CONTENTS

INTRODUCTION 9-1
ASSESSMENT APPROACH 9-1
Study Area and Scope of Assessment 9-1
Scoping and Consultation 9-2
Limitations of Baseline Ecological Survey Information 9-3
Approach to Ecological Evaluation 9-3
APPROACH TO IMPACT ASSESSMENT 9-5
Baseline Conditions 9-5
Landscape Context 9-5
Data Search 9-6
Habitats 9-8
Fauna 9-9
NATURE CONSERVATION EVALUATION 9-10
Evaluation of Designated Sites 9-10
Evaluation of Habitats 9-11
Evaluation of Protected and Notable Fauna 9-11
ECOLOGICAL IMPACT ASSESSMENT 9-12
The Proposed Development 9-12
Identification of Predicted Impacts – Construction 9-12
Designated Sites 9-13
Habitats 9-13
MITIGATION AND RESIDUAL IMPACTS 9-15
Designated Sites 9-15
Habitats 9-15
Badgers 9-15
Bats 9-16
Birds - Breeding 9-16
Invertebrates 9-16
Reptiles 9-16
Other Species 9-16
CONCLUSION 9-16

Appendices

9.1 Extended Phase 1 Survey
9.2 Bat Survey

Drawings

Drawing 9.1 Phase 1 Habitat Map

INTRODUCTION

9.1 This section of the ES describes the ecological conditions at the application site. It assesses the potential impacts that the proposed development could have upon the flora and fauna, and details appropriate mitigation measures required to avoid, reduce or compensate these impacts.

9.2 The approach to the ecological assessment has been undertaken as follows: definition of the existing ecological conditions of the application site, including a review of the development area in its local and regional ecological context;

- determination of the existing ecological value of the application site and surrounding areas;
- identification of the potential ecological effects of the proposed development;
- identification of mitigation measures for any identified adverse ecological effects;
- demonstration that these activities will meet the legal requirements relating to species and habitats; and
- assessment of the significance of any residual ecological effects, i.e. those still remaining following mitigation.

9.3 In assessing the effects of any development it is necessary to define the areas of land and the species that need to be considered. This should be determined after careful consideration of the direct and indirect impacts associated with the proposed development and the potential effects on flora and fauna that may be associated with these impacts. The focus of this ecological assessment is on those species (or communities of species) that are considered 'important'.

ASSESSMENT APPROACH

9.4 The ecological impact assessment has been completed in accordance with the Guidelines for Ecological Impact Assessment in the UK[1]; with reference to the Guidelines for Baseline Ecological Assessment[2] . The following section briefly sets out the methodology used for each stage of the assessment.

Study Area and Scope of Assessment

9.5 The location and boundary of application site are shown on Drawing 9.1.

[1] Institute of Ecology and Environmental Management (2006). Guidelines for Ecological Impact Assessment in the United Kingdom (version 7 July 2006). http://www.ieem.org.uk/ecia/index.html. Institute for Ecology and Environmental Management, Winchester.

[2] Institute of Environmental Assessment (IEA) 1995. Guidelines for Baseline Ecological Assessment. E & FN Spon, London.

Scoping and Consultation

9.6 The scope of this assessment has been discussed through consultation with the local planning authority. The scope of the assessment to be undertaken is described below.

Contextual Information

9.7 Information on statutory designations of nature conservation importance in the vicinity of the application site was obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC) database, and 'Nature on the Map', Natural England's interactive map website.

9.8 Information on non-statutory sites and the presence of protected species within and near the application site, i.e. within 2km of the centre of the application site, was sought through consultation with East Sussex Biodiversity Records Centre.

Baseline Data Collection

9.9 Field surveys have been undertaken by SLR Consulting Ltd on behalf of Haulaway Waste Limited.

9.10 Summaries of the survey methods are set out below, with survey methods for the work in the reports in Appendix 9.1 and 9.2.

Badgers

9.11 The site was searched for signs of use by badgers during the 2010 extended Phase 1 survey, including setts, latrines, dung pits, pathways, hairs, footprints and feeding signs such as snuffle holes and scratched trees/logs.

Bats

9.12 Field surveys for bats in August 2010 included a visual inspection of the cliffs to assess their potential to support roosting bats; two evening emergence surveys and a dawn swarming survey were conducted within the quarry void, to see if any bats emerged from the cliffs and to assess the value of the void for foraging bats.

Birds – Peregrine Falcon

9.13 An initial visit was made to the quarry in 2009 to confirm the presence of nesting peregrine and to determine the location of the nest ledge. The peregrine pair has been seen on each subsequent visit in 2010.

Invertebrates

9.14 All habitats were assessed for their potential to support a good assemblage of invertebrates, including rare or scarce species, and any direct observations of invertebrate species were recorded.

Reptiles

9.15 The site was assessed for its potential as reptile habitat during the extended phase one survey, with existing refugia searched during the survey along with targeted visual searches for basking adder.

Other Species

9.16 Locations of other species observed during the above surveys, e.g. raven, were recorded and mapped during the 2010 survey work.

Limitations of Baseline Ecological Survey Information

9.17 Any constraints to specialist surveys are fully described in the separate survey reports in the appendices to this section. These limitations are considered to be minor and it is unlikely that additional baseline survey of the site would materially alter the conclusions of this assessment.

Approach to Ecological Evaluation

9.18 To evaluate the significance of impacts from a development it is important to establish the value, or sensitivity, of the site or feature upon which the effect is to occur.

9.19 IEEM guidelines suggest that to ensure a consistency of approach, ecological features are valued in accordance with the following geographical scale of reference. These categories have been applied to the features identified in baseline surveys. A further explanation of these criteria is provided in IEEM.

- International;
- UK;
- National (i.e. England, Wales);
- Regional (e.g. South);
- County (e.g. Buckinghamshire);
- District (e.g. Chiltern);
- Parish; and/or
- within the boundaries of the site.

9.20 Separate criteria are used to value designated sites, non-designated sites and species of ecological importance. These criteria are briefly described below.

Designated Sites

9.21 At the national and international levels, sites of nature conservation interest, such as Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Protection Areas (SPA) and Special Areas of Conservation (SAC), are designated under statutory legislation. The statutory basis for protection of these sites in the UK is provided by the Wildlife and Countryside Act 1981 (as amended) and, for European sites, the Conservation of Habitats and Species Regulations 2010.

9.22 Non-statutory wildlife sites in East Sussex are known as Sites of Nature Conservation Importance (SNCIs).

9.23 The Ancient Woodland Inventory (AWI) for England identifies over 22,000 ancient woodland sites. These include ancient semi-natural woodland (ASNW), where existing woodland cover has not been planted but may have been managed and allowed to regenerate naturally, and plantation on ancient woodland sites (PAWS), where the original tree cover has been felled and replanted. Although sites on the AWI are not designated, ancient woodland is an ecologically valuable habitat.

9.24 For the purpose of this assessment, the zone of influence is set at 2km from the site with regards to statutory designated sites, 2km with regards to non-statutory designated sites and Ancient Woodland, and within the application area and its immediate surroundings for non-designated sites and species.

Species

9.25 Species are evaluated based on their rarity, population size and whether they are especially important to the functioning of an ecosystem. Though they may not be protected or particularly rare, consideration is also given to those species listed in national and local Biodiversity Action Plans.

9.26 The criteria used to determine the biodiversity value of a species or features that may support a species include the following general considerations:

- rarity at a geographical level (international, national or local);
- endemism and locally distinct varieties or sub-species;
- species on the edge of geographic range;
- size of populations in the local geographical context;
- species-rich assemblages of a larger taxonomic grouping, e.g. herpetofauna or wintering birds;
- plant communities, ecosystems or habitat mosaics/associations that provide habitat for any of the above species or assemblages; and
- populations of species considered as significant in a Buckinghamshire context, as described in the UK Biodiversity Action Plan, East Sussex LBAP, or other relevant documents.

9.27 Legal protection of certain species is considered in a later section and does not specifically form part of the biodiversity evaluation.

APPROACH TO IMPACT ASSESSMENT

9.28 This section assesses the impacts arising from the proposed development and describes how these impacts may adversely or positively affect the flora and fauna of the application site and its surrounding area.

9.29 The assessment of ecological impacts follows the process described by the IEEM, which can be summarised as:

- identification of the range of potential impacts that may arise resulting from the proposed development;
- consideration of the systems and processes in place to avoid, reduce or mitigate the possible effects of these impacts;
- identification of the opportunity for ecological enhancement associated with the proposals;
- assessment of the residual impacts, following consideration of the success of avoidance, mitigation and enhancement measures; and
- where necessary, identification of compensation required to offset any significant residual effects.

9.30 The significance of residual impacts is assessed on the following levels:

- impacts upon biodiversity resources;
- the consequences in terms of national and local nature conservation planning policy; and
- the legal requirements relating to species and habitats.

9.31 To assess the effects of a proposed development it is essential that the range of potential impacts that could arise is identified. The range of impacts that require consideration in the ecological impact assessment is based upon knowledge of the proposed development and knowledge of the receptors (features of ecological sensitivity). This can only be undertaken with a thorough understanding of ecological processes and how flora and fauna react to the range of impacts that could occur.

9.32 The follows the mitigation and compensation measures that have been incorporated into the scheme and, where appropriate, it provides recommendations for further mitigation or compensation that may reduce impacts, or the effects of impacts, further. The final part of this section analyses the significance of the effects of this scheme following mitigation, i.e. the residual impacts. Finally, the significance of the residual impacts is assessed.

Baseline Conditions

Landscape Context

9.33 The survey area comprises the void and access road of Filching Quarry and the surrounding land within the perimeter fence. The entire survey area is irregular in shape, but the main void is broadly rectangular and ranges from

30 to 56 metres in depth as it is set into the side of a chalk escarpment. The application boundary of this site is shown on Drawing 1 in Appendix 9.1.

Data Search

9.34 No European Protected Sites were identified within a five km radius of the application site.

9.35 Wilmington Downs SSSI lies approximately 270m west of the western edge of the site. This is an important area of Nationally uncommon chalk grassland habitat on the steep slopes of the South Downs. Also of importance the site contains two nationally rare invertebrates protected under schedule 5 of the Wildlife and Countryside Act 1981 (as amended) the wart biter grasshopper (*Decticus verrucivorus*) and the snail *Monacha carthusiana.*

9.36 Folkington Reservoir SSSI is located 400m north of the application site boundary and is designated due to the presence of hoary mallow (*Althaea hirsuta*), a Schedule 8 species recorded in only a few locations in the UK and only on this site in Sussex. The surrounding bunds also support a highly diverse chalk flora.

9.37 Willingdon Down SSSI is situated 700m south east of the application site and is designated for its species rich chalk grassland.

9.38 Lullington Heath SSSI is designated due to the presence of two nationally uncommon habitats; chalk heath and chalk grassland. Located 1.5km south west of the site boundary and the nature of the proposed works this site is not considered further in this chapter, as it will be unaffected by the proposals.

9.39 Lullington Heath National Nature Reserve (NNR) is also covered by the SSSI designation discussed above and is sufficiently distant from the application site to be discounted from further consideration.

9.40 Sussex Biolodiversity Records Centre identified five SNCIs within the survey area. Cranedown and Middle Brow located 180 metres to the north of the application site and is a 16.8ha area of calcareous grassland with areas of species rich sward adjacent to the eastern edge of Wilmington Downs SSSI.

9.41 Willingdon and Home Bottom SNCI comprises two areas of unimproved chalk grassland and woodland totalling 21.5ha located approximately 800m south of the site boundary, with grassland of varying quality but species rich with some notable plant species such as clustered bell flower (Campanula glomerata) and dropwort (Filipendula vulgaris).

9.42 Located 1.5km north east of the application site Diplocks wood SNCI is a small former coppice with a diverse groundflora.

9.43 Wilmington Down, Deep Dean and Ewe Dean Fragments SNCI is comprised of three areas of chalk grassland totalling 21.4ha separated and adjacent to

Wilmington downs SSSI. The closet fragment, Wilmington fragment is located 1580 metres north-west of the application site.

9.44 Friston forest SNCI comprises as 805.8ha beech and pine plantation, the main interest of the site is restricted to the rides where diverse botanical communities occur along with a large number of notable and scare invertebrate of the Lepidoptera and Coleoptera. Friston Forest lies 1600m south west of the application boundary.

9.45 A small area of Ancient woodland is located 100 metres to the south east of the sit, known as The Boot. No further information on this woodland is known and it was not accessed as part of the site survey.

9.46 The Sussex Biodiversity Record Centre returned comprehensive records for the search area though no records specific to the site itself were returned, records of several notable species were returned for the immediate vicinity of the quarry however:

- Two moss species listed on the Sussex Rare inventory are recorded at a 1km resolution for the same grid square as the site; smaller (*Cinclidotus fontinaloides*) and marble screw-moss (*Syntrichia Papillosa*);
- Burnt Orchid (*Orchis ustulata*) has been recorded to the west of the application site approximately 400 metres from the site boundary;
- Loose Silky Bent (*Apera spica-venti*) has been recorded 300m to the west of the application site;
- Rough Marsh-mallow (*Althaea hirsuta*) is recorded in the Folkingdon reservoir SSSI 400 metres to the north of the application site; and
- Bastard-toadflax (*Thesium humifusum*) has also been recorded at Folkingdon Reservoir SSSI.

9.47 The Sussex Biodiversity Record Centre also provided a list of records from the Sussex Ornithological Society, these records are only provided with the number of records from within the search area and no further detail is included. Sixty of these records related to sensitive breeding records of Schedule 1 species from within the search area and Sussex Ornithological Society was contacted requesting further information about these records and 5 records of breeding attempts in the quarry were returned spanning from 1998 to 2005. In addition to the breeding records of Peregrine (*Falco peregrinus*), two records for hen harrier (*Circus cyaneus*) were returned, five records of common nightingale (*Luscinia megarhynchos*), along with single records of hobby (*Falco subbuteo*), grey partridge (*Perdix perdix*), whimbrel (*Numenius phaeopus),* and tree sparrow (*Passer montanus*) all relating to the same 1km grid square as the site.

9.48 A number of records for bats relating to roosts were returned from the data search area, all being located more than 800m or further away from the site. Species records are for serotine (*Eptesicus serotinus*), whiskered bat (*Myotis brandtii*), Natterer's bat (*Myotis nattereri*), pipistrelle species (*Pipistrellus*) and brown long-eared bat (*Plecotus auritus*).

Habitats

9.49 The results of the habitat surveys are shown in Drawing 9.1 at Appendix 9.1.

9.50 The survey area is broadly divided into two sections. The quarry void and access track, and the grassland on top of the cliffs to the perimeter fence that delineates the ownership boundary.

9.51 The quarry void is dominated by bare chalk, with a sparse scattering of colonising species, and two small pockets of scrub are present along with scattered sapling ash. No water was present in the base of the void but information provided by the client has indicated that the void floods as the water table rises in winter most years. No indication of this seasonal inundation was recorded in the species composition of the vegetation present in the void base.

9.52 The grassland on top of the cliff comprises unmanaged calcareous grassland which is heavily rabbit grazed in places causing a corresponding increased density of herbs species in the sward. The ungrazed areas are dominated by false oat grass (*Arrhenatherum elatius*), with abundant red fescue (*Festuca rubra*), occasional cock's foot (*Dactylis glomerata*), creeping bent (*Agrostis stolonifera*), common bent (*Agrostis capillaris*), Timothy grass (*Phleum pratense*), Yorkshire fog (*Holcus lanatus*), ragwort (*Senecio jacobaea*), Hogweed (*Heracleum sphondylium*), with marjoram (*Origanum vulgare*) frequent in the longer grassland but locally dominant along with mouse-eared hawkweed (*Pilosella officinarum*) where rabbit grazing is more severe. Occasional common toadflax (*Linaria vulgaris*), common nettle (*Urtica dioica*), spear thistle (*Cirsium vulgare*), common knapweed (*Centaurea nigra*), greater knapweed (*Centaurea scabiosa*), creeping thistle (*Cirsium arvensis*), hawthorn scrub (*Crataegus monogyna*), bramble (*Rubus fruticosus*), common gromwell (*Lithospermum officinale*), black medic (*Medicago lupulina*), clematis (*Clematis vitalba*), groundsel (*Senecio vulgaris*), ash seedlings (*Fraxinus excelsior*), creeping buttercup (*Ranunculus repens*), bird's-foot trefoil (*Lotus corniculatus*), sweet violet (*Viola odorata*), ladies' bedstraw (*Galium verum*), fairy flax (*Linum catharticum*) and dogwood (*Cornus sanguinea*). Frequent wild carrot (*Daucus carota ssp. carota*), yarrow (*Achillea millefolium*), ground ivy (*Glechoma hederacea*), red bartsia (*Odontites vernus*), Germander speedwell (*Veronica chamaedrys*), hedge bedstraw (*Gallium mollugo*), eyebright (*Euphrasia nemorosa*), ribwort plantain (*Plantago lanceolata*), sheep's sorrel (*Rumex acetosella*) and field bindweed (*Convolvulus arvensis*). Rare pear (*Pyrus communis*), orchid spp. (only dried spike evident) and mugwort (*Artemisia vulgaris*), tor grass (*Brachypodium pinnatum*), box (*Buxus sempervirens*), common rest harrow (*Ononis repens*), yellow-wort (*Blackstonia perfoliata*), bladder campion (*Silene vulgaris*) and elder (*Sambucas nigra*). Scattered anthills and colonising scrub species occur throughout this area.

9.53 The south eastern corner of the site is bounded by and area of continuous scrub with occasional semi-mature ash trees.

9.54 The fields beyond the boundary fence are heavily grazed and semi improved calcareous grassland with a consequently reduced botanical interest.

Fauna

Badger

9.55 No setts were recorded during the Phase 1 survey, but indications of badger presence on the grassland surrounding the quarry void were observed, with latrines and snuffle marks recorded.

Bats

9.56 On the first evening bat survey (19th August) two survey stations were selected from which the entire cliff faces in the quarry could be observed. The first station was in the base of the void in front of the western face. A common pipistrelle was recorded 25 minutes after sunset passing over the void, no other bats were seen in or over the void from that point onwards, but three common pipistrelle passes and nine noctule passes were recorded foraging over the grassland on top of the cliffs, no bats were recorded at dawn.

9.57 The second survey station was located on top of the access track overlooking the void and the grassy bank that leads up from the access track to the north of the site. Six common pipistrelles and a single noctule were recorded over the grassland and occasionally foraging along the tree lines to the north and east of the site during the evening. No bats were recorded at dawn.

9.58 The same survey stations were adopted for the second night's survey on the 9th September. There was much less activity with a single common pipistrelle making three foraging passes over the grassy bank to the north and two distant noctule passes recorded.

Birds - Peregrine

9.59 Following concerns raised in the scoping response by West Sussex County Council regarding the presence of breeding peregrine in the quarry, the site was visited in June 2009 by an ecologist from SLR to validate the presence of this species in the application site and to determine if the site was being used for breeding, at least two chicks were observed on the nest ledge at this time. The presence of this species was also noted during all of the 2010 visits showing that this site is regularly used though breeding was not confirmed in 2010 due to the timing of the site visits.

Invertebrates

9.60 The habitats within the void are comprised of bare chalk with a scattering of sparse vegetation and were not considered to be of value to invertebrates the

Calcareous grassland surrounding the void was identified as having the potential to support a good assemblage of invertebrates.

9.61 All readily identifiable invertebrates (such as butterflies) were noted during the course of all site surveys. Habitats on site were also assessed for their potential to support notable assemblages of invertebrates. Due to the lack of vegetation and relatively recent nature of the chalk exposures within the proposed area of influence no specific surveys were undertaken to record invertebrates.

9.62 Good numbers of widespread butterfly species were recorded during the Phase 1, with common blue and meadow browns noted on the grassland surrounding the void, in addition to this a single chalk hill blue was also observed. No incidental observations of invertebrates were made within the void itself with the exception of a single velvet ground beetle observed during one of the bat surveys.

Reptiles

9.63 While no formal reptile survey was undertaken the Phase 1 survey identified the areas of grassland around the top of the void as being of high potential to support commonly occurring reptile species and targeted searches of existing refugia as well as observational survey for adder was undertaken. Slow worm (*Anguis fragilis*), adder (*Viper berus*) and common lizard (*Zootica vivipara*) were all recorded as being present. Habitats within the quarry void itself are insufficiently vegetated to support these species. The two small islands of scrub present are considered too isolated and small to support populations of reptiles.

Other Species

9.64 The habitats contained within the site and the records returned from SBRC do not suggest that the site is likely to support any notable or rare species other than those already identified as part of the study.

Predicted Trends

9.65 In the absence of any development or management, the application site would continue to develop through a natural succession of habitats to chalk grassland, then scrub and, finally, broad-leaved woodland. In the short-term, the ecological value of the application site would be unlikely to change significantly.

NATURE CONSERVATION EVALUATION

Evaluation of Designated Sites

9.66 The SSSIs within the 2km search area are of national value.

9.67 The five SNCIs within the search area are of county value.

Evaluation of Habitats

9.68 Most of the application area comprises sparsely vegetated chalk either in the base, cliffs or scree slopes present within the quarry void.

9.69 The habitats within the site are common and widespread in the local landscape. Bare chalk, the predominant habitat type within the site represents the only large chalk exposure within the immediate surrounds of the site but is widespread along the south coast, approximately 6km south of the site. It is not considered that the site covers a large enough area or with sufficient mosaic of habitats to be considered as the UK Priority BAP habitat "Open Mosaic Habitats on Previously Developed Land". Subsequently it has been assessed as being of Parish value using IEEM criteria.

9.70 The unimproved chalk grassland areas within the ownership boundary but outside of the application boundary, are considered to be of Parish value, principally because it is a small extent of a locally common and widespread habitat with a limited national distribution.

9.71 All other habitats and plant communities present on the site can be considered common and widespread both nationally and locally (Rodwell, 1992 and 2000) and are of value within the site boundary only.

9.72 No Nationally Rare or Nationally Scarce species, defined by Wigginton (1999) or Stewart, Pearman and Preston (1994) respectively and no Priority Species for Biodiversity, as defined by the UK steering group, were recorded within the survey area.

Evaluation of Protected and Notable Fauna

Badgers

9.73 No badger setts were recorded during the survey. The grassland around the quarry void did show field signs indicating that it was used by badgers for foraging, though the area of grassland is small and will represent only a small part of the local badger clan's foraging range. Consequently, the badger interest is assessed as being of value within the site's boundary.

Bats

9.74 The surveys undertaken on the site did not find any roosts within the site, with no mature trees being present and the quarry cliffs of low potential only. No bats were observed emerging from the cliffs or returning to the cliffs at dawn and foraging activity was limited to occasional foraging and commuting passes of common pipistrelle on the margins of the site.

9.75 Consequently, the bat interest is assessed as being of no more than negligible value.

Peregrine

9.76 Of particular note is the breeding peregrine pair in the quarry. The surrounding chalk downland landscape does not offer high numbers of alternative nest site for this species at a parish level, but within the county abundant opportunities are present along the chalk coastline. Whilst the peregrine population has increased in number and distribution nationally since a crash in the 1950s and is now listed as green on the list of Birds of Conservation Concern, there are an estimated 22 pairs in Sussex and, consequently, the breeding pair is assessed as being of District value.

Invertebrates

9.77 No specific invertebrate survey was undertaken and the main void that will be subject to the proposed works is mostly comprised of chalk and of little value to invertebrates. The grassland around the void however supported several common species of butterfly, such as common and chalk hill blue, and is likely to be of Parish value for invertebrates.

Reptiles

9.78 While no formal estimate of population size was made, three species of reptile were identified as being present within the margins of the site but not within the quarry void were the proposed development will take place. Adder, slow worm and common lizard are restricted to the grassland surrounding the void that is ungrazed and consequently rank in nature, the assemblage of species is assessed as being of Parish to District value.

Other Species

9.79 No other species of interest were observed during the survey was undertaken and no records of notable species specific to the site were returned during the data search.

ECOLOGICAL IMPACT ASSESSMENT

The Proposed Development

9.80 The proposed development comprises the following:

- the restoration through landfill of the former chalk pit at filching quarry, with the void filled with inert waste and the original contour of the hillside restored to species rich calcareous grassland that will be managed for nature conservation value;
- the erection of a temporary site office and welfare area;

Identification of Predicted Impacts – Construction

9.81 The following potential construction impacts have been identified and are discussed below:

- habitat loss, fragmentation and isolation through land-take;
- direct and indirect effects upon fauna through habitat loss, fragmentation and isolation, including effects upon protected and notable species;
- noise and visual disturbance;
- dust;
- indirect construction impacts on designated sites within the zone of influence; and
- impacts of the proposed landscaping scheme.

Designated Sites

9.82 Wilmington Downs SSSI lies approximately 270m west of the application site. The potential impacts on this site from the restoration through infilling of Filching Quarry relate increased airborne dust levels. Normal working practice will act to keep airborne dust levels within acceptable limits. Therefore the no significant impacts are anticipated upon the SSSI.

9.83 Folkingdon Reservoir SSSI lies approximately 400m north from the application site. At this distance, it is considered that impacts will be negligible.

9.84 None of the other SSSIs within the 2km search area of the site are considered to be impacted upon due to the intervening distances involved.

9.85 Cranedown and Middle Brow SNCI, located 180 metres to the north of the application site is considered to be too far away from the development to be impacted upon by dust generated by the restoration. Therefore, impacts of the proposed development are assessed as not significant.

9.86 Likewise, impacts upon the Boot, a small area of Ancient Woodland approximately 100m south of the site, are considered to be not significant.

Habitats

9.87 Areas of bare chalk and associated colonising pioneer species will be lost under the working footprint, though these will be replaced in the final restoration and are of less than Parish value, some small patches of scrub will also be lost but are common elsewhere within the site and their loss will be of negligible or minimal significance. Overall the impact of bare chalk loss will be not significant.

Badgers

9.88 Badgers and their setts are protected by the Protection of Badger Act 1992. As no badger setts or indications of foraging were observed inside of the application site and the cliff top grassland is remaining unaffected by the proposed development then no impacts upon badger are anticipated.

9.89 Impacts are assessed as not significant to the badger population.

Bats

9.90 Bats and their roosts are protected by the Conservation of Habitats and Species Regulations 2010.

9.91 No indication of bats utilising the cliff faces as roosts was observed during the surveys carried out, foraging activity was limited to the grassland surrounding the application site with very limited foraging taking place within the application site itself.

9.92 As no indication of the application site being used for foraging or roosting by bats the overall, impacts to bats are considered to be not significant.

Peregrine

9.93 The Wildlife and Countryside Act (1981 and as amended) protects all wild birds and their nests and eggs. Certain rare breeding birds, listed on Schedule 1 to the Act, are also protected against disturbance whilst building a nest or on or near a nest containing eggs or dependent young.

9.94 The western cliff with the ledge that has been used by the peregrine for breeding in previous years will be eventually lost as the fill of the quarry commences, it is anticipated that it will take approximately two years before the fill is at a depth that will deter the peregrine from continuing to nest on the ledge.

9.95 In the interim period, it is anticipated that activity and noise levels within the void will obviously significantly increase from its inactive state with the regular receipt of lorries delivering waste and the use of a 20 ton, 360o excavator, processing and contouring the waste. However peregrine are well known for their propensity to utilise active quarries as nesting sites as they become habituated to the associated activities. As long as works are not started during the breeding season and a standoff distance between the work and the cliff base is maintained during the breeding season, disturbance should be not significant.

9.96 Ultimately the ledge will be lost once the restoration approaches completion. The overall impact on peregrine is assessed as significant at a District level.

Invertebrates

9.97 The invertebrate interest within the study was considered to be low and the best of the habitats lie outside of the application site. Overall, impacts are assessed as being not significant.

Reptiles

9.98 No habitats with potential to support reptiles are present within the void, a small area of ruderals on the eastern boundary does offer limited potential to support low numbers of reptiles and will be subjected to habitat modification prior to works taking place combined with a destructive search of the fly

tipped garden waste present. The grassland on top of the cliffs surrounding the void supports adder, slow worm and common lizard but will remain largely unaffected by the proposed development.

9.99 Impacts to reptiles are assessed as being negligible, as no suitable habitats will be affected.

Other Species

9.100 No other species of conservation concern were recorded during the surveys or through the data search and with the restoration of the quarry to calcareous grassland, the impacts are likely to be negligible.

MITIGATION AND RESIDUAL IMPACTS

9.101 This part of the section outlines the mitigation measures that have already been incorporated into the proposed scheme, in terms of design, along with any other proposed mitigation and compensation measures. This should be read in conjunction with the following:

- Section 5 of this Environmental Statement, which contains the details of the proposed development, including such measures as control of dust and lighting; and
- Section 6, which sets out the final restoration proposals and the rationale behind them.

Designated Sites

9.102 No impacts are anticipated to Wilmington Down SSSI and Folkingdon Reservoir SSSI or any of the SNCIs in the vicinity of the application site from dust and noise generated from the restoration work, as industry standard working practices will be employed to limit dust generation will be in place. Residual impacts will be neutral.

Habitats

9.103 The final restoration of the re-profiled void will replace low value exposed chalk with calcareous grassland and scattered scrub. The residual impacts are assessed as being positive and significant at a Parish level.

Badgers

9.104 The provision of increased habitat diversity and new areas of grassland will result in a positive net benefit to badgers in the longer term. The residual impacts are assessed as being positive and significant at a Parish level.

Bats

9.105 The restoration proposals will in time provide greatly enhanced foraging areas, providing a beneficial impact in the longer term. The residual impacts are assessed as being positive and significant at a Parish level.

Birds - Breeding

9.106 As cliff nesting birds have been identified on the site, works affecting the cliffs will be carried out during the non-breeding season (September-February), and a stand off from breeding ledges will be undertaken during the breeding season. Provision of an artificial ledge will be sought for a local building or other high structure, if this does not prove to be practical then a donation will be made to local raptor conservation groups to provide other nesting opportunities in the County.

9.107 The ultimate loss of the cliffs as the void is filled is considered to have a negative impact on peregrines in the area. The residual impacts are assessed as being non-significant at a District level, but significant at a Parish level.

Invertebrates

9.108 The increase in extent of calcareous grassland provided by the restoration will increase the opportunities for invertebrate species on site over the current situation. The residual impacts are assessed as being positive and significant at a Parish level.

Reptiles

9.109 The final restoration of the quarry to grassland will create a greater area of more suitable habitat for reptiles than is currently available, which will be beneficial. The residual impacts are assessed as being positive and significant at a Parish level.

Other Species

9.110 As the restoration is completed, the extra calcareous grassland and scrub habitats available to invertebrates and flowering plants will be created. The residual impacts are assessed as being positive and significant at a Site level.

CONCLUSION

9.111 This Section of the Environmental Statement presents an ecological impact assessment, following guidelines published by IEEM, on the likely effects upon flora and fauna for the proposed restoration of Filching Quarry.

9.112 Habitat and protected species surveys have been undertaken in 2010 to determine the presence of protected or notable species or habitats within the site.

9.113 The survey area holds a relatively small range of plant and animal species and habitats. The majority of the interest for the site was for the calcareous grassland on the cliff tops that will remain unaffected by the development.

9.114 The site mostly supports commonly occurring species that are widespread locally, the bare chalk that dominated the site has not been left for sufficient time to develop good examples of the vegetative communities typically associated with such an underlying geology. The only species afforded statutory protection, identified on site is peregrine falcon which use the quarry as a breeding site, and are assessed as being of District value. All other species and habitats are of between negligible value and Parish value.

9.115 The restoration of the void will result in the loss of the void and its cliffs, and the restoration scheme for this area has been designed to provide additional areas of calcareous grassland habitats. The increase in this habitat is predicted to benefit particularly plant species, invertebrates, reptiles and foraging bats. This new habitat is expected to be of Parish importance. Impacts on peregrine will remain locally, through the loss of a nesting site, but this will be remedied in the County.

9.116 Taking into account the restoration proposals, it is therefore concluded that the overall the scheme will have insignificant beneficial impact at a Parish level.

APPENDICES