

46 Sea Lane, Middleton-On-Sea, West Sussex Ecological Appraisal



For
James Burland Architects

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9 Pitfold Avenue, Haslemere
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1.0 INTRODUCTION

The owner of 46 Sea Lane (Mr Peter Bainbridge) is seeking planning permission to construct a detached property within the grounds, retaining the existing property. The development site (SZ 973 998) currently supports a lawn, shingle drive, flat garage/office building and a side wing to the existing property within a small 0.09ha plot (see **Cover Photo**), bounded by a hedge on three sides and within a 0.175ha application site that includes the existing property. GPM Ecology was commissioned to conduct an ecological appraisal of the site on 15th November 2015.

1.1 Protected Species and Wildlife Legislation

All species of bat are protected through the Wildlife and Countryside Act (1981) as amended, Countryside Rights of Way Act (2000) and Habitat Regulations (1994). Other European Protected Species for which this legislation relates to include Risso's dolphin and great crested newts. In essence this legislation prohibits the following:

- *intentional disturbance or harm,*
- *reckless damage to a breeding site or resting place or a place used for shelter and protection*
- *intentionally obstructing a place used as shelter*

Protection to bat species generally relates to protection of roost sites as well as harm to individual bats. The badger and its sett are protected from disturbance and harm through the Protection of Badgers Act 1992. The Wildlife and Countryside Act 1981 also provides protection to species such as widespread reptiles (such as slow-worms and grass snake) protected from *harm only* and wild birds which are protected on the nest.

1.2 Planning Guidance

National Planning Policy Framework (NPPF, March 2012) provides guidance to Councils, through the Biodiversity and Geological Conservation Circular 06/2005 (ODPM ¹) to ensure protected species, statutorily (nationally protected Sites of Special Scientific Interest and internationally protected Special Protection Areas, noted for internationally important bird populations) and non-statutorily designated sites (e.g. Sites of Importance for Nature Conservation, SINC) are considered during the planning process.

1.3 Biodiversity Action Plans

The Natural Environment and Rural Communities (NERC) Act 2006, Section 41 (S41) requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. Section 41 (3) states that the Secretary of State must, '*take such steps as appear to the Secretary of State to be reasonably practicable to further the conservation of the living organisms and types of habitat included in any list published under this section, or promote the taking by others of such steps*'. This list relates to Priority Biodiversity Action Plan (BAP) Species and Habitats (BRIG ed. Ant Maddock 2008)², as listed in 2007 (revised 2008), including habitat features such as vegetated shingle and species such as Risso's dolphin.

¹ ODPM (2005) Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System, ODPM Circular 06/2005

² UK Biodiversity Action Plan: Priority Habitats Description. (BRIG ed. Ant Maddock) 2008

2.0 METHODOLOGY

Sussex Biological Records Centre was commissioned to conduct a biological desk-study report for 0.5km around the site (see **Appendix I**). The site was visited by ecologist Gareth Matthes BSc MSc CIEEM on 27th November 2015 to assess the habitats present and its potential to support protected species, with a bat visit conducted on 8th December 2015 by licensed bat-worker Sue Harris. General notes were made on habitat features present and potential for protected and Biodiversity Action Plan species. Ecological features on site were assessed according to CIEEM guidelines (2006³), which evaluates features according to their value within the geographical context (International importance; National; County; Borough; Parish or site value only), as well as other considerations such as legislation.

The immediate vicinity of the development was assessed for its potential to support other protected species such as potential for reptiles, bats, breeding-birds and evidence of badger activity on or adjacent the proposed development site.

3.0 SURVEY RESULTS, EVALUATIONS AND IMPACTS

3.1 Biodiversity Desk-Study

The closest statutorily protected site (SSSI, SPA or SAC) to the proposed development is Felpham SSSI (notified as a Geological Site with fossil records), about 2.5km west of the site, and Climping SSSI (notified for its vegetated shingle, sand dunes and inter-tidal zone) just over 4km east to the east (www.magic.gov.uk).

The agricultural land east of the site (beyond the adjacent hay meadow) is under organic entry-level / higher-level stewardship, with woodland south of the site under woodland and forestry grant schemes and www.magic.gov.uk has identified the area as supporting important BAP farmland bird species such Turtle Dove.

Middle Shingle Sites of Nature Conservation Interest (SNCI) is located directly adjacent and south of the site (see **Appendix I, Habitat Map**). The site is summarised as *‘a strip of vegetated shingle along the seafront at Middleton-on-Sea with a large population of Sea Radish Raphanus raphanistrum ssp. Maritimus, a plant that occurs in only three other sites in Sussex. The strip of vegetated shingle is backed by regularly mown grass and then housing.’* Management recommendations in the citation include:

1. Main threats to the vegetated shingle are householders’ garden waste/bonfires and any future coastal defence work.
2. Any future coastal defence work should be done sensitively towards the ecological interest.
3. Local residents should be informed of the importance of the site so that dumping and burning of garden waste on the beach does not begin.

The SBRC report has records of slow-worms, grass snake and great crested newt (a European Protected Species) in the general area, but the newt record was over 600m to the west. Off the coast Risso’s dolphin *Grampus griseus* has also been recorded directly south of the application site on 18th March 1960, possibly a stranding around Middleton Point. There have been three other historic records of this species along the Sussex coast, dating from 1875 (Sidlesham),

³ CIEEM (Chartered Institute of Ecology and Environmental Management) (2006), Guidelines for Ecological Impact Assessments in the UK - Approved version 26 June 2006

1939 (Rye) and 1946 (Selsey Bill). More recently and further out to sea 10 Risso's Dolphin (in two pods) were recorded by Marine Life on 8th August 2015, during the return journey from Dieppe to Newhaven (<http://www.marine-life.org.uk/newhaven-dieppe>). While this species is considered scarce in the English Channel (<http://www.marine-life.org.uk/cetaceans>) surveys on this and other Channel ferry crossings regularly observed Harbour Porpoise *Phocoena phocoena*. There were no records of bat roosts from the general vicinity around the site.

The SBRC report has also recorded a wide variety of notable plant, bird and moth species associated with coastal and agricultural environments, with Stiff Saltmarsh-grass *Puccinellia rupestris* being the only close record to the site, about 100m west of the site within Middle Shingle SNCI. No records of other widespread protected species (dormice or badgers) have been recorded in the search area, although hedgehogs have been recorded on the database just over 1km from the site.

First edition 1876 OS plans (www.old-maps.co.uk) show that Sea Lane was the main access to the sea, with only a handful of buildings along the Lane, including the Grade II Listed Flint Cottage, 50m north of the site (www.magic.gov.uk). The location of the application site appears as rough grassland, possibly sand-dune from 1876 to 1914, with the existing property appearing on 1933 OS Plan (www.old-maps.co.uk). Two historic ponds are located on maps since 1876, 400m west of the application site within a private garden at SZ 969 999 and about 420m to the north, adjacent the former Middleton Farm. A further pond was also present, over 500m from the site, on early Edition maps adjacent to St. Nicholas Church. By 1898 Middleton Farm had been renamed Middleton Manor. In 1912 a small holding appears just north of Middleton Manor called Middleton Field, with a further new pond feature marked on the 1:2,500 plan. Neither of these two distant ponds appear to be present by 1980s. Middleton village appears to have been developed extensively by 1933, thus construction commenced around the 1920s, with further development of the village evident on 1940s and 1980s OS Plans.

3.2 Habitat Evaluation and Impact

The application site covers an area of about 0.175ha, supporting a detached dwelling, garage/office building with associated shingle vehicle access (see **Photos 1 to 3**), maintained lawn around property (see **Photo 4**), mature garden hedges; borders, bedding plants and rockery (see **Figure 1**). The new build would remove a small side-wing of the property and the garage/office, with associated landscaping removing some existing garden boundary vegetation. Habitats present are described in more detail below, those within the site boundary are generally considered ecological features of site value only, with exception of the semi-improved lawn area considered of Parish-value while Middleton Shingle SNCI is considered an ecological features of Borough/County value. However, the area of SNCI adjacent this site is degraded, well trampled and supported little shingle vegetation (see **Photo 5**).

3.2.1 Maintained lawn

Areas of maintained lawn, south of the property had been influenced by the sea, with salt-spray having allowed species such as buck's-horn plantain *Plantago coronopus* abundant and thrift *Armeria maritima* was rare in occurrence. Clovers *Trifolium* spp., bryophytes and fescue-grass *Festuca* spp. were all abundant, with perennial rye-grass *Lolium perenne* and daisy *Bellis perennis* frequent. Within the sward several fungal-fruited were observed including *Galerina*, *Hygrocybe* and *Geoglossum* spp. (see **Photo 6**).

Due to the influences of coastal spray and abundance of forbs this lawn area was currently considered amenity / species-poor semi-improved grassland, as opposed to strict amenity lawn and an ecological feature of Parish-value. A more detailed botanical survey during a suitable time of year (spring-summer) will provide a greater range of species, some of which could be of local distribution. This lawn is a part of the coastal landscape, located to the rear of Middleton Shingle SNCI, where sand-dunes are likely to have previously occurred prior to the development of the village (recorded as rough grassland on 1st Edition OS Maps). The lawn is grazed by rabbits *Oryctolagus cuniculus* (although no warrens were observed within the grounds) and crows *Corvus corone* were observed feeding on invertebrates within the lawn. In total the development of the new property will remove about 50m² of this lawn, while a further area will be temporarily damaged during construction. However, it is considered that the lawn can be easily re-created with coastal spray likely to influence the lawn community over-time, so in the absence of mitigation impact upon the lawn is likely to be low to medium.

Lawns to the rear (north of the property) were sheltered by the property at 46 Sea Lane and had a plant community typical of amenity lawns, with grasses (rye-grass, fescue and meadow-grasses *Poa* spp.) dominant, with forbs frequent in occurrence, including self-heal *Prunella vulgaris*, thyme-leaved speedwell *Veronica serpyllifolia* and yarrow *Achillea millefolium*, with buck's-horn plantain rare. About 100m² of this rear lawn will be lost to drive-way. However, this habitat is consider of site-value only.

3.2.2 Property

The house is believed to have been constructed around 1920-30s, while the garage/office is much more recent in origin. Missing tiles on the pitched roofs of these two properties (see **Photos 2** and **3**) provide potential access points for bats to roost within the roof. A more detailed building assessment for bats was conducted by licenced bat-worker, Sue Harris (see S. Harris December 2015⁴ for detailed information). The existing drive and buildings impacted by development represent ecological features of site value only.

3.2.3 Boundary Features: Hedgerow and Borders

A remnant native hawthorn *Crataegus monogyna* hedge-line was located at the site entrance, and at about 10m long does not represent a priority BAP hedge. Adjacent this hedge-line and along most of the eastern site boundary was a close-board fence with dense ivy *Hedera helix* growing over it. This dense ivy, especially adjacent the garden-borders supporting pampas-grass *Cortaderia selloana* provided potential bird nesting habitat. A tamarisk *Tamarix gallica* hedge grew on the eastern and southern boundaries, while a young walnut *Fagus sylvatica* grew to the rear of the property, adjacent a non-native evergreen-broadleaf hedge.

3.3 Protected Species Evaluation and Impacts

3.3.1 Bats

Bats and their roosts are protected from disturbance and harm, though the Habitat Regulations 1994 and Wildlife and Countryside Act 1981. On account that missing tiles were observed on the side-wing and garage/office, a building assessment was conducted by licensed bat-worker Sue Harris on 8th December 2015. It is considered that on the basis of no evidence of roosting

⁴ Harris S. 2015 Building Assessment for Bats on 8th Dec 2015, 46 Sea Lane, Middleton-On-Sea, West Sussex.

bats observed following inspection of easily accessible potential roost access points, the exposed, windy location of the property and lack of existing records no further investigations related to bats are required. However, it is recommended as good practise roof tiles must be removed with care and if bat droppings or a bat is seen work should cease immediately and advice sought. Refer to the Bat Report by S. Harris (December 2015⁴) for detailed information.

3.3.2 Great Crested Newts (GCN) and reptiles

The historic ponds in the vicinity of the site appear to support a GCN population. However, they are distant from the application site and the site provides very limited habitat of rest and shelter for GCN, therefore this species will not be impacted by development. In addition to GCN, slow-worms and grass snake were also recorded by SxBRC report. Grass snake are generally associated with water features and due to the limited habitat present on site and distance from nearby ponds, this species will not be impacted by the development. Slow-worms are likely to utilise gardens in the area, but the site provides limited habitat for this species and if present likely to be restricted to hedgerows around the site boundary. Therefore the development is unlikely to impact this species.

3.3.3 Marine cetaceans, such as Risso's Dolphin

While it appears that Risso's Dolphin is a rare visitor to Sussex shores (only three sightings recorded by SxBRC and considered scarce by Marine Life), it is well documented that plastic marine debris poses a serious threat to marine habitats and wildlife, with a wide range of species being directly impacted. The following abstract provides an account of the impact of this debris upon cetaceans (Perry and Baulch 2014⁵) *'This literature review finds that ingestion of debris has been documented in 48 (56% of) cetacean species, with rates of ingestion as high as 31% in some populations. Debris-induced mortality rates of 0–22% of stranded animals were documented, suggesting that debris could be a significant conservation threat to some populations. However, knowledge of the severity of effects lags behind that for other species groups.'* Studies of bird populations have been well-documented, including some around UK water, for example 80% of Northern Fulmars *Fulmaris gracialis* have been found to hold plastics in their digestive systems (BirdLife 2008⁶). The impact of plastic marine debris is often diffuse at source, but in combination of many sources is becoming a more urgent conservation threat to a number of species and therefore consider a high impact upon pelagic species such as Risso's Dolphin.

3.3.4 Breeding birds

Little bird activity was observed on site, with only wren *Troglodytes troglodytes* and carrion crow *Corvus corone* recorded. While the crows were feeding on the lawns, a wren was calling from the dense ivy-pampas grass boundary, which provides potential nesting habitat for this species. Wren generally lay their first brood between April and June, with a possible second brood later in the year. While the impact upon this species is likely to be low, all wild birds are protected from harm and disturbance at the nest under the Wildlife and Countryside Act 1981 and where dense ivy and hedge-borders along the site boundary will be impacted by development then mitigation maybe required to ensure wildlife law is not breached.

⁵ Sarah Baulch, Clare Perry (2014), *Marine Pollution Bulletin*, Volume 80, Issues 1–2, 15 March 2014, Pages 210-221 (Abstract reviewed at <http://www.sciencedirect.com/science/article/pii/S0025326X13007984>)

⁶ BirdLife Int. (2008) Seabirds suffer from eating "junk". Presented as part of the BirdLife State of the world's birds website. Available from: <http://www.birdlife.org/datazone/sowb/casestudy/159>. Checked: 12/02/2015

4.0 CONCLUSIONS AND RECOMMENDATIONS

The application site will not directly impact any features of ecological importance, although there is Middleton Shingle SNCI is directly adjacent the application site. The only species likely to be directly impacted are breeding birds and the front lawns support a sward heavily influenced by the coastal location. The following mitigation will be considered (see **Figure 2**):

4.1 Waste Management Strategy

Predators that live at sea, such as sea birds and mammals (e.g. Risso's dolphin and harbour porpoise) are susceptible to ingesting plastic waste and plastic can pass up the food chain (BirdLife 2008⁵). For this reason the site will be monitored on a daily basis to ensure it is kept as a Grade A level of cleanliness i.e. no litter or refuse will be allowed to be left on site, in the event that it could be wind-blown and enter the marine environment. This level of cleanliness is as defined in the original Code of Practice on Litter and Refuse issued under section 89(7) of the Environmental Protection Act 1990. Wind-blown or dropped rubbish can be mitigated by ensuring good site management including site briefs to contractors and daily monitoring, with the following provisions made prior to site set-up:

- a) A tool box talk to all contractors highlighting the impact plastic waste has on such environments; and the requirement for all contractors to be responsible for their own personal waste as well as site waste.
- b) No tolerance policy to littering on or off site.
- c) Three daily litter monitoring inspections will take place after breakfast and lunch breaks and at the end of the working day, with each inspection signed and dated on a daily log. Additional monitoring inspections may also be required after major deliveries to the site.
- d) Bins, containers and skips storing or taking waste from the site should have sealed covers to ensure light plastics are not blown seaward and should be emptied on a regular basis.

4.2 Landscaping and impacts upon Middleton Shingle SNCI

Due to the location of the application site to the coast-line and SNIC the landscape scheme will not include plant species such as Hottentot fig *Carpobrotus edulis*, listed in **Appendix II** (list of Schedule 9 plant species, WCA 1981, as amended 2010). In addition it is recommended that the lawns to the rear (south of the property) are laid with a fine-leaved lawn turf or allow grasses and lawn species to naturally seed, thereby allowing local species to colonise that maybe better adapted to the harsh coastal environment and providing a natural feature to compliment the adjacent SNCI.

4.3 Protected Species

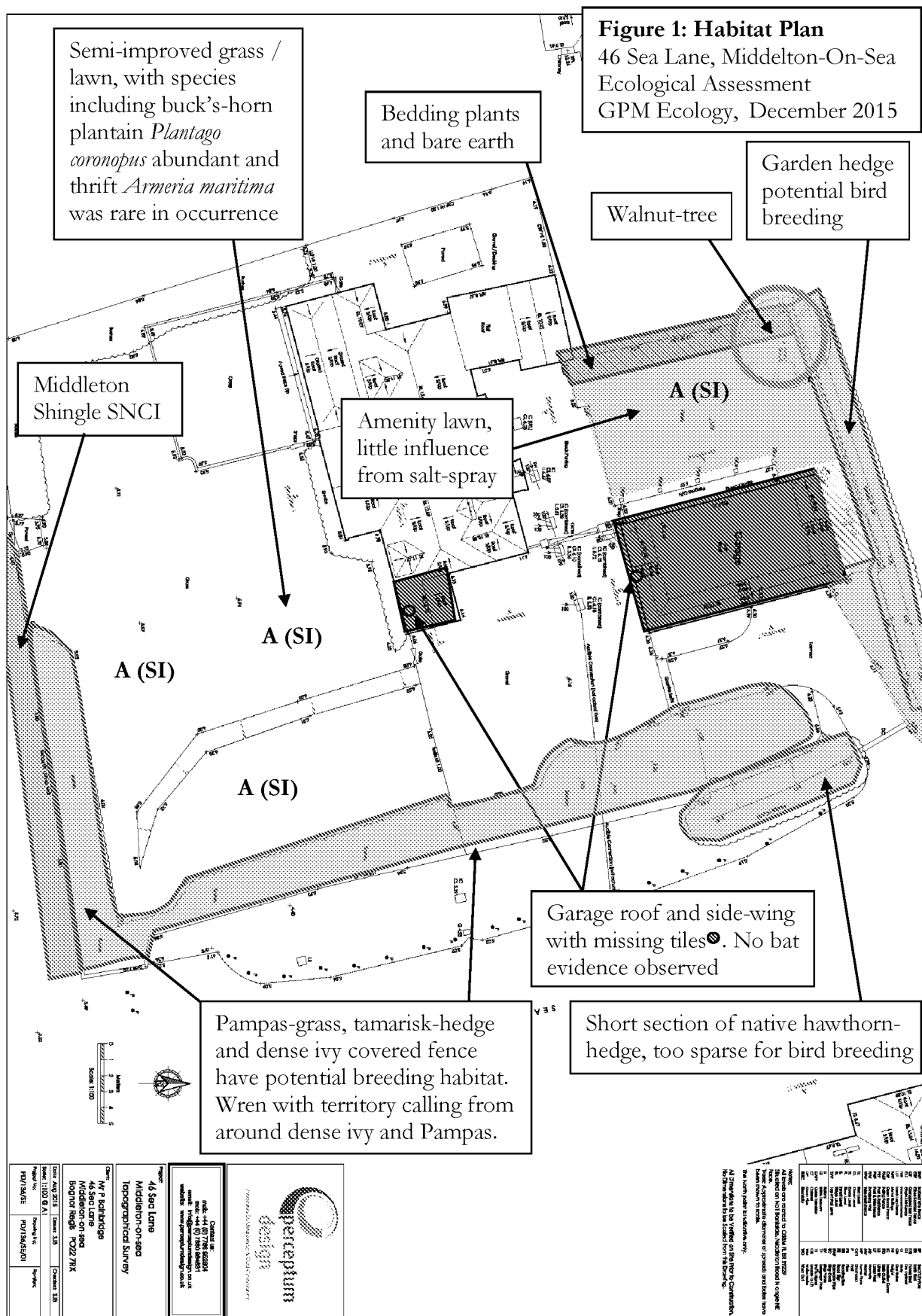
The dense ivy covered fence-line and adjacent pampus-grass had potential to support breeding birds such as wren. It is recommended that these features are removed from the site outside bird breeding period (i.e. between October and February). If however vegetation clearance is scheduled to take place during breeding period a breeding bird survey will be required to determine if any birds are breeding on site and if an active nest is located then the vegetation cannot be removed until the young have fully fledged and the nest becomes inactive.

Bat were not recorded on site (S. Harris, December 2015⁵) however, it is recommended as good practise that roof tiles are removed with care and if bat droppings or a bat is seen work should cease immediately and advice sought.

5.0 SUMMARY OF RECOMMENDATIONS

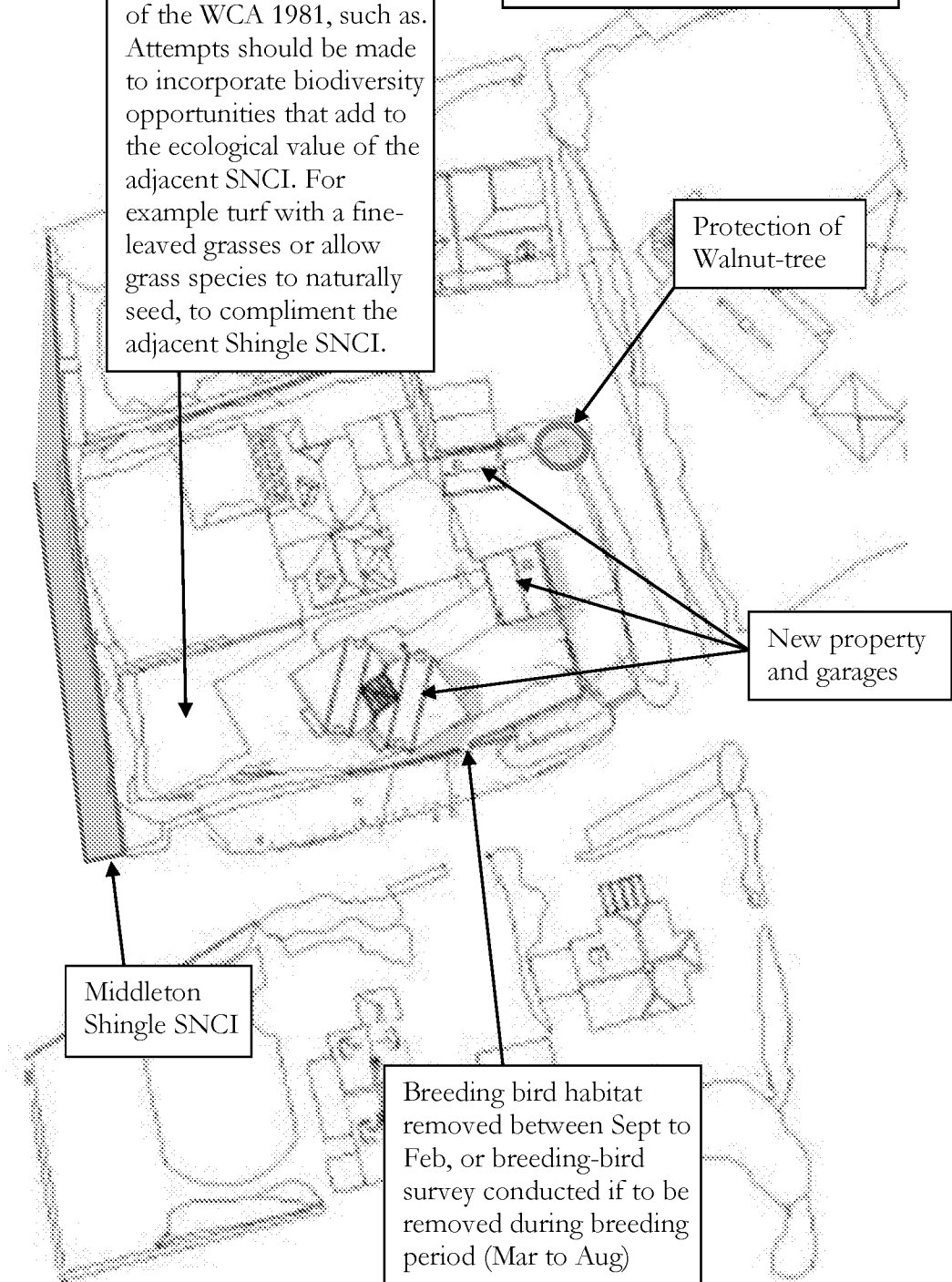
Table 1: Summary of features, impacts, further surveys required and appropriate mitigation.

Feature	Value	Impact	Mitigation / Enhancement	Further Surveys
Middleton Shingle SNIC	Borough / County	Low to Medium	Ensure site kept clear of litter (see below). No non-native Schedule 9 listed species to be planted	Daily monitoring of litter by site foreman
Coastal lawn	Site to Parish	Low to High	If damaged during landscaping, relayed lawn turfs will develop coastal influenced flora	No further surveys required
Pelagic predators, such as Risso's dolphin	Not known	Low to Medium	Highest levels of cleanliness (Grade A) to be maintained, site monitored, use covered skips	Daily monitoring (by site foreman) and removal of litter
Breeding Birds	Site only	Low	Remove vegetation during autumn / winter period. Install sparrow / tit boxes on buildings nest to hedges	Breeding bird survey. if the boundary vegetation is removed Mar-Sept period



The landscape scheme must not include invasive non-native plant species as schedule under Schedule 9 of the WCA 1981, such as. Attempts should be made to incorporate biodiversity opportunities that add to the ecological value of the adjacent SNCI. For example turf with a fine-leaved grasses or allow grass species to naturally seed, to compliment the adjacent Shingle SNCI.

Figure 2: Mitigation Plan
46 Sea Lane, Middleton-On-Sea
Ecological Assessment
GPM Ecology, December 2015



Photographs: 46 Sea Lane, Middleton-On-Sea (2015)



Photo 1: Access onto plot, hawthorn hedge on verge and buildings to be removed



Photo 2: Missing tiles on office roof, potential access points for bats



Photo 3: Lawn and side-wing of property to be demolished



Photo 4: Area of coastal lawn mostly retained, with hedge / bedding plants on boundary



Photo 5: Tamarisk-hedge to rear of property adjacent Middleton Shingle SNCI



Photo 6: Fungi growing within the lawn included *Geoglossum* spp.

APPENDIX I: DESK-STUDY INFORMATION

Biodiversity Desk-study (SBRC December 2015)

Appendix II – Species currently listed on the Wildlife and Countryside Act 1981 (Schedule 9, England and Wales, amended 6th April 2010)

Alexanders, Perfoliate	<i>Smyrniolum perfoliatum</i>	Knotweed, Giant	<i>Fallopia sachalinensis</i>
Algae, Red	<i>Grateloupia lucurians</i>	Knotweed, Hybrid	<i>Fallopia japonica</i> × <i>Fallopia sachalinensis</i>
Archangel, Variegated Yellow	<i>Lamiastrum galeobdolon</i> subsp. <i>argentatum</i>	Knotweed, Japanese	<i>Fallopia japonica</i>
Azalea, Yellow	<i>Rhododendron luteum</i>	Leek, Few-flowered	<i>Allium paradoxum</i>
Balsam, Himalayan	<i>Impatiens glandulifera</i>	Lettuce, Water	<i>Pistia stratiotes</i>
Cotoneaster	<i>Cotoneaster horizontalis</i>	Parrot's-feather	<i>Myriophyllum aquaticum</i>
Cotoneaster, Entire-leaved	<i>Cotoneaster integrifolius</i>	Pennywort, Floating	<i>Hydrocotyle ranunculoides</i>
Cotoneaster, Himalayan	<i>Cotoneaster simonsii</i>	Potato, Duck	<i>Sagittaria latifolia</i>
Cotoneaster, Hollyberry	<i>Cotoneaster bullatus</i>	Primrose, Floating Water	<i>Ludwigia peploides</i>
Cotoneaster, Small-leaved	<i>Cotoneaster microphyllus</i>	Primrose, Water	<i>Ludwigia grandiflora</i>
Creeping, False Virginia	<i>Parthenocissus inserta</i>	Primrose, Water	<i>Ludwigia uruguayensis</i>
Creeping, Virginia	<i>Parthenocissus quinquefolia</i>	Rhododendron	<i>Rhododendron ponticum</i>
Dewplant, Purple	<i>Disphyma crassifolium</i>	Rhododendron	<i>Rhododendron ponticum</i> × <i>Rhododendron maximum</i>
Fanwort (otherwise known as Carolina Water-shield).	<i>Cabomba caroliniana</i>	Rhubarb, Giant	<i>Gunnera tinctoria</i>
Fern, Water	<i>Azolla filiculoides</i>	Rose, Japanese	<i>Rosa rugosa</i>
Fig, Hottentot	<i>Carpobrotus edulis</i>	Salvinia, Giant	<i>Salvinia molesta</i>
Garlic, Three-cornered	<i>Allium triquetrum</i>	Seafingers, Green	<i>Codium fragile</i>
Hogweed, Giant	<i>Heracleum mantegazzianum</i>	Seaweed, Californian Red	<i>Pikea californica</i>
Hyacinth, Water	<i>Eichhornia crassipes</i>	Seaweed, Hooked Asparagus	<i>Asparagopsis armata</i>
Kelp, Giant	<i>Macrocystis pyrifera</i>	Seaweed, Japanese	<i>Sargassum muticum</i>
Kelp, Gaint	<i>Macrocystis angustifolia</i>	Seaweeds, Laver (except native species)	<i>Porphyra</i> spp except: <i>p.amethystea</i> , <i>p.leucosticta</i> , <i>p.linearis</i> , <i>p.miniata</i> , <i>p.purpurea</i> , <i>p. umbilicalis</i>
Kelp, Gaint	<i>Macrocystis integrifolia</i>	Stonecrop, Australian swamp (otherwise known as New Zealand Pygmyweed).	<i>Crassula helmsii</i>
Kelp Giant	<i>Macrocystis laevis</i>	Wakame	<i>Undaria pinnatifida</i>
Kelp, Japanese	<i>Laminaria japonica</i>		

