Gladman Developments Limited

Dover Road, Deal, Kent

ECOLOGICAL APPRAISAL

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CONTENTS

FIGURES

TABLES

PHOTOGRAPHS

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1.0 INTRODUCTION

1.1 This report has been produced by FPCR Environment and Design Limited on behalf of Gladman Developments Limited and provides an assessment of possible ecological constraints to development on land off Dover Road, Deal, Kent.

1.2 The site consists of grazed and un-grazed horse paddocks separated by fences, and a block of immature woodland. The study area measures approximately 4.06ha in total and is centred on grid reference TR 367 495. The towns of Walmer and Deal lie to the north. Dover Road forms the western site boundary with land under arable cultivation and pasture beyond. A hedgerow separates the eastern edge of the site from arable land beyond., Residential gardens are located immediately adjacent to the northern site boundary, whilst additional pasture, a small reservoir and commercial buildings are located adjacent to the southern boundary.

1.3 An initial investigation was made to determine habitats and species present within a defined boundary in this case the site and immediate surrounds and to make an initial assessment of the ecological value and any potential ecological constraints to future development. Additional objectives were, where appropriate, to identify the need for more detailed species specific surveys and to consider opportunities for ecological mitigation and enhancements within any future development design.

1.4 It is understood that the proposals for development include new housing consisting of up to 85 dwellings, with associated infrastructure and landscaping.

2.0 METHODOLOGY

Desktop Survey

2.1 The Multi-Agency Government Information for the Countryside (MAGIC) website (www.magic.gov.uk) has been reviewed for the presence of any statutory designated sites of international (Special Area of Conservation (SAC), Special Protection Area (SPA) or Ramsar Sites)), national (Site of Special Scientific Interest, (SSSI)) or local nature conservation importance (Local Nature Reserves (LNR)) within 10km, 2km and 1km of the study area, respectively.

2.2 Natural England were consulted for advice regarding impact risk zones (IRZs) for statutory sites within 10km of the study area.

2.3 Kent and Medway Biological Record Centre (KMBRC) was consulted for species information and non-statutory Local Wildlife Sites (LWS) within 1km of the study area. Further information regarding the occurrence of badger species within 1km of the study area was sought from East Kent Badger Group.

2.4 Further inspection, using colour 1: 25,000 OS base maps and aerial photographs from Bing (http://www.bing.com/maps) was also undertaken in order to provide additional context and identify any features of potential importance for nature conservation in the wider landscape.

Habitats

2.5 The study area boundary is shown on Figure 2. This area was surveyed on 11th November 2016 using the extended Phase 1 Habitat Survey technique as recommended by Natural England[1]. This involved a systematic walk over of the survey area to classify the broad habitat types present and mark them on a survey map. Target notes (Tn) were used to record features or habitats of particular interest, as well as any sightings or evidence of protected or notable species.

Hedgerows

2.6 Hedgerows were surveyed using the Hedgerow Evaluation and Grading System (HEGS)[2]. The aim of the assessment is to allow the rapid recording and ecological appraisal of any given site in the UK, and to allow the grading of the individual hedges present, in order to identify those which are likely to be of greatest significance for wildlife. This method of assessment includes noting down: canopy species composition; associated ground flora and climbers; structure of the hedgerow including height, width and gaps; and associated features including number and species of mature tree and the presence of banks, ditches and grass verges.

2.7 Using the HEGS methodology each hedgerow can then be given a grade. These grades are used to assign a nature conservation value to each hedgerow as follows:

- Grade -1, 1, 1+ High to Very High Value

[1] JNCC. (1990). *Handbook for Phase 1 habitat survey – a technique for environmental audit.* Peterborough: JNCC

[2] Clements, D. & Toft, R. (1992). *Hedgerow Evaluation and Grading System (HEGS) – a methodology for the ecological survey, evaluation and grading of hedgerows*. Countryside Planning and Management

- Grade -2, 2, 2+ Moderately High to High Value
- Grade -3, 3, 3+ Moderate Value
- Grade -4, 4, 4+ Low Value

Hedgerows graded -2 or below are suggested as being a nature conservation priority.

2.8 The hedgerows were also assessed against the wildlife and landscape criteria of the Hedgerow Regulations 1997 (Statutory Instrument No: 1160)[3]. Each hedgerow is evaluated to ascertain whether it qualifies as an 'Important' hedgerow under the Regulations by determining both the average number of woody native species present within 30m survey sections and the number of hedgerow associated features present. Hedgerows may also qualify as 'Important' under the archaeological criteria of the Regulations, but this has not been assessed within this report.

2.9 All hedgerows were also assessed to ascertain whether they qualified as a Habitat of Principal Importance under section 41 of the Natural Environment & Rural Communities (NERC) Act, 2006[4], i.e. they consisted of 80% or more native species.

Fauna

2.10 During the survey, observations, identification and signs of any species protected under Part 1 of the Wildlife and Countryside Act 1981 (as amended), the Protection of Badgers Act 1992 and the Conservation of Habitats and Species Regulations 2010, were noted. In addition, habitats with the potential to support such species were noted and assessed for their suitability.

2.11 Throughout the survey consideration was also given to the existence and use of the survey area by other protected species or locally notable fauna, such as Species of Principal Importance under the Natural Environment and Rural Communities (NERC) Act 2006, Birds of Conservation Concern (BoCC), Local Biodiversity Action Plan Species (LBAP) or Red Data Book (RDB) species.

Badger

2.12 Evidence indicating the presence of badgers was sought with the identification of signs which might indicate a presence within the study area, including:

- Setts (main, annexe, subsidiary and outlier);
- Latrines;
- Prints and track-ways;
- Hairs caught on rough wood and fencing;
- Snuffle holes, scratching posts and general feeding activity.

[3] *The Hedgerow Regulations 1997 – Statutory Instrument 1997 No. 1160.* [Online]. London: HMSO. Available at: http://www.legislation.gov.uk/uksi/1997/1160/contents/made [Accessed 01/02/2014].

[4] *The Natural Environment and Rural Communities Act 2006.* [Online]. London:HMSO Available at: http://www.legislation.gov.uk/ukpga/2006/16/contents [Accessed 01/02/2014]

Bats

Tree Assessment

2.13 The tree assessments were undertaken from ground level on 11th November 2016 by a suitably experienced ecologist from FPCR. During the survey, Potential Roosting Features (PRF) for bats such as the following were sought (Based on P16, British Standard 8596:2015 Surveying for bats in trees and woodland, October 2015):

- Natural holes (e.g. knot holes) arising from naturally shed branches or branches previously pruned back to a branch collar.
- Man-made holes (e.g. cavities that have developed from flush cuts or cavities created by branches tearing out from parent stems.
- Woodpecker holes.
- Cracks/splits in stems or branches (horizontal and vertical)
- Partially detached, loose or bark plates.
- Cankers (caused by localised bark death) in which cavities have developed.
- Other hollows or cavities, including butt rots.
- Compression of forks with included bark, forming potential cavities.
- Crossing stems or branches with suitable roosting space between.
- Ivy stems with diameters in excess of 50mm with suitable roosting space behind (or where roosting space can be seen where a mat of thinner stems has left a gap between the mat and the trunk).
- Bat or bird boxes.
- Other suitable places of rest or shelter.

2.14 Certain factors such as orientation of the feature, its height from the ground, the direct surroundings and its location in respect to other features may enhance or reduce the potential value.

2.15 Based on the above, trees were classified into general bat roost potential groups based on the presence of these features. Table 1 (below) broadly classifies the potential categories as accurately as possible as well as discussing the relevance of the features. This table is based upon Table 4.1 and Chapter 6 in Bat Surveys for Professional Ecologists: Good Practice Guidelines[5].

2.16 Although the British Standard 8596:2015 document groups trees with moderate and high potential, these have been separated below (as per Table 4.1 in The Bat Conversation Trust Guidelines) to allow more specific survey criteria to be applied.

[5] Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust

Table 1: Classification and Survey Requirements for Bats in Trees

Classification of Tree	**Description of** Category and Associated Features **(based on** Potential Roosting Features **listed above)**	**Likely Further Survey work / Actions**
Confirmed Roost	Evidence of roosting bats in the form of live / dead bats, droppings, urine staining, mammalian fur oil staining, etc.	A Natural England derogation licence application will be required if the tree or roost site is affected by the development or proposed arboricultural works. This will require a combination of aerial assessment by roped access bat workers **and** / **or** nocturnal survey during appropriate period (May to August) should be used to inform on the licence. Replacement roost sites commensurate with status of roost to be provided. Works to be undertaken under supervision in accordance with the approved good practice method statement provided within the licence. **However,** where confirmed roost site(s) are not affected by works, work under a precautionary good practice method statement may be possible.
High Potential	A tree with one or more Potential Roosting Features that are obviously suitable for larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter protection, conditions (height above ground level, light levels, etc) and surrounding habitat but unlikely to support a roost of high conservation status (i.e. larger roost, irrespective of wider conservation status). Examples include (but are not limited to); woodpecker holes, larger cavities, hollow trunks, hazard beams, etc.	A combination of aerial assessment by roped access bat workers **and** / **or** nocturnal survey during appropriate period (May to August). Following additional assessments, tree may be upgraded or downgraded based on findings. After completion of survey work, a precautionary working method statement is likely to be required. If roost sites are confirmed a licence from Natural England will be required.

Classification of Tree	**Description of** Category and Associated Features **(based on** Potential Roosting Features **listed above)**	**Likely Further Survey work / Actions**
Moderate Potential	A tree with Potential Roosting Features which could support one or more potential roost sites due to their size, shelter protection, conditions (height above ground level, light levels, etc) and surrounding habitat but unlikely to support a roost of high conservation status (i.e. larger roost, irrespective of wider conservation status). Examples include (but are not limited to); woodpecker holes, rot cavities, branch socket cavities, etc.	A combination of aerial assessment by roped access bat workers **and /or** nocturnal survey during appropriate period (May to August). Following additional assessments, tree may be upgraded or downgraded based on findings. After completion of survey work, a precautionary working method statement may be required. If a roost site/s is confirmed a licence from Natural England will be required.
Low Potential	A tree of sufficient size and age to contain Potential Roosting Features but with none seen from ground or features seen only very limited potential. Examples include (but are not limited to); loose/lifted bark, shallow splits exposed to elements or upward facing holes.	No further survey required but a precautionary working method statement may be required.
Negligible/No potential	Negligible/no habitat features likely to be used by roosting bats	None.

* The Conservation of Habitats & Species Regulations 2010 (as amended) affords protection to "breeding sites" and "resting places" of bats. The EU Commission's Guidance document on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC, February 2007 states that these are places "where there is a reasonably high probability that the species concerned will return".

Building Assessment

2.17 External aspects of buildings within the study area were examined to determine any potential access points and roost sites on 11th November 2016. Structural features with the potential for use by roosting bats were recorded and suitable access points such as small gaps under eaves/soffit boards, raised or missing ridge tiles and gaps at gable ends were sought. Evidence that potential access points were used by bats was also sought. Such evidence includes staining from urine and/or fur and the presence of bat droppings in and around features. Indicators that potential access points had not recently been used included the presence of heavy cob-webbing and general detritus around these points.

2.18 Internal access was not possible (see limitations/constraints).

Herpetofauna

2.19 Habitats were evaluated for their potential to support amphibians and reptiles following guidance set out within the Herpetofauna Workers Manual[6], these include aquatic habitats, south facing banks and field margins, transitional areas between long and short vegetation, and other areas which provide basking and/or sheltering opportunities.

Limitations

2.20 The species data collated for the desk study is derived from records submitted by members of the public and from specialist volunteer group surveys. It does not represent a definitive list of species that occur in the local area, and the absence of records does not necessarily imply absence of such species.

2.21 The extended Phase 1 habitat survey was completed outside of the optimal time of year. However, given the paucity of habitats recorded and the presence of only very common and widespread species and habitats, it is not likely that the seasonality of the survey has prevented appropriate characterisation of habitats or assessment of the study areas ecological value.

2.22 In the case of the building inspections, internal access was not possible due to the presence of horses, however given the potential and features observed, this is not considered to be a constraint to determination of the level of bat potential.

3.0 RESULTS

Desktop Survey

Statutory Designations

Sites of International Importance for Nature Conservation

3.1 There are five statutorily designated sites of international importance located within 10km of the study area (Figure 1): Dover to Kingsdown Cliffs SAC is located approximately 2km south-east of the survey area; the nearest section of the Thanet Coast and Sandwich Bay Ramsar Site is located approximately 3.1km north west of the study area whilst the nearest section of the Thanet Coast and Sandwich Bay SPA is located approximately 4.3km north of it; Sandwich Bay SAC is located approximately 4.5km to the north-east; and Lydden & Temple Ewell Downs SAC is located approximately 8.9km to the south-west.

3.2 Dover to Kingsdown Cliffs SAC consists of sea cliffs, shingle, islets, heath scrub, and dry grassland habitats. The primary reason for the sites designation as an SAC is due to the presence of vegetated sea cliffs of the Atlantic and Baltic Coasts which is an Annex I habitat. Semi-natural dry grassland and scrubland facies on calcareaous substrates (Festuco-Brometalia (important orchid sites)) is another Annex I habitat present along the cliffs but this is a qualifying feature not a primary reason for selection.

3.3 Thanet Coast and Sandwich Bay Ramsar Site and SPA consists of rocky shores adjoining areas of estuary, sand dune grassland, saltmarsh, and grazing marsh.

[6] Gent, T., & Gibson, S. [Eds.]. (2003) *Herpetofauna Workers Manual.* Peterborough: Joint Nature Conservation Committee.

Table 2: Nature Conservation Designations of the Thanet Coast and Sandwich Bay SPA and Ramsar Site.

Designation	Justification / interest Feature		
SPA	**This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:**		
	Little tern	*Sterna albifrons*	B
	Golden Plover	*Pluvias apricaria*	W
	This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:		
	Turnstone	*Arenaria interpres*	W
Ramsar	**Criterion 2**: Supports 15 British Red Data Book wetland invertebrates. **Criterion 6**: by regularly supporting internationally important number of over-wintering populations of Turnstone (5 year peak mean 1998/9-2002/3).		

B = Breeding birds; W = Wintering birds

3.4 Sandwich Bay SAC consists of tidal rivers, mudflats, sand flats, lagoons, salt marshes, and sand dunes. The Annex I habitats that are the primary reason for the sites selection as an SAC are:

- Embryonic shifting dunes;
- Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes")
- Fixed coastal dunes with herbaceous vegetation ("grey dunes")
- Dunes with *Salix repens* ssp. *Argentea* (*Salicion arenariae)*

Humid dune slacks are another Annex I habitat present but this is regarded as a qualifying feature not as a primary reason for selection

3.5 Lydden & Temple Ewell Downs SAC consists of habitats such as heath, scrub, dry grassland and deciduous broad-leaved woodland. Its reason for selection as an SAC is the presence of the Annex I habitat - semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia* (important orchid rich sites)).

Sites of National Importance for Nature Conservation

3.6 There is one statutorily designated site of national importance located within 2km of the study area. This is Dover to Kingsdown Cliffs SSSI which is located approximately 1.5km south-east of the study area.

3.7 The majority of the SSSI is incorporated in the SAC of the same name. It is designated as a SSSI due to the presence of its varied floral communities which include many rare species, its rich invertebrate fauna, and its breeding migrant and seabird populations.

Impact Risk Zones

3.8 According to the MAGIC website, the study area is within the IRZ for the Thanet Coast & Sandwich Bay Ramsar Site & SPA. It is advised that the LPA should consult Natural England on the likely risks of "any residential development of 10 units or more" within these risk zones.

3.9 An email received from Natural England (6th February 2017), Appendix C), stated *"that no IRZs are triggered for Sandwich Bay SAC, Dover to Kingsdown Cliffs SAC or Lydden & Temple Ewell Downs SAC. However, Dover to Kingsdown Cliffs and Lydden & Temple Ewell Downs are susceptible to air quality impacts, so could be impacted if the proposals include any sources of air pollution."*

Non-statutory Designations

3.10 KMBRC returned one record of a non-statutory site of nature conservation interest within 1km of the study area. This is Kingsdown & Walmer Beach LWS, the nearest section of which is Hawk's Hill, located approximately 470m to the east of the study area.

Protected Species

Badger

3.11 KMBRC returned confidential badger records at four locations around the site. Three of these, dated May and September, 2000 were within 1km of the site, and were at the same approximately 500m location.

3.12 No response to our data request was received from East Kent Badger Group.

Bats

3.13 KMBRC returned bat records from Kent Bat Group for locations within 5km of the study area. The only one of these within 1km of it was a common pipistrelle *Pipistrellus pipistrellus* record from 2000 located approximately 500m east. There was also a 1999 record of a brown long-eared bat *Plecotus auritus* located in an adjacent tetrad to that of the site. The records did not indicate whether this was a bat roost record or individual bat sightings.

Birds

3.14 KMBRC provided a number of records of schedule one protected bird species, bird species of principal importance under the NERC Act (2006), and Birds of Conservation Concern (BoCC) Red List species within the search area. Records less than 20 years old are summarised in Table 3.

Table 3. Notable Bird Species Recorded within the Search Area.

Species	Date of most recent record	Status
Arctic skua *Stercorarius parasiticus*	2014	BoCC Red List, NERC
Avocet *Recurvirostra avosetta*	2002	Schedule 1, BoCC Amber List
Balearic shearwater *Puffinus mauretanicus*	2014	BoCC Red List, NERC

Species	Date of most recent record	Status
Bee-eater *Merops apiaster*	2012	Schedule 1
Bewick's swan *Cygnus columbianus*	2001	Schedule 1, BoCC Amber List, NERC
Black redstart *Phoenicurus ochruros*	2014	Schedule 1, BoCC Red List
Black-tailed godwit *Limosa limosa*	2011	Schedule 1, BoCC Red List, NERC
Black-throated diver *Gavia arctica*	2014	Schedule 1, BoCC Amber List, NERC
Bluethroat *Luscinia svecica*	2010	Schedule 1
Brambling *Fringilla montifringilla*	2011	Schedule 1
Brent goose *Branta bernicla*	2014	BoCC Amber List, NERC
Bullfinch *Pyrrhula pyrrhula*	2012	BoCC Amber List, NERC
Cetti's warbler *Cettia cetti*	2008	Schedule 1
Common crossbill *Loxia curvirostra*	2012	Schedule 1
Common scoter *Melanitta nigra*	2014	Schedule 1, BoCC Red List, NERC
Corn bunting *Emberiza calandra*	2013	BoCC Red List, NERC
Cuckoo *Cuculus canorus*	2012	BoCC Red List, NERC
Curlew *Numenius arquata*	2014	BoCC Red List, NERC
Dartford warbler *Sylvia undata*	2002	Schedule 1, BoCC Amber List
Dunnock *Prunella modularis*	2014	BoCC Amber List, NERC
Fieldfare *Turdus pilaris*	2013	Schedule 1, BoCC Red List
Firecrest *Regulus ignicapillus*	2014	Schedule 1
Golden oriole *Oriolus oriolus*	2012	Schedule 1, BoCC Red List
Grasshopper warbler *Locustella naevia*	2003	BoCC Red List, NERC
Great northern diver *Gavia immer*	2011	Schedule 1
Greenshank *Tringa nebularia*	2004	BoCC Amber List, Schedule 1
Grey partridge *Perdix perdix*	2014	BoCC Red List, NERC
Grey wagtail *Motacilla cinerea*	2015	BoCC Red List
Hawfinch *Coccothraustes coccothraustes*	2009	BoCC Red List, NERC
Hen harrier *Circus cyaneus*	2004	Schedule 1, BoCC Red List, NERC
Herring gull *Larus argentatus*	2014	BoCC Red List, NERC
Hobby *Falco subbuteo*	2013	Schedule 1
Honey buzzard *Pernis apivorus*	2014	Schedule 1, BoCC Amber List, NERC
Hoopoe *Upapa epops*	2003	Schedule 1

Species	Date of most recent record	Status
House sparrow *Passer domesticus*	2014	BoCC Red List, NERC
Kittiwake *Rissa tridactyla*	2014	BoCC Red List
Lapland bunting *Calcarius lapponicus*	2013	Schedule 1, BoCC Amber List
Lapwing *Vanellus vanellus*	2012	BoCC Red List, NERC
Leach's petrel *Oceanodroma leucorhoa*	2000	Schedule 1
Lesser redpoll *Carduelis cabaret*	2011	BoCC Red List, NERC
Lesser spotted woodpecker *Dendrocopus minor*	2010	BoCC Red List, NERC
Linnet *Carduelis cannabina*	2014	BoCC Red List, NERC
Little gull *Larus minutus*	2014	Schedule 1
Marsh harrier *Circus aeruginosus*	2003	Schedule 1, BoCC Amber List
Marsh tit *Poecile palustris*	2012	BoCC Red List, NERC
Mediterranean gull *Larus melanocephalus*	2014	BoCC Amber List, Schedule 1
Merlin *Falco columbarius*	2006	Schedule 1, BoCC Red List
Mistle thrush *Turdus viscivorus*	2013	BoCC Red List
Montagu's harrier *Circus pygargus*	2000	Schedule 1, BoCC Amber List
Osprey *Pandion haliaetus*	2014	Schedule 1, BoCC Amber List
Peregrine falcon *Falco peregrinus*	2014	Schedule 1
Pied flycatcher *Ficedula hypoleuca*	2000	BoCC Red List
Pintail *Anas acuta*	2012	Schedule 1, BoCC Amber List
Pochard *Aythya farina*	2012	BoCC Red List
Puffin *Fratercula arctica*	2000	BoCC Red List
Purple sandpiper *Calidris maritima*	2002	Schedule 1, BoCC Amber List
Red kite *Milvus milvus*	2014	Schedule 1
Red-backed shrike *Lanius collurio*	2013	Schedule 1, BoCC Red List, NERC
Red-necked grebe *Podiceps grisegena*	1999	BoCC Red List
Red-throated diver *Gavia stellata*	2014	Schedule 1
Redwing *Turdus iliacus*	2013	Schedule 1, BoCC Red List
Reed bunting *Emberiza schoeniclus*	2013	BoCC Amber List, NERC
Ring ouzel *Turdus torquatus*	2014	BoCC Red List, NERC
Ringed plover *Charadrius hiaticula*	2014	BoCC Red List
Serin *Serinus serinus*	2003	Schedule 1

Species	Date of most recent record	Status
Shag *Phalacrocorax aristotelis*	2013	BoCC Red List
Shore lark *Eremophila alpestris*	2000	Schedule 1
Skylark *Alauda arvensis*	2014	BoCC Red List, NERC
Slavonian grebe *Podiceps auritus*	2014	Schedule 1, BoCC Red List
Snow bunting *Plectrophenax nivalis*	2011	Schedule 1
Song thrush *Turdus philomelos*	2014	BoCC Red List, NERC
Spoonbill *Platalea leucorodia*	2006	Schedule 1
Spotted flycatcher *Muscicapa striata*	2007	BoCC Red List, NERC
Starling *Sturnus vulgaris*	2014	BoCC Red List, NERC
Turtle dove *Streptopelia turtur*	2014	BoCC Red List, NERC
Velvet scoter *Melanitta fusca*	2014	Schedule 1, BoCC Red List
Whimbrel *Numenius phaeopus*	2014	Schedule 1, BoCC Red List
Whooper swan *Cygnus cygnus*	2007	Schedule 1, BoCC Amber List
Wood sandpiper *Tringa glareola*	2014	Schedule 1, BoCC Amber List
Woodcock *Scolopax rusticola*	2012	BoCC Red List
Woodlark *Lullula arborea*	2008	Schedule 1
Wryneck *Jynx torquilla*	2014	Schedule 1, NERC
Yellow wagtail *Motacilla flava*	2011	BoCC Red List, NERC
Yellowhammer *Emberiza citrinella*	2013	BoCC Red List, NERC

Herpetofauna

3.15 KMBRC returned records from Kent Reptile & Amphibian Group (KRAG). KRAG held no records of great crested newt *Triturus cristatus* in the area. Seven common toad *Bufo bufo* records were returned, five of which were within 1km of the site. The nearest records comprised of two 1995 recorded sightings approximately 620m to the north-east. The most recent common toad record was from 2012, at Walmer Castle, approximately 990m north-east. KRAG returned two hundred and twenty slow worm *Anguis fragilis* records, seven grass snake *Natrix natrix* records, two records of unknown snake species, and sixteen common lizard *Zootoca vivipara* records. Of these, six grass snake records and the two unknown snake species records were from locations over 1km away from the site Of the sixteen common lizard records returned, twelve were at locations over 1km away. The majority of the slow worm records were from a 2010 survey of fields approximately 2.6km north-west of the study area, and only two of the two hundred and twenty records returned for slow worm were located within 1km of the site. All three species were recorded in 2012 in allotments located approximately 540m north-west of the study area, and at Hawk's Hill, approximately 540m east of the site in 2000. A common lizard was also recorded in 2014 at a private residence approximately 470m north-west of the site.

Other Species

3.16 Hedgehogs *Erinaceus europaeus* were recorded in 1998 and 1999 at private residences in the adjacent tetrad to that containing the site.

3.17 The desktop study results did not include any notable species records from within the site boundary.

Field Survey

Habitats

3.18 Figure 2 illustrates the study area which consisted of grazed and un-grazed semi-improved horse pasture with associated stabling and a small ménage/training area, and an area of immature plantation woodland.

Photograph 1: View looking North towards the Western Edge of the Plantation Woodland, showing Grazed and Un-grazed Pasture.

Woodland

3.19 An area of semi-mature broad-leaved plantation woodland measuring approximately 0.99ha in area formed the whole of the eastern and most of the northern site boundaries. Tree species included ash *Fraxinus excelsior,* beech *Fagus sylvatica,* alder *Alnus glutinosa* and pedunculate oak *Quercus robur.* The understorey consisted of species such as hawthorn *Crataegus monogyna*. There was little evidence of ground flora with the woodland floor being dominated by bramble *Rubus fruticosa* agg., and common nettles *Urtica dioica.*

Scrub

3.20 Areas of scrub were restricted to patches of bramble within the woodland, along the grass track at the southern end of the study area (Tn2), and around the edge of an un-grazed grassland compartment (Tn3).

Photograph 2: Scrub growing along the Grassland Track at the Southern Boundary (Tn 2)

Trees

3.21 There were trees growing individually and in a small group (Tn4) along the western boundary with Dover Road, and other groups of trees were present in the north-western corner of the site immediately on the site boundary (Tn6). Most trees within the site were immature or semi-mature in age but there were two mature sycamores Acer pseudoplatanus within the group along the western boundary (Tn4). Other species present included holly Ilex aquifolia, hawthorn, and copper beech Fagus sylvatica purpurea.

Photograph 3: Group of Trees along Western Boundary (Tn4)

Photograph 4: Off-site Trees overhanging the Study Area (Tn6)

Semi-improved Grassland

3.22 The majority of the site consisted of semi-improved grassland used as horse pasture. Sections were separated by wooden or electric fences and where compartments had been left un-grazed the sward was up to approximately 0.75m high (Tn3 and Tn7). Dominant grasses were cock's-foot *Dactylis glomerata* and creeping bent *Agrostis stolnifera,* crested dog's-tail *Cynosurus cristatus* and perennial ryegrass *Lolium perenne* were also present. Herbs present included ribwort plantain *Plantago lanceolata,* bristly oxtongue *Picris echioides*, yarrow *Achillea millefolium*, white clover *Trifolium repens,* scentless mayweed *Tripleurospermum inodorum*, and creeping buttercup *Ranunculus repens.*

Photograph 5: Un-grazed Field Compartment in SW Corner (Tn3)

Tall Ruderal

3.23 Tall ruderal vegetation comprising species such as common nettle, creeping thistle *Cirsium arvense*, rosebay willowherb *Chamerion angustifolium* and mugwort *Artemisia vulgaris* was found growing along the unmanaged grass track at the southern end of the site (Tn2) and around a log pile in the north-eastern corner (Tn5).

Photograph 6: Log Pile in NE Corner (Tn5)

Standing Water

3.24 There was no standing water within the site. A small reservoir was located immediately adjacent to the southern site boundary (Tn1). This could not be accessed as it was surrounded by a post and wire fence and dense bramble and elder scrub. However, it was partially visible and appeared to be lined, had steep banks and no aquatic vegetation could be observed.

Photograph 7: Off-site Waterbody (Tn1)

Hedgerows

3.25 There was one hedgerow (H1) along the eastern boundary of the study area, between the plantation woodland and the off-site arable field. It consisted of mature hawthorn bushes with some elder *Sambucus nigra* and holly. Ground flora included species such as hedge woundwort *Stachys sylvatica*, common nettle, and hogweed *Heracleum sphondylium*. Using the HEGS methodology the hedgerow scored highly for its structure, but its lack of connectivity, diversity, and associated features meant it was classified as being of moderate value (3) overall. As a result of its lack of species diversity H1 was not considered 'important' under the Hedgerow Regulations 1997, but it was classed as a Habitat of Principal Importance under the NERC Act as it contained 80% or more native species.

Fauna

Badgers

3.26 No evidence of badgers occupying areas within the site nor any evidence of foraging was observed at the time of survey..

Bats

3.27 The plantation woodland edge and adjacent residential garden boundaries provide potential dispersal and feeding habitat for local bat populations, although this resource is considered limited within the site.

Tree Assessment

3.28 Of the two mature trees noted within the site both were considered to have low potential to support bat roosts. A third tree located just outside of the boundary wall on the north western site boundary was also considered to have low bat roost potential. These are summarised in Table 4 (below).

Table 4: Results of Ground Level Tree Assessments for Potential Bat Roosts.

Tree reference	Species	Category (See Table 1)	Comments
1	Sycamore	Low	Split limb, but resulting crevice facing upwards / open to elements
2	Sycamore	Negligible	Small upward facing cavity on broken limb
3	Sycamore	Low	Ivy covered stem; small fissures in bark

Building Assessment

3.29 None of the buildings, which comprise stabling present within the site were considered to have any potential to support roosting bats and no evidence of bats was recorded. These are summarised in Table 5 (below).

Table 5: Ground Level Building Assessment for Potential Bat Roosts.

Ref	Picture	Description	Potential
B1		B1 was a single-storey, wooden clad stable building with a pitched corrugated metal roof. Features of note were the gable ends. No evidence of bats was observed.	Overall, the building appeared to be well sealed with no obvious access points so was considered to have negligible potential to support a bat roost.
B2		B2 was a single-storey, wooden clad stable building with a pitched corrugated metal roof with a metal ridge. There was a single storied extension on its southern aspect, with a flat felted roof, and partially weather-boarded sides. Potential access points were limited to occasional gaps under the roof and the weatherboarding. No evidence of a bat roost was observed.	The features present within B2 were of limited value, internally the building appeared to have no roof void or underboarding and was considered to be too light and airy to be used as a bat roost and therefore had negligible potential to support a bat roost.

Ref	Picture	Description	Potential
B3		B3 was a single-storey, wooden clad stable building with a pitched corrugated metal roof. Features of note were gable ends, and wooden barge boards. No evidence of bats was observed.	Overall, the building appeared to be well sealed with no obvious access points so was considered to have negligible potential to support a bat roost.
B4		B4 was a single-storey, wooden clad storage building with a pitched corrugated metal roof. Features of note were gable ends, and eaves-level vents at the western aspect. The western aspect had a large opening covered by a plastic curtain. No evidence of bats was observed.	Access points were limited to the vents on the western aspect. Due to the large opening on the western side the building was considered to be light and airy and was considered to have negligible potential to support a bat roost.

Birds

3.30 Given the habitats present within the study area boundary and its location, it is considered that it will be used for foraging and nesting by species typical of residential fringe habitats. This includes species such as house sparrow *Passer domesticus* and song thrush *Turdus philomelos* both of which are Birds of Conservation Concern (BoCC) red list species and species of principal importance under the NERC Act.

3.31 Dunnock, a species of principal importance under the NERC Act, were observed in the trees around the boundaries during the survey.

Herpetofauna

3.32 There were no aquatic habitats within the study area, and the only waterbody within 250m of the site was a steep banked, lined 'reservoir' with no aquatic vegetation. The majority of the study area was considered to be unsuitable as foraging habitat for amphibians due to its grazed nature. The woodland, hedgerow base, and longer un-grazed grassland had limited suitability for foraging or hibernating amphibians.

3.33 The margins of the field and areas of grassland were considered suitable for reptile species having the complex and varied vegetation structure preferred by reptiles for basking and shelter.

4.0 EVALUATION & RECOMMENDATIONS

National Planning Policy Framework (NPPF)

4.1 Within the NPPF[7] there is a 'presumption in favour of sustainable development' which is laid out in twelve central land use planning principles which underpin the production of development plans and decision taking.

4.2 The NPPF aims to "*seek positive improvements in the quality of the built, natural and historic environment."* which, amongst others, includes*, "…moving from a net loss of biodiversity to achieving net gains for nature*."

4.3 Within the NPPF there are clear objectives for conserving and enhancing the natural environment. "*The planning system should contribute to and enhance the natural and local environment by:*

- *minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.*

4.4 Development proposals for the study area are for up to 85 dwellings, with associated infrastructure, landscaping and open space. The following section provides an evaluation and proposals for mitigation and enhancement that take account of the likely ecological effects of the proposals and the requirements of the NPPF.

Statutory Sites

4.5 SACs are strictly protected sites, designated under the Habitats Directive, which contain habitats and/or species (excluding birds) considered to be most in need of conservation at a European level

4.6 Ramsar Sites are strictly protected sites designated under the 1971 Convention on Wetlands of International Importance especially as Waterfowl Habitat. Wetlands are designated, protected and promoted in order to stem encroachment upon and/or loss of wetlands, such as marsh, fen, peat land, and open water habitats.

4.7 SPAs are strictly protected sites designated under the EC Birds Directive, to conserve the habitat of certain rare or vulnerable birds, and regularly occurring migratory birds.

4.8 Guidance on International sites is provided by the National Planning Policy Framework and Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System.[8] In brief the circular states that the competent authority (the local planning authority (LPA)) must establish if any proposals not directly connected to or necessary for the management of the international site, either alone or in combination, are likely

[7] Department for Communities and Local Government. (2012). *National Planning Policy Framework.* [Online]. London: Department for Communities and Local Government. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf [Accessed 01/11/2015]

[8] Office of the Deputy Prime Minister (2005). *National Planning Policy Framework and Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System* HMSO

to have a significant effect on the interest feature of the site. If, on a precautionary basis, there is a risk that there may be a significant effect upon the international site then a further appropriate assessment may be required.

4.9 The study area does not receive any statutory or non-statutory nature conservation designations such as SPA, SSSI, SAC or LNR.

4.10 Natural England confirmed that no IRZs are triggered for Sandwich Bay SAC, Dover to Kingsdown Cliffs SAC or Lydden & Temple Ewell Downs SAC, although the latter two are susceptible to air quality impacts, so could be impacted if the proposals include any sources of air pollution.

4.11 Dover to Kingsdown Cliffs SAC and SSSI is located approximately 2km south-east of the study area. It is designated for its vegetated sea cliffs, a habitat that is not present within the study area. Although the town of Kingsdown is located between the site and the study area, it is connected to it via public footpaths..

4.12 The nearest section of the Thanet Coast and Sandwich Bay Ramsar Site is located approximately 3.1km north west of the study area whilst the nearest section of the Thanet Coast and Sandwich Bay SPA, and the Sandwich Bay SAC are located approximately 4.3km north, and 4.5km north-east of it respectively. The towns of Walmer and Deal are between the study area and the Ramsar Site/SPA/SAC but are accessible by roads and footpaths through the town. Habitats within the Ramsar Site/SPA/SAC consist primarily of rocky shores, sand dunes and sand dune grassland, estuary, saltmarsh, and grazing marsh, none of which are present within the study area. This site qualifies as a SPA as it supports populations of little tern and golden plover which are species of European importance, and populations of turnstone which is a migratory species of European importance. It is designated as a Ramsar Site due to the presence of 15 British Red Data Book wetland invertebrate species, and because it regularly supports internationally important populations of turnstone. It qualifies as an SAC due to the presence of 4 Annex I dune habitats.

4.13 Lydden & Temple Ewell Downs SAC is located approximately 8.9km south-west of the study area, and is selected as an SAC due to the presence of the Annex I habitat - semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia* (important orchid rich sites)), a habitat that is not present within the study area. The site is connected to the study area by public footpaths and green corridors but is separated from it by two main roads (the A2 and the A256).

4.14 In the Habitats Regulations Assessment (HRA) of Dover District Council's Local Development Framework (LDF) Core Strategy[9] the effects of development on international sites in the locality are assessed with regard to urbanisation, recreational use, atmospheric pollution, water resources, water quality, and coastal squeeze. Recommendations to mitigate for adverse effects assessed in the HRA were incorporated into the Dover District Council's LDF Core Strategy (adopted February 2010), and implemented in a Green Infrastructure Policy that sits alongside the Thanet Coast and Sandwich Bay SPA and Ramsar Mitigation Strategy.

[9] *Habitat Regulations Assessment of the Dover LDF Core Strategy*[online] https://www.dover.gov.uk/Planning/Planning-Policy/Local-Plan/Core-Strategy/HabitatRegulationsAssessment.pdf

4.15 The Green Infrastructure Strategy[10] states: *"Where necessary, identification of specific mitigation measures must be undertaken and incorporated into proposals. Mitigation options for developments have been identified as:*

- *Deflection of Impact: The provision of Suitable Alternative Natural Greenspace (SANGS) has been developed by Natural England in response to recreational pressures on the Thames Basin Heaths SPA. It has been demonstrated through development in Dover (Whitfield Urban Expansion) that the SANGS approach is feasible, albeit that the nature of the alternative greenspace must be appropriate for the circumstances.*
- *Management of Sites: Good management has been shown to reduce recreational pressures on nature reserves. This may require funding for monitoring over an extended period to evaluate impacts and wardening. It is particularly important for sites where the provision of SANGS cannot be achieved. This approach has been agreed as a way forward for the Thanet Coast and Sandwich Bay SPA and Ramsar sites.*
- *Behaviour Change: Reducing a reliance on the private car and the promotion of healthier lifestyles means that recreational impacts on more remote sites are likely to be reduced and the use of green space close to the town (within walking distance or close to bus routes) is likely to increase. This trend can be encouraged by policy, information and the provision of suitable local GI. This approach is being taken forward through seeking better connections to, and the promotion of the existing public rights of way system, householder information leaflets on new development sites, as well as the establishment of local GI/Landscape master plans.*

  Local GI

  Each new major development site will be required to have a local GI plan, (or Landscape master plan) which starts by assessing how the site sits within its wider context:

- *Existing GI locations to be protected (e.g. Biodiversity sites, Ancient Woodlands);*
- *Existing GI locations to be maintained or potentially enhanced (woodlands, river corridors, important tree belts, parks, green corridors, open spaces etc.) and*
- *Public Rights of Way and other important footpaths/ cycle routes linking the development area to these locations.*

Managing Biodiversity GI

Visitor pressures have been identified in a number of the District's natural GI assets including a range of designated wildlife sites as well as European sites such as at the White Cliffs and Sandwich and Pegwell Bay. A considerable year-round recreational pressure arises from dog walking. On the one hand this has the very positive benefits for health and wellbeing as it results in regular physical exercise and can lessen social isolation. However, the personal benefits of dog walking have to be weighed against the wider antisocial and potential health risks presented by unmanaged dog fouling. Additionally, and of profound importance on sensitive wildlife sites, dogs can not only significantly disturb wildlife, especially if running free, but through fouling adversely affect vegetation communities. Measures to managing these pressures include:

Ensuring provision of good quality GI assets including:

[10] Dover District Council *Green Infrastructure Strategy* January 2014

- *Open space and pedestrian and cycle linkages local to residential communities to reduce pressures on natural GI sites;*
- *Adequate monitoring, clear signposting and wardening if necessary.*
- *Building on the dog walking studies to provide a positive solution in reducing or avoiding conflict.*

4.16 With respect to the international sites of the Thanet Coast and Sandwich Bay (SPA, SAC, and Ramsar Site), the HRA concludes that the main impacts will be due to recreational pressure, urbanisation, impacts on water quality and water resources, and coastal squeeze. The Thanet Coast Spa Mitigation Strategy[11] comprises 4 elements:

- *Draw on funding (via a bond) to support wardening at Sandwich Bay for a period of 10 years;*
- *Monitoring of potential impacts associated with Dover development;*
- *Contribution to the Pegwell Bay and Sandwich Bay Disturbance Study; and*
- *To use the monitoring to identify lesser sources of development-related disturbance and to draw on the relevant developer's contributions for mitigation of such.*

4.17 The overall sum for the above was calculated to be £505000 of which £350000 would be in the form of a bond. The development contribution is calculated per house, with the amount varying with respect to bedroom number. For outline applications where the detail of the dwelling type has not been established, an amount of £49.59 per dwelling is used (the same as for a 3bedroom house).

4.18 Natural England confirmed that the development has "*the potential to lead to increased recreational pressure on Thanet Coast and Sandwich Bay SPA/Ramsar, in combination with other residential developments in Dover"* but their view is *"that if a financial contribution to this strategy is made, then this would address recreational pressure from the developments, and a likely significant effect could be ruled out."*

4.19 With regard to the use of the study area for foraging, roosting, or (in the case of little terns) breeding by qualifying species present within the SPA and Ramsar sites, it is considered unlikely due to the small size of the field, regular disturbance and heavy grazing, and the nature of the habitats within it (semi-improved grassland). It is possible that individual golden plover may use the grassland for feeding, but large flocks tend to use large fields for foraging, so the loss of small areas of grassland habitat would not affect the populations overwintering in the designated sites.

Non-statutory Designated Sites

4.20 Kingsdown & Walmer Beach LWS, the nearest section of which is Hawk's Hill, located approximately 470m to the east of the study area is the only non-statutory site of nature conservation interest within 1km of the study area. The LWS is connected to the study area by public footpaths. AS Hawk's Hill and the beaches at Kingsdown and Walmer are open public spaces, and are managed as such, it is considered that there will be no adverse effect from the proposed development on the LWS.

[11] Dover District Council *Thanet Coast SPA Mitigation Strategy* October 2012

Habitats

Woodland

4.21 Approximately 0.99ha of the study area consisted of young plantation woodland. The woodland contained a diverse range of native species and will be of increasing value for nature conservation as it matures. The vast majority of the woodland is to be retained as part of the development proposals, and will be afforded suitable protection during construction activities i.e. working methods must adhere to standard best practice guidance. This will include BS5837 Trees in Relation to Design, Demolition and Construction – Recommendations: 2012 for trees and hedges.

Grassland

4.22 The majority of the study area consisted of semi-improved grassland compartments. They were of limited diversity and supported common and widespread species of little floristic interest and were therefore considered to be of low nature conservation value.

Hedgerows

4.23 The hedgerow along the eastern boundary of the study area was of moderate conservation value using the HEGS criteria and was not identified as 'important' under the Hedgerow Regulations. Hedgerows are a Habitat of Principal Importance under NERC.

4.24 The hedgerow is to be retained and buffered from residential development, and its enhancement is to be incorporated into landscaping proposals.

Fauna

Badgers

4.25 No badger setts were observed within the study area.

4.26 No evidence of badger activity was recorded during the walkover survey within the study area. The grassland within it was considered to be of limited value for foraging badgers.

4.27 At the time of survey badgers were not considered as likely to pose a statutory constraint to the development of the site.

Bats

4.28 The habitats within the site including the woodland along with nearby residential gardens connect to larger woodland blocks to the south of the site and therefore provide potential for use by bats. Given the size of the study area and the habitats present, it is recommended that bat activity is assessed using transect surveys and static monitoring methods. Such surveys will help to assess the overall usage of the site and identify areas of highest and lowest likely impact on bats and the data can be used to inform appropriate avoidance and mitigation measures. The bat activity survey season is from April to October.

4.29 Surveys demonstrated that the three mature site trees have low potential as bat roosts supporting features such as branch cavities and bark fissures. All bat species and their roosts are

fully protected in the UK by the Wildlife & Countryside Act (WCA) 1981 (as amended) and at a European level by the Conservation of Habitats & Species Regulations 2010 (as amended). Some bat species are species of principal importance under the NERC Act.

4.30 If feasible it is recommended that the trees and hedgerow be retained as part of the development proposals. If this is not possible and any of the trees deemed to have low potential for roosting bats are to be lost or isolated, then further surveys will be necessary to establish if bats are present. This could include aerial roped access surveys, if the trees are deemed safe to climb, or nocturnal surveys to be undertaken between the months of May – August (inclusive) to confirm the presence or likely absence of a bat roost within them. This methodology takes into account BCT guidelines introduced in 2016.

4.31 None of the four stable buildings within the study area were considered suitable for roosting bats due to the lack of suitable features, No further surveys are considered necessary.

4.32 Any lighting should be designed to avoid or minimise impacts of light spill on wildlife using the more important habitat features such as the woodland or any new areas of connected semi-natural vegetation created as part of proposed GI. This can be achieved by a combination of the following steps:

- avoiding unnecessary lighting
- the use of low-intensity lighting
- minimising light spill with the use of directed lighting or designing planting to shield sensitive areas

Birds

4.33 As all birds are protected whilst on the nest under the Wildlife and Countryside Act 1981 (as amended). It is recommended that site clearance works including the removal of any woody vegetation and ground flora during construction is conducted outside the bird breeding season (March – September, inclusive). If clearance is planned for the bird breeding season, then it will be preceded by a nesting bird survey conducted by an experienced ecologist. This will involve observing any vegetation to identify birds exhibiting nesting behaviour and / or searching for active nests. Should active nests be identified then an exclusion zone would need to be retained until the chicks had fledged as determined by the supervising ecologist.

Great Crested Newts

4.34 No records for great crested newts were returned during the desk study. The site provided very limited shelter for this species in the form of the grassland margins and hedgerow bases. No water bodies were present within the site to provide suitable breeding habitat for great crested newts. A reservoir was present adjacent to the southern boundary of the study area, but this was considered unsuitable breeding habitat for the species given its man-made origin lack of suitable aquatic habitats and nature of the immediate surroundings.

4.35 Given the poor suitability of the waterbody, its isolation from other suitable breeding habitat in the wider area, and the lack of recent records for GCN in the area it is considered highly unlikely that this waterbody will support the species. It is therefore considered reasonably unlikely that the species would make use of habitats within the study area and no further survey is recommended.

Reptiles

4.36 All British reptiles are protected under the Wildlife and Countryside Act 1981 (as amended). Grass snake, slow worm, and common lizard are protected against intentional killing or injury and against sale.

4.37 Unmanaged grassland and field margins were considered to provide suitable habitat for reptile species. Given this, and the fact that there are records of grass snake, slow worm, and common lizard within 1km of the study area it is recommended that a full presence/absence survey should be undertaken between March and October 2017. Surveys could be completed by the end of May provided weather conditions are favourable. Surveys would need to comprise one visit to lay refugia within suitable habitat and then seven visits to check the refugia during suitable weather conditions.

4.38 Should reptiles be present within the area two options for mitigation exist. The chosen method for mitigation will depend on the population size and the extent of habitat loss.

4.39 Option 1 would be displacement of reptiles from working areas through management of vegetation. This could be undertaken if a low population of reptiles was recorded within areas that are linked to suitable retained habitats. If this is the case, then reptiles could be displaced through a two-stage cut of vegetation during the reptile active season when temperatures are above 10^{o}C. The first cut should be to 200mm and then the second at least an hour later to 50mm. Vegetation should be cut from the working area towards the retained habitats allowing reptiles to move into retained habitats. Once the two cuts have been completed all suitable refugia should be removed by hand under the supervision of a suitably qualified ecologist. Reptiles present should be caught and removed to retained habitats.

4.40 Option 2 would be required if a high population of reptiles is found to be present within large areas of the study area that are not linked to retained habitats. In this instance trapping, may need to be undertaken. This would involve ensuring a receptor site was in place prior to trapping which would need to include suitable habitat for reptiles in the form of a range of habitats and hibernation areas. Further detail would be provided if this were necessary. Reptiles could then be trapped between March and October for a period of between 30 and 90 days depending on the population size. Individuals caught during trapping would need to be removed to the receptor site.

Mitigation and Enhancements

4.41 Dover to Kingsdown Cliffs SAC and SSSI is located approximately 2km south-east of the survey area; the nearest section of the Thanet Coast and Sandwich Bay Ramsar Site is located approximately 3.1km north west of the study area whilst the nearest section of the Thanet Coast and Sandwich Bay SPA is located approximately 4.3km north of it. Built up areas (e.g. the towns of Walmer, Deal and Kingsdown) separate the study area from these statutory sites but they are connected to it via roads and public footpaths.

4.42 Proposed play areas are to be located in the centre of the development, and around the woodland which is to include a circular ‘play trail’. This circular route will also provide recreational space for dog walkers and other users, and is designed to be a focal point for recreation, reducing the need for residents to travel away from the development to designated areas.

Regular litter picks and the inclusion of waste bins around the development will aid in protecting the integrity of the development.

4.43 An attenuation facility is to be incorporated into the development to ensure surface runoff and pollution does not indirectly enter the designated sites, these will hold runoff from hard surfaces and roofs.

4.44 New habitat creation proposals should aim to increase the diversity of habitats present and provide structural diversity, with scrub, trees, informal and formal grassland areas, and wetland associated with the attenuation pond and areas of SUDS. Habitat connectivity could be significantly improved through the creation of new and linked planting of trees, hedgerows and scrub belts. Any garden planting proposed at the outset should also seek to use native species of value to wildlife. Suitable small tree species for inclusion in garden planting schemes include field maple *Acer campestre*, silver birch *Betula pendula* and holly. All informal areas of planting should use native species and be subject to sympathetic management to promote their conservation value. More formal areas should consider the use of non-native species with known value to wildlife these are often species with nectar bearing flower, fruit and berries. Planting schemes should seek to create a varied three-dimensional structure through use of ground cover, climbers and shrubs with an emphasis on species bearing nectar, berries, fruit and nuts, as these enhance the foraging opportunities for local wild fauna including birds and invertebrates.

4.45 Roosting opportunities for bats could be enhanced by the provision of bat bricks incorporated into the built fabric of residential dwellings. Bat bricks could be positioned on the southern, eastern and western elevations of buildings at least 4m from the ground. Bat bricks should be arranged around the development in different locations so that a number of different aspects are covered to provide a variety of alternative roost sites.

4.46 Breeding opportunities for birds could be enhanced by inclusion of nest boxes or nest bricks around the development. The use of a number of different nest boxes with different entrances, e.g. 26mm, 32mm and open-fronted will enable the scheme to encompass the nesting requirements of a range of species. Boxes would need to be placed on retained trees or selected buildings in sheltered locations that are free of regular disturbance. Nest bricks may be incorporated into the fabric of proposed buildings in similarly sheltered locations.

4.47 As reptile species, have been recorded in the local area it is recommended that areas around the margins of the residential area are enhanced for reptile use by creating and maintaining strips of informal tussocky grassland to enhance commuting and foraging activity. If reptiles are found within the site during surveys then an area would need to be set aside to provide a section of optimum habitat for reptiles to move into prior to construction works. The creation of dead wood piles in strategic locations would provide further opportunities for shelter and basking and would also provide potential habitat for amphibians and invertebrates in general. Insect houses could provide further enhancements.

4.48 As hedgehogs, have been recorded in the local area improving permeability across the site by including gaps under garden fencing where possible and better connectivity around the sites edges would be beneficial to the conservation of the species. Measures adopted for hedgehogs will also allow movement of other small mammals and amphibians through the development and future garden spaces.

5.0 NON TECHNICAL SUMMARY

5.1 The study area is within 10 km of Dover to Kingsdown Cliffs SAC, Thanet Coast and Sandwich Bay Ramsar Site and SPA , Sandwich Bay SAC, and Lydden & Temple Ewell Downs SAC. It is also within 2km of the Dover to Kingsdown Cliffs SSSI and 1km of the (non-statutory) Kingsdown & Walmer Beach LWS. As the study area falls within the zone of influence of some of these sites, a strategic avoidance strategy including incorporating greenspace in the form of play areas and circular walks will be devised. A financial contribution to the strategic management strategy for the statutory sites is likely to be required.

5.2 The study area consists of semi-improved grassland of negligible value, a hedgerow, and an immature woodland plantation. New habitat creation proposals aim to increase the diversity of habitats present and provide structural diversity, with scrub, trees, informal and formal grassland areas. An attenuation pond and associated SUDS required as part of the drainage proposals create an opportunity to provide additional wetland features. Enhanced habitat connectivity will be achieved through the planting of tree belts, hedgerow and scrub.

5.3 No evidence of bat roosts within the study area was found. Three trees were considered to have low bat roost potential. If any of these trees are to be lost or isolated due to the development, then further surveys will be required to establish the presence of bat roosts.

5.4 The habitats including woodland within the site connect to larger woodland blocks to the south and therefore provide potential for use by bats. Given the size of the study area and the habitats present, it is recommended that bat activity across the site is assessed using transect surveys and static monitoring methods.

5.5 The removal of vegetation from the study area should be completed outside of the bird breeding season (March – September, inclusive). If this is not possible then vegetation removal should be preceded by precautionary checks for nesting birds.

5.6 The only waterbody within 250m of the site was considered unsuitable for GCN and it is considered reasonably unlikely that GCN are present within the site or would make use of habitats present therein and no further survey is considered necessary.

5.7 As reptile species are recorded in the local area it is considered likely that they are present on site. It is recommended that presence/absence surveys are undertaken in order that the correct mitigation strategy is devised.

5.8 Additional boundary planting should be provided to create a buffer and wildlife corridor around the site, as well as providing connections through the development.

5.9 Where possible planting schemes should use native species with an emphasis on species bearing nectar, berries, fruit and nuts, to enhance the foraging opportunities for local fauna.

5.10 Further opportunities to enhance the development include the provision of bat and bird boxes, dead wood habitat and insect houses, and if feasible, gaps should be left under garden fencing to allow movement of mammals and amphibians through it.

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APPENDIX A: BOTANICAL SPECIES LIST

Name	Scientific Name	TN1	TN2	TN3	TN4	TN5	TN6	TN7	Plantation Woodland	Hedgerow H1
Ash	*Fraxinus excelsior*								x	
Alder	*Alnus glutinosa*								x	
Beech	*Fagus sylvatica*								x	
Bramble	*Rubus fruticosus agg.*	x	x	x					x	x
Bristly Oxtongue	*Picris echioides*		x	x		x		x		
Broad-leaved Dock	*Rumex obtusifolius*			x		x		x		
Chickweed	*Stellaria media*				x					
Cleavers	*Galium aparine*								x	
Cock's-foot	*Dactylis glomerata*			x						
Common Nettle	*Urtica dioica*		x			x		x	x	x
Cow Parsley	*Anthriscus sylvestris*				x					x
Creeping buttercup	*Ranunculus repens*			x				x		
Creeping Thistle	*Cirsium arvense*		x							
Crested Dog's-tail	*Cynosurus cristatus*			x						
Dandelion	*Taraxacum officinale agg.*							x		
Elder	*Sambucus nigra*	x								x
English Elm	*Ulmus procera*				x					
English Oak	*Quercus robur*								x	
Hawthorn	*Crataegus monogyna*								x	x
Hedge Bindweed	Calystegia sepium									x
Hedge Woundwort	*Stachys sylvatica*					x				
Hogweed	*Heracleum sphondylium*									x
Holly	*Ilex aquifolium*									x
Holm Oak	*Quercus ilex*								x	
Ivy	*Hedera helix*				x		x			x
Mugwort	*Artemisia vulgaris*			x						
Perennial Rye-grass	*Lolium perenne*							x		
Red Clover	*Trifolium pratense*			x						
Ribwort Plantain	*Plantago lanceolata*			x				x		
Rosebay Willowherb	*Chamerion angustifolium*					x				x

Name	Scientific Name	TN1	TN2	TN3	TN4	TN5	TN6	TN7	Plantation Woodland	Hedgerow H1
Scentless Mayweed	*Tripleurospermum inodorum*							x		
Scots Pine	*Pinus sylvestris*						x			
Sessile Oak	*Quercus petraea*								x	
Sycamore	*Acer pseudoplatanus*				x		x			x
Wild Angelica	*Angelica sylvestris*				x					
White Clover	*Trifolium repens*			x						
Yarrow	*Achillea millefolium*			x				x		

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APPENDIX B: HEDGEROW SURVEY RESULTS

Hedge	HEGS *(-2 or above of conservation priority)*	Average spp/30m	Species Rich Hedgerow *(average species 5+/30m)*	Associated Features: *Bank or wall; <10% gaps; Ditch along half its length; connections; >1 standard tree / 50m; parallel hedge within 15m or public byway*	Important Hedgerow [1]
H1	3	3	×	Bank	×

APPENDIX C: NATURAL ENGLAND DAS RESPONSE TO FPCR'S ENQUIRY

Karen L. Bartlett

From: Giacomelli, Alison (NE) <Alison.Giacomelli@naturalengland.org.uk>
Sent: 06 February 2017 10:50
To: Karen L. Bartlett
Subject: RE: Developments within 10km of SPA , SAC & Ramsar Sites, nr Deal

Dear Karen,

Thanks for your enquiry regarding two developments near Deal.

I have checked which SSSI Impact Risk Zones the two developments fall within, as a starting point for potential impacts.

Both sites have the potential to lead to increased recreational pressure on Thanet Coast and Sandwich Bay SPA/Ramsar, in combination with other residential developments in Dover. Dover DC has a monitoring and mitigation strategy in place: https://www.dover.gov.uk/Planning/Planning-Policy/PDF/Evidence-Base-2013/EvidenceBaseSD/SD45ThanetCoastSPAMitigationStrategy.pdf. Natural England's view is that if a financial contribution to this strategy is made, then this would address recreational pressure from the developments, and a likely significant effect could be ruled out.

The proposal for 220 dwellings falls within the impact risk zone for Sandwich Bay to Hacklinge Marshes SSSI in terms of water quality impacts. But if there is no hydrological connection between the development site and the SSSI, then potential for impact can be ruled out.

If the proposals are for residential development only, then no IRZs are triggered for Sandwich Bay SAC, Dover to Kingsdown Cliffs SAC or Lydden & Temple Ewell Downs SAC. However, Dover to Kingsdown Cliffs and Lydden & Temple Ewell Downs are susceptible to air quality impacts, so could be impacted if the proposals include any sources of air pollution.

Though you didn't ask about landscape impacts, I would check whether there would be impacts on views from the Kent Downs AONB.

You asked about costs through our Discretionary Advice Service. Information can be found at https://www.gov.uk/guidance/developers-get-environmental-advice-on-your-planning-proposals However, if the proposals are simply for residential development, then there's not an awful lot more to say than what I've outlined above, so it may not be worth your while. I'm happy to chat through on the telephone what the options might be. I'm around today and tomorrow if you'd like to give me a call.

Regards,
Alison

Alison Giacomelli
Lead Adviser – Sustainable Development
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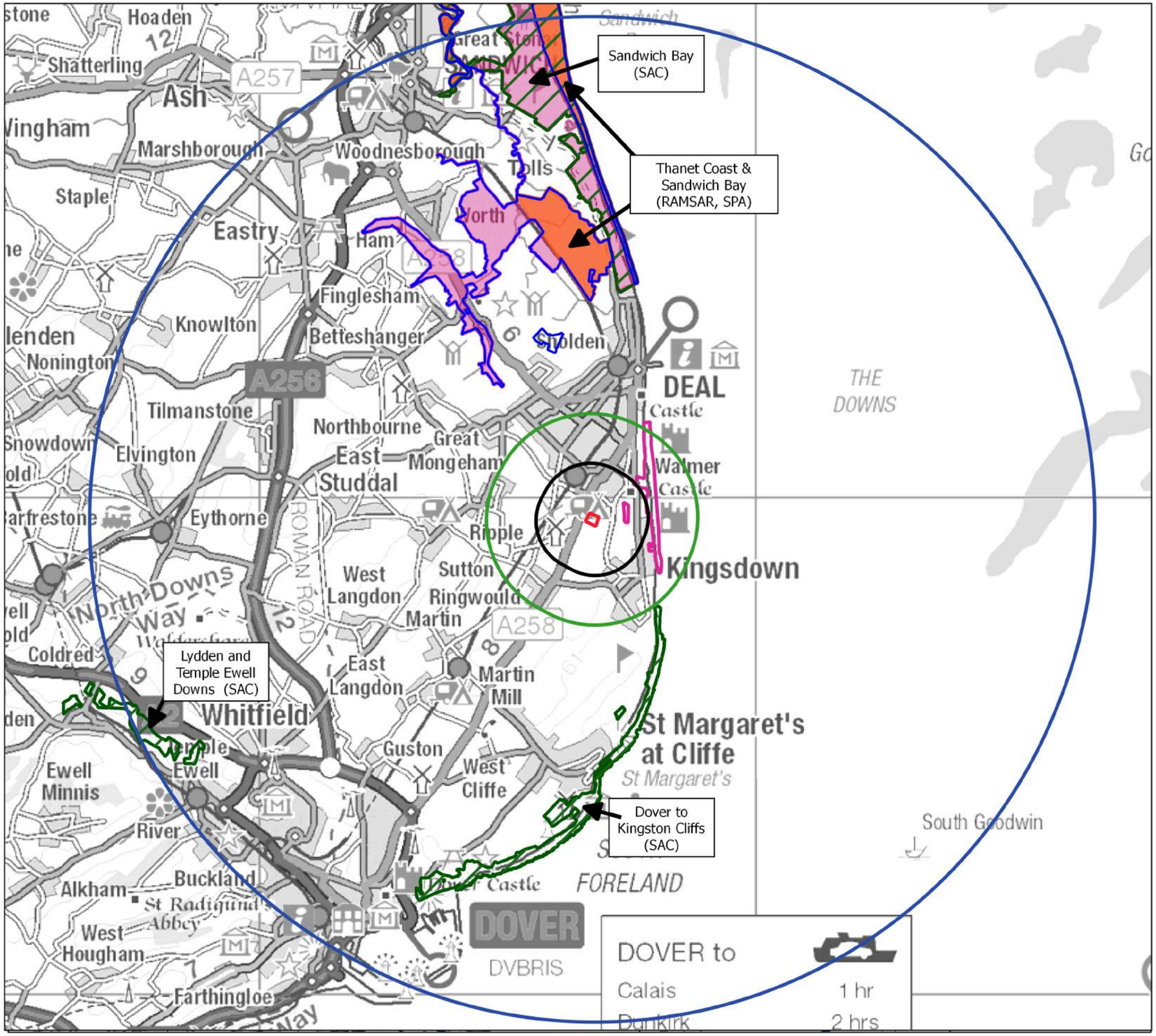

Legend

- Site Boundary
- 1km Buffer
- 2km Buffer
- 10km Buffer

Designated sites

- Sandwich Bay to Hackinge Marshes SSSI
- RAMSAR Site
- Special Area of Conservation (SAC)
- Special Protected Area (SPA)
- Kingsdown and Walmer Beach LWS

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P:\7500\7573\QGIS\Plans\7573-E-01 Designated sites Plan.qgs

client: Gladman Developments Ltd
project: Dover Road, Deal, Kent
drawing title: Site Location and Designated Sites Plan

scale: 1:80,000 | drawn: RCO / KLB | issue: 8/2/2017
drawing / figure number: **Figure 1** | rev: **7573-E-01**

Key

- Site Boundary
- Tree with Bat Potential (T#)
- Target Note (TN#)
- Tree
- Wall
- Hedgerow (H#)
- Scrub - scattered line
- Fence
- Buildings (B#)
- Broadleaved Woodland - Plantation
- Standing Water
- Other Tall Herb and Fern - Ruderal
- SI Poor Semi-Improved Grassland

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client: Gladman Developments Ltd.
project: Dover Road, Deal
drawing title: PHASE 1 HABITAT PLAN
scale: 1:2,000 drawn: RCO / KJB issue: 9/2/2017
drawing / figure number: Figure 2 rev: 7573-E-02