and the strategic road network, the Site is ideally suited to contribute to the area's future housing need.
- 3.2 The site is located to the north of Chelmsford, approximately 12km to the south of Braintree on the northern edge of the existing village of Broomfield, and to the south west of Little Waltham. The Site comprises approximately 28 hectares of agricultural land and lies immediately to the west of the B1008 and north of Broomfield Hospital.
- 3.3 Broomfield village is located either side of the B1008, which is the north-south transport corridor serving North West Chelmsford and connecting to Chelmsford City Centre. Woodhouse Lane forms the southern boundary of the Site with residential dwellings, Puddings Wood and Farleigh Hospice located immediately adjacent to the south of the Site. Sports pitches and a sports pavilion are located to the west of the Site with agricultural fields located beyond. Areas of undeveloped, agricultural fields are also located to the north of the Site. The Site (SGS6) is not subject to any ecology, heritage or landscape designations. These points are expanded on within this representation.
- 3.4 The policy identifies that the quantum of residential development to be achieved on site is 'around 450 dwellings'. Whilst the site is capable of providing this level of development as a minimum, capacity studies commissioned by Bloor Homes identify that a greater number of dwellings could be achieved on site without compromising the ability of the site to deliver a high-quality edge of settlement development that respects its rural setting whilst providing all necessary environmental mitigation, open space provision, drainage and strategic planting. Bloor Homes supports an amendment to the Policy SGS6 providing flexibility to determine the capacity of the Site through the masterplanning process rather than imposing an artificial restriction.
- 3.5 It is understood that the current capacity of the Broomfield Primary School would be expanded to cater for projected growth. On that basis, the proposed Regulation 18 consultation residential capacity for SGS6 was revised downwards from 'around 800 homes'. Whilst this may be a justifiable restriction in education terms, our own consideration of site and context indicates a potential 650-750 homes being accommodated on the site. This capacity includes for a reserve site to provide a 2FE primary school. The

proposed development of SGS6 could therefore achieve more than the 450 dwellings identified within the draft policy, which should not be overlooked particularly in respect of concerns noted above around the ability of Garden Communities to deliver within the plan period. Accordingly, it is reasonable therefore, that the use of the wording 'around 450 dwellings' does not inhibit or restrict residential development that exceeds this figure, and the optimum capacity should be defined through detailed studies.

- 3.6 The Council's Local Plan Housing Trajectory (2013 – 2036) identifies that the SGS6 will start delivering houses as from 2020/21, providing 40 units in the first year. While Bloor Homes supports the Council's proposed trajectory and is committed to the early delivery of housing on the site, it is considered that a greater number of homes can in fact be built over the defined period.
- 3.7 As previously referenced, Growth Area 2 (North Chelmsford) has been identified to deliver a total of 4,550 dwellings (including 3,000 dwellings at North East Chelmsford) over the plan period. According to the Council's trajectory, around 1,502 dwellings are proposed towards the end of the plan period (i.e. 2031/32 – 2035/46). Most of these dwellings relate to the North East Chelmsford site. With this in mind, and given the optimistic trajectory for North East Chelmsford, it should be emphasised that SGS6 can accommodate a larger number of dwellings early in the plan period thereby offsetting the risk of under delivery and the plan being found unsound at examination.
- 3.8 In addition to housing need and capacity, the Council has identified within their SHMA (dated 2015), that there is a high need for 3 bed properties, both in terms of private and affordable provision.
- 3.9 Bloor Homes is committed to delivering homes that are needed. Given the likely size of dwellings required, this is another reason to ensure the capacity of the site is not limited to an artificially low number of dwellings. It is important that Bloor Homes is able to design and deliver a scheme that responds to local needs.

### **Site Capacity**

#### ***Landscape Assessment***

- 3.10 A Landscape and Visual Appraisal (LVA), dated March 2018, has been undertaken by Barton Willmore on behalf of Bloor Homes (**Appendix 1**). Within the LVA and associated appendices, the Site has been assessed in terms of landscape character and visual impact.

- 3.11 A desktop review was undertaken to identify landform, landscape features, landscape designations and relevant landscape policy, and to review published landscape character information. This information was used as the initial basis against which to appraise the Site.
- 3.12 A visual appraisal of the Site was also undertaken to consider the nature of existing views from publicly accessible viewpoints including roads, Public Rights of Way (PRoW) and public open spaces. Views were considered from all directions and from a range of distances.
- 3.13 The report notes that 'the Site is relatively visually well contained'. From the south, views towards the Site are limited to those from the immediate southern boundary, due to the presence of built development and Puddings Wood to the south. From the west, views are limited to the western area of the Site and these are filtered. The remainder of the Site is screened by the fall in the landform when viewed from the west. From the north, the northern boundary of the Site is visible from Lark's Lane and footpaths within approximately 1km. The majority of the Site is screened from these locations due to the topography and the presence of Sparrowhawk Wood. The greatest visibility is from the east, from Blasford Hill which extends along the north-eastern boundary, and from footpaths on the opposite side of the valley. From most of these locations, it is the north-eastern area of the Site which is visible, with much of the remainder of the Site screened by the topography and development along Blasford Hill. The north-eastern corner of the Site also forms an important part of the perceived separation of development on Blasford Hill within Broomfield and development within Little Waltham to the north. From the limited number of locations where the majority of the Site is seen, it is mainly viewed within the context of the surrounding development, including the hospital buildings south of Woodhouse Lane.
- 3.14 In addition, a characteristics plan has been undertaken which identifies existing features within and adjoining the site, which would influence the developable area, attached as **Appendix 2**. This plan reinforces the findings of the LVA, though also incorporates consideration of attenuation ponds which are considered appropriate for the Site.

### ***Ecology & Nature Conservation***

- 3.15 Ecological assessments have also been undertaken in respect of SGS6. The majority of the existing land is used for arable farming. As such, the ecological value of the land is relatively low. There are existing physical features within the site that contribute to any

potential ecological value, which include field boundary hedgerows and the former mineral workings to the east, that is now water filled.

- 3.16 The findings of the ecological assessment identify areas for mitigation and enhancements, which include, for example, retention and reinforcing of existing hedgerows; creating green corridors that could potentially link to Sparrowhawk Wood; extensive tree/woodland planting; and enhance the network of SuDS to benefit wildlife.

### ***Food Risk and Drainage***

- 3.17 The site gently slopes from the north western ridge, down towards the east and south eastern corner. An assessment on drainage concluded that the eastern part of the site has the potential to accommodate shallow infiltration drainage via soakaways and other SuDS features. It is considered that these drainage features are sufficient in mitigating the impact of the proposed development.

### ***Transport and Access***

- 3.18 The development of the site provides the opportunity to provide an access road across the Site that could be connected to Broomfield Hospital via Puddings Wood. The point of access to the site would be from the north east, off the B1008. The indicative line for this access road is shown on the Policy Map 8 and is supported by Bloor Homes.
- 3.19 The modelling work undertaken within Essex Highways Pre-Submission Strategic & Local Junction Modelling (dated January 2018) considers the draft allocation of 800 homes within North of Broomfield. The same modelling work within the document has assessed the downward revised dwellings numbers. The modelling work identifies that the reduction in the number of proposed dwellings in Broomfield as part of Local Plan development proposals has resulted in lower levels of forecast modelled traffic flows along Main Road, Broomfield. This has resulted in a positive impact in terms of traffic flows. Overall, from the initial modelling work of 800 homes, now down to 450 dwellings, this has resulted in a reduced trip generation and is deemed positive in terms of traffic flows for the proposed development.
- 3.20 The proposed development can create new pedestrian and cycle links within the Site and connecting to the existing network. There is an existing PRoW (footpath No. 29) that crosses the site from Woodhouse Lane, heading north into Sparrowhawk Lane. In addition, the draft Policies Map 8 identifies a new cycle route which crosses through Puddings Wood and onto Woodhouse Lane. The proposed development has the potential to increase

demand for bus services in the local area and existing services may be rerouted to serve the Site.

## 4.0 INFRASTRUCTURE REQUIREMENTS

4.1 Policy SP11 states that *'New development must be supported by sustainable means of transport to serve its need including walking, cycling and public transport modes. New highway infrastructure should help reduce congestion, link new development and provide connections in the strategic road network. These include but are not limited to... [a] New access road to Broomfield Hospital'*.

4.2 The draft allocation for SGS6 identifies numerous items of supporting infrastructure requirements. These include the following:

- Neighbourhood Centre;
- Provision of a new stand-alone early years and childcare nursery;
- Provide a new vehicular access road to serve the development and provide access to Broomfield Hospital and Fairleigh Hospice;
- Provide pedestrian and cycle connections;
- Provide a well-connected internal road layout which allows for bus priority measures
- Create a network of green infrastructure;
- Provide suitable SuDs and flood risk management;
- Land (circa 0.13 hectares) for a stand-alone early years and childcare nursery (Use Class D1) and the total cost of physical scheme provision with delivery through the Local Education Authority;
- Appropriate improvements to the local and strategic road network as required by the Local Highways Authority;
- Appropriate measures to promote and enhance sustainable modes of transport;
- New and enhanced cycle routes, footpaths, Public Rights of Way and bridleways where appropriate;
- Provide, or make financial contributions to, new or enhanced sport, leisure and recreation facilities;
- Financial contributions to delivery of the Chelmsford North East Bypass, primary and secondary education, and community facilities such as healthcare provision as required by the NHS/CCG.

4.3 Bloor Homes is committed to delivering the necessary supporting infrastructure for the delivery of the required number of homes to be accommodated on site, in accordance with the CIL Regulations 2010, in particular Regulations 122 and 123. It is noted within the Council's Infrastructure Delivery Plan (IDP), dated January 2018, that the required infrastructure items and associated costs (where applicable) for the strategic site North of



Broomfield, are provided within Table 14.6. Bloor Homes reserves its position in supporting infrastructure subject to application of tests of viability and necessity.

- 4.4 In respect of the new vehicular access road identified in the policy, Bloor Homes is committed to providing an access and spine road through the Site to serve the new community of SGS6 facilitating the opportunity for a Secondary Access to Broomfield Hospital across land safeguarded through the policy SPA1.
- 4.5 Whilst the connection from the site to Broomfield Hospital is a matter for policies SP11 and SPA1, and beyond the scope of policy SGS6, potential routes available have been evaluated. An optimal route through Pudding Wood has been identified and this could form the basis for a safeguarded corridor through which Broomfield Hospital may explore its delivery. Bloor Homes position is to support the illustration of this on the Policies Map 8, where the Policies Map is required to "*illustrate geographically the application of the policies*" (Regulation 9(1)(c) of the Town and Country Planning (Local Planning)(England) Regulations 2012).
- 4.6 The supporting text accompanying SPA1 states that the Policies Map has been defined to 'enable the operational and functional requirements of Broomfield Hospital to be planned in a strategic and phased manner as it is outside the Defined Settlement of Broomfield where ordinarily policy would constrain new development.'
- 4.7 The draft SPA1 policy wording states '... New development proposals at SGS6 - North of Broomfield, to the north of the Hospital, will provide a new access road to the Hospital from Main Road (B1008). Development within this Special Policy Area should safeguard the route of this new road and ensure successful integration with the existing internal road network of the Hospital.'
- 4.8 However, the Local Plan, and indeed the IDP, need to take account of the CIL Regulations 2010. Whilst the Policy SPA1 is articulated in terms of 'safeguarding', the provision of a new Secondary Access to the Hospital is not necessitated by the development of SGS6. Rather, SGS6 provides the 'opportunity' for the hospital to integrate its facility with a new network. The Hospital's position is furthered by an access road to SGS6 being taken to Woodhouse Lane, from which the Hospital can then examine the completion of the access road into the hospital campus.

## **5.0 EDUCATION CAPACITY AND PROVISION**

- 5.1 The Regulation 18 Consultation Local Plan policy SGS6 provided for a site capacity of around 800 dwellings with the inclusion of a primary school. The Regulation 19 consultation version of the Local Plan has reduced that number to 'around 450 dwellings'. The requirement to provide for a primary school has been removed. It is understood that the removal of the primary school from the allocation has necessitated the reduction in housing numbers, in effect placing an artificial constraint on the capacity of SGS6.
- 5.2 The removal of the primary school has occurred in the absence of any clear rationale. The Broomfield Primary School is identified for future expansion to cater for additional housing growth in the area. However, the expansion plans would only provide a limited capacity and would not allow for further growth. The education strategy in respect of primary school capacity is therefore considered inconsistent with the need to plan positively for growth (certainly in the terms anticipated by the current NPPF) and indeed for education provision now and beyond the plan period.
- 5.3 The high-level infrastructure requirements are set out within Draft Policy S11. These infrastructure requirements are supported by the findings of the Council's Infrastructure Delivery Plan (dated January 2018), and the Local Plan Viability Study (dated January 2018). It is noted that the Essex County Council Commissioning School Places in Essex, 2017-2022, takes no account the proposed Broomfield site, and does not appear to assess the site at either 800 dwellings (as proposed within the Issues and Options Draft Local Plan) or the current 450 dwellings. There appears to be no other supporting evidence in respect of the approach taken by Essex County Council at the North of Broomfield site.
- 5.4 Bloor Homes requests that clear supporting evidence for education provision in Broomfield is provided that allows not only for current growth but provides adequate capacity based on child yield from the actual housing mix anticipated and that the education strategy plans positively for future growth. The SGS6 site presents the opportunity for reserving a Site for new primary school. Crucially, the ability of this sustainable site to deliver critical homes for the city should not be constrained unnecessarily.

## **6.0 SUMMARY**

6.1 A summary of the representations made is providing below.

### **Housing Need**

6.2 The Council's Housing provision exceeds that of the their OAHN requirement. The Government's proposed Standardised Methodology requires a greater increase in the delivery of homes over the plan period. Whilst this has been accounted for within the Council's housing provision, it is considered that there is insufficient flexibility in the draft Local Plan to manage changes to housing supply and demand.

6.3 There is an overreliance on large strategic allocations for delivering a significant amount of the housing. We note that SGS4 provides for a significant number of homes towards the end of the plan period. Our experience shows that due to the complexities involved in consenting and enabling strategic sites, the lead times for delivering new homes can be considerable. There is a strong likelihood therefore that a significant proportion of SGS4 would fall in to a subsequent plan period. Accordingly, the Council should allow sufficient flexibility within other proposed housing allocations, such as SGS6, to maximise the potential of delivering new homes early in the plan period.

### **Site Capacity**

6.4 Bloor Homes broadly supports the draft allocation SGS6, notwithstanding the representations contained in this report. It is clear from technical assessments undertaken to date that the Site can be developed to provide a high quality residential-led scheme, incorporating the necessary environmental mitigation, infrastructure and open space greater than the draft policy of 'around' 450 dwellings.

### **Enabling Access to Broomfield Hospital from Main Road (B1008)**

6.5 The proposed draft policy wording for SGS6 refers to a 'vehicle access road to serve the development'. Bloor Homes supports the principle of an access road to Broomfield Hospital across safeguarded land within SPA1. However, the connection from the SGS6 site boundary to Broomfield Hospital is beyond the scope of SGS6. SGS6 would facilitate a new access road from Main Road (B1008) providing the opportunity for the Hospital to extend this road across safeguarded land within the Hospital campus, ensuring successful integration with the existing internal road network of the Hospital.

**Education**

- 6.6 The education strategy in respect of primary school capacity is inconsistent with the need to plan positively for growth.
- 6.7 Bloor Homes requests that clear supporting evidence for education provision in Broomfield is provided that allows not only for current growth but provides adequate capacity based on child yield from the actual housing mix anticipated and that the education strategy plans positively for future growth. The SGS6 site is an ideal opportunity for reserving a site for a new primary school with little if any suitable alternative sites available locally. Crucially, the ability of this sustainable site to deliver critical homes for the city should not be constrained unnecessarily.

## 7.0 PROPOSED DRAFT POLICY AND SUPPORTING TEXT AMENDMENTS

7.1 Draft Policy SGS6 – North of Broomfield. Amended draft policy should read as follows:

### Strategic Growth Site 6 – North of Broomfield

“Land to the north of Woodhouse Lane and west of Blasford Hill, as shown on the Policies Map, is allocated for a high-quality landscape-led development that maximises opportunities for sustainable travel. Development proposals ~~will accord with a masterplan approved by the Council to~~ provide:

#### Amount and type of development:

- At least ~~around~~ 450 new homes of mixed size and type to include affordable housing.
- Capacity to be determined through the masterplanning process and consideration of housing mix and typologies.

#### Supporting on-site development:

- Neighbourhood Centre.
- Provision of a new stand-alone early years and childcare nursery located in the southern portion of the site.

#### Site masterplanning principles:

#### Movement and Access

- Main vehicular access to the site will be from Blasford Hill (B1008).
- Provide a new vehicular access road to serve the development and ~~provide~~ facilitate access to Broomfield Hospital and Fairleigh Hospice.
- Provide pedestrian and cycle connections

- Provide a well-connected internal road layout which allows where necessary and practicable for bus priority measures.

#### Historic and Natural Environment

- Protect the setting of historic properties and the scheduled monument surrounding the site.
- Mitigate the visual impact of the development.
- Enhance the historic environment.
- Create a network of green infrastructure.
- Provide suitable SuDs and flood risk management.
- Ensure appropriate habitat mitigation and creation is provided.
- Undertake a Minerals Resource Assessment.
- Undertake an Archaeological Assessment.

#### Design and Layout

- Provide a coherent network of public open space, formal and informal sport, recreation and community space within the site.

#### Site infrastructure requirements:

- Land (circa 0.13 hectares) for a stand-alone early years and childcare nursery (Use Class D1) and the total cost of physical scheme provision with delivery through the Local Education Authority.
- Appropriate improvements to the local and strategic road network as required by the Local Highways Authority.
- Appropriate measures to promote and enhance sustainable modes of transport.
- New and enhanced cycle routes, footpaths, Public Rights of Way and bridleways where appropriate.
- Provide, or make financial contributions to, new or enhanced sport, leisure and recreation facilities.

- **Financial contributions to delivery of the Chelmsford North East Bypass, primary and secondary education, and community facilities such as healthcare provision as required by the NHS/CCG, subject to test of viability and necessity**

7.2 The supporting text to policy SGS6 – North of Broomfield, requires several amendments to reflect the draft policy changes. These read as follows:

7.3 Para 7.288 delete and replace with:

**“The opportunity for Broomfield Hospital to have a Secondary Access Road is facilitated by the development of the site. The Policy SPA1 looks to the further development of Broomfield Hospital incorporating a safeguarded corridor linking the Hospital campus roads with the B1008. The opportunity also exists for improved access to Farleigh Hospice and the King Edward VI Grammar School playing fields through the downgrading of Woodhouse Lane and North Court Road to routes for local access only.”**

7.4 Para 7.292 Delete last two sentences and replace with:

**“In implementing the Secondary Access Road across land safeguarded by policy SPA1, the Hospital shall consider any necessary mitigation including compensatory measures which replace any habitat lost as part of its construction.”**

7.5 The text within draft policy SPA1, should read as follows:

**POLICY SPA1 – BROOMFIELD HOSPITAL SPECIAL POLICY AREA**

**The Council will support health related proposals which support the role, function and operation of Broomfield Hospital. This includes the provision of a loop road to allow bus, service and emergency vehicles easy access into the full body of the estate; optimising access by public transport; strengthening the network of pedestrian routes and spaces to aid safety, comfort and convenience;**

concentrating buildings of scale and mass within the central core of the estate; limiting the scale and mass of buildings at the edge of the estate; ensuring a phased and coherent strategy for removal of temporary buildings and their replacement with permanent structures; protecting and enhancing woodland, parkland, trees and hedgerows; minimising environmental impacts including in respect of ecology and water quality, and creating high quality public spaces. New development proposals at Strategic Growth Site 6 – North of Broomfield, to the north of the Hospital, will ~~provide~~ incorporate a new access road from Main Road (B1008) providing the opportunity for the Hospital to extend this road across safeguarded land within the Hospital campus ~~to the hospital from Main Road (B1008).~~ ~~Development within this Special Policy Area should safeguard the route of this new road and~~ ensur~~ing~~e successful integration with the existing internal road network of the Hospital.