EASTBOURNE BOROUGH, EAST SUSSEX

2007 EASTBOURNE BIODIVERSITY ASSESSMENT

VOLUME 1 of 2

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Eastbourne Borough Council

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EXECUTIVE SUMMARY

Local Development Frameworks require the support of a strong evidence base to ensure they can be endorsed by the sustainability appraisal. This Report therefore establishes a comprehensive database on biodiversity and geological interests within the Borough, to enable the impact of development to be assessed.

This Report provides an audit of the biodiversity and geological interests within the Borough, as existing nature conservation assets such as designated sites, as well as the framework of landward, coastal and marine habitats and species that occur.

The Borough is examined in relation to Natural Areas, underlying geology, natural systems and land management, and the biodiversity resource is discussed in terms of constituent habitat types and species. Sussex Biodiversity Action Plan (BAP) habitats and species are reviewed, and additional flagship species are identified.

The Report critically examines development control within the Borough strictly in relation to the biodiversity resource, based on the Eastbourne Borough Plan 2001 to 2011, and identifies where Policies should be reviewed.

Recommendations are made on creating a Green Network from a biodiversity perspective, and habitat creation, enhancement and restoration considerations are provided.

The current nature conservation designations within the Borough are reviewed, and recommendations for upgrading and downgrading existing sites are made. In addition, a further 13 sites covering 528ha are proposed for nature conservation designation. This would include creating the first Local Nature Reserves within the Borough.

Guidelines for development are presented to ensure that development control adopt current standards in terms of surveyor qualifications, and survey and assessment methodologies.

1. INTRODUCTION

1.1 Eastbourne Borough Council has commissioned The Ash Partnership (UK) Ltd. to undertake a Borough-wide assessment of biodiversity bringing together ecological and geological information to provide a comprehensive overview of the natural environment. The output is provided as both a written report and a digitised database within a GGP compatible Geographical Information System.

1.2 The aim is to provide a database that can be drawn upon for use by the Borough Council, and eventually the public (via the web). The Report establishes the evidence base required under *Planning Policy Statement 9 (PPS9): Biodiversity and Geological Conservation* in order that the Borough Council can take an integrated approach to planning for biodiversity and geodiversity within the Local Development Framework (LDF)

1.3 Under the provisions of PPS9, LDF's are required to:

- Indicate the location of designated sites of importance for biodiversity and geodiversity, making clear distinctions between the hierarchy of international, national, regional and locally designated sites; and

- Identify any areas or sites for the restoration or creation of new priority habitats which contribute to regional targets, and support this restoration or creation through appropriate policies.

1.4 This Report draws upon data sources for habitats and species, in particular from the results of previous Borough-wide biodiversity audits in 1992 and 2000, and a more recent focussed survey of Eastbourne Park in 2005.

1.5 The Report also examines development control within the Borough by reviewing the current Local Plan allocations, providing guidelines for the ecological assessment of development proposals and makes recommendations that can ultimately be incorporated into a development control checklist.

2. DATA PREPARATION

Consultees

2.1 A list of the consultees that have been approached in the proparation of this Report is provided in Appendix 1.

Background Material

2.2 There is a considerable amount of local reference material available amongst which the following have been interrogated for this Report:

- *Eastbourne Downland Management Plan (Draft)* – Eastbourne Borough Council (2007).
- *Eastbourne and Wealden Draft Strategic Flood Risk Assessment* – Scott Wilson (2007).
- *Local Development Framework, Core Strategy Preferred Options Report* – Eastbourne Borough Council (2006).
- *Eastbourne Open Space Assessment 2006* – Eastbourne Borough Council (2006).
- *Eastbourne Park Biodiversity Audit Report* – The Ash Partnership (UK) Ltd. (2005).
- *Cuckmere and Sussex Havens Catchments Flood Management Plan* – Environment Agency (2005).
- *Eastbourne Biodiversity Survey* – Masters & Davey (September 2000).
- *Sovereign Park Conservation Area 1998* – Parks & Gardens, Eastbourne Borough Council (1998).
- Nature Conservation Survey of Eastbourne. Volumes 1 and 2. Chris Blandford Associates (1990).

Search Area

2.3 The search area was defined as a 2km radius from the Borough boundary, from which all relevant biological and geological information was sourced. In addition a 5km radius was set for more wide-ranging species – namely bats (Chiroptera) and Badger Meles meles. These search areas are shown on Figure **2.1**.

Data Sources

2.4 The primary data source was the Sussex Biodiversity Records Centre or SBRC (www.sxbrc.gov.org), where the following databases were sourced:

- Sussex Rare Species Inventory.
- Sussex Protected Species Register.
- Sussex Environmental Survey Directory.
- Natural England's Ancient Woodland Inventory.
- Bat Records.
- Digital files for 'Eastbourne Borough Administrative Boundary', 'Eastbourne Borough Plus 2km & 5km Search Boundary', 'Eastbourne Sites of Nature Conservation Importance', 'Eastbourne Notable Verges', 'Eastbourne Marine Sites of Nature Conservation Importance'.

2.5 Further data sources that were approached to acquire nature conservation designations, habitat distribution information and species records include the following:

1. Eastbourne Borough Council – The following files were made available under copyright from the EBC:

   - Ordnance Survey Base Map of Eastbourne Borough.
   - Aerial photographs from 1947 flight.
   - Aerial photographs from 2006 flight.
   - Borough Plan designations – NE1, NE9, NE10, NE20, D1 (AONB), UHT8, UHT15, UHT16, UHT20, HO4, BI 2, BI 3, BI 4, BI 5, TR4, TR17, TR18, TO7, LCF1, LCF2, LCF5, LCF7, LCF12, LCF13, LCF14, LCF15 and LCF18.
   - Open Spaces.
   - Street Trees.

2. Natural England (www.naturalengland.org.uk) - Approached for the digital boundaries of:

   - Ancient Woodland.
   - Natural Areas.
   - Sites of Special Scientific Interest.

3. Multi-Agency for Geographic Information on the Countryside (www.majic.gov.uk) - Supply of information on digital boundaries under Licence for:

   - Agricultural Land Classification dataset.

4. South Downs Joint Committee (www.southdowns.gov.uk) - Supplied digital datasets by direct download for the following files:

   - Sussex Ponds dataset (2002).
   - Sussex Dewponds dataset (2006).
   - Sussex Hedgerows dataset (2001).
   - Chalk Grassland dataset (1999).

- National Park Boundary (proposed 2005) dataset.

5. The Booth Museum of Natural History – Supply of marine species records.

Consolidation of Data

2.6 All previous records for rare and protected species were collected for Eastbourne including a 2km radius area surrounding the Borough boundary. Records for Badger and bats were extended to a 5km radius from the Borough boundary. Data for marine species recorded within a 5km distance from the sub-littoral zone were also collected.

2.7 Various consultees were contacted to supply additional data where information is not held by the SBRC and to ensure that there were no recent records that could be missed. This consultation is discussed below:

1. The Sussex Ornithological Society was contacted for records of rare birds that were not supplied to the Sussex Biodiversity Records Centre, but release of this data was not approved by the SOS Council.

2. The South Downs Badger Protection Group was contacted for records of badger setts in the study site. To date, no information has been received.

3. The County Recorder for Lepidoptera (Colin Pratt) was approached for records of rare species of butterflies and moths in the study area. However, the data released has no information on site location or dates, and was therefore of limited use. It has been reproduced in Appendix 2 for completeness.

4. The County Botanical Recorder, Alan Knapp, has supplied data on rare plants found in Eastbourne Borough.

5. Trevor Weeks of the East Sussex Wildlife Rescue and Ambulance Service has been asked to provide road traffic accident records involving Badger within Eastbourne Borough. To date, no information has been received.

2.8 Grid references and dates were acquired for each observation wherever possible. However due to the sensitivity of some protected species records (e.g. birds and Lepidoptera), the bird data has merely been supplied as "present in study area", or, where less sensitive, data was supplied to the nearest 100km^2 Ordnance Survey Grid Reference.

Geographic Information System (GIS)

2.9 The mapping system used for this project is Map Info Version 7.8. The GIS data has been arranged in a database linked to an Ordnance Survey series base map of Eastbourne. All cartographical work was prepared by DavCad UK (Ltd).

2.10 Aerial photographs from a 2005 survey of the Borough were arranged electronically and were aligned to the boundary of the Borough base map. The 1947 aerial photograph set involves complex overlays of the flight path and could not be successfully aligned, and therefore these older photographs have not formed part of the completed GIS database.

2.11 All digital datasets have been added to the database, and have been aligned to the Eastbourne Ordnance Survey base map. Where inaccuracies were found with data received under Licence, appropriate corrections have been made.

Pilot Study

2.12 Due to the complex nature of GIS data, it was decided to commission a test file in June 2007 to test the digital file transfer capability and identify any errors prior to completion of the main database. An arbitrary site was chosen and fictional data was electronically linked to the site. This allowed initial problems with symbols and the GIS earth projection to be resolved. Once the format was agreed, the database was constructed accordingly.

Habitat Categories

2.13 The Audit did not involve a comprehensive botanical survey, but instead relied on the results of the previous biodiversity surveys in 1990 and 2000, coupled with the detailed botanical survey of Eastbourne Park in 2005. All of these surveys only involved botanical field surveys by competent botanists (Tim Rich, Philip Masters, Simon Davey and Ashley Leftwich) and therefore the data should be considered reliable. It is not known whether quality assurance testing was undertaken on the 1990 and 2000 surveys, but this was undertaken for the 2005 survey.

2.14 For the remaining areas of the Borough not covered by these former surveys, the Audit relied on the interpretation of aerial photographs, coupled with fieldwork to verify approximately 30% of the habitats and/or features such as ponds.

2.15 Inevitably, given the limitations of photographic quality there was a need to seek habitat categories that befitted this type of habitat mapping exercise, in order to address the following scenarios:

- A single generic habitat type to address complex linear features such as watercourses - where multiple Phase I habitats are actually present such as scrub and grassland on the banks, reedbed and swamp along the marginal/emergent edge and open water.

- A single generic habitat to address habitat mixes such as grassland invaded by tall herbs and/or Bramble.

- A single generic habitat to address habitats that are indistinguishable unless examined in the field, such as native scrub,

mature scrub and woodland. Unfortunately, this has meant that ornamental scrub will also have entered into this category.

- A single generic habitat that best fits the features, e.g. should an amenity grassland overlain by mature trees be categorised as woodland or amenity grassland ?

2.16 To resolve this, Sussex BAP habitat categories were used to define generic habitat types. These habitat categories represent a range of habitats undergoing varying successional changes, where directed management could derive the BAP habitat. These are listed in para. 2.19.

Fieldwork

2.17 The main approach has been to interpret the aerial photographs. Approximately 30% of the habitats were then field verified to confirm the habitat identification. In addition, all confused or in-discernable habitat areas were also examined.

2.18 A3 printouts of the aerial photographs at approximately 1:4000 scale were used for the analysis, according to the grid pattern set out on Figure **2.2**.

2.19 Each aerial photograph was studied for the following 11 habitat categories:

- Woodlands, Scrub (Native & Ornamental), Mature Tree Lines & Hedgerows;
- Neutral Grassland, including Pasture, Rank Grassland & Tall Herb Communities;
- Chalk Grassland;
- Arable/Grass Leys;
- Amenity Grassland;
- Allotments;
- Reedbed;
- Open Water (Freshwater);
- Open Water (Saline);
- Vegetated & Bare Shingle; and
- Coastal Cliff.

3. NATURAL AREAS

3.1 The Borough of Eastbourne is embraced by three Natural Areas as designated by Natural England - the majestic chalk escarpment of the Downs to the west, the open sea of the English Channel to the south and the flat undulating plain upon which most of the Town is built. These form Natural Areas, shown on Figure **3.1**, which are discussed below (under their Natural England name and number):

South Downs Natural Area (No. 74)

3.2 This is regarded as being a Natural Area that forms one of the strongholds of the national chalk grassland resource, and is associated with high concentrations of biodiversity interest. Key nature conservation features of relevance to the Borough are as follows:

Features of National Significance:

- ***Lowland Calcareous Grassland*** – There are extensive preserves within the Eastern Downs, and the resource penetrates into the western edge of the built area where residential development has encroached onto the underlying chalk.

- ***Earth Heritage*** – The maritime cliffs provide an outstanding example of geological, geomorphological and palaeontological interests.

3.3 In addition, there are ***Lowland Beech & Yew Woodland*** and ***Lowland Heathland*** habitats of National Significance within this Natural Area. These habitats do not appear to occur within the Borough and they are therefore omitted from further discussion.

3.4 Key nature conservation features of Local Significance within this Natural Area of relevance to the Borough are as follows:

Features of Local Significance:

- ***Lowland Mixed Deciduous Woodland*** - This habitat cloaks the eastern end of the Downs with additional pockets occurring in the north-eastern sector of the Borough, such as Hampden Park.

3.5 In addition, there are ***Lowland Wood Pasture & Parkland***, ***Rivers & Streams*** and ***Coastal & Floodplain Grazing Marsh*** habitats of Local Significance within this Natural Area. These habitats do not appear to occur within the Borough[1] and they are therefore omitted from further discussion.

3.6 The list of nature conservation sites in which these interests receive protection on a statutory or non-statutory basis within the Borough is as follows:

[1] The extensive areas of ***Coastal & Floodplain Grazing Marsh*** within Eastbourne Park lie within the Low Weald & Pevensey Natural Area.

Lowland Calcareous Grassland:

- *Willingdon Down* SSSI – **60.2** ha
- *Seaford to Beachy Head* SSSI – c. **195.2** ha of this resource (extends over 1020ha).
- *Hollywell & Crows Nest Steps* SNCI [E77] – **0.8** ha
- *Cliffs Below The Helen Gardens* SNCI [E78] – **0.6** ha
- *Ocklynge Cemetery* SNCI [E86] – **8.0** ha
- *Eastbourne College War Memorial Field* SNCI [E89] – **0.2** ha
- *Upper Duke's Drive* SNCI – **0.8** ha
- *Willingdon Roundabout* SNCI [E98] – **0.7** ha[2]

Earth Heritage:

- *Seaford to Beachy Head* SSSI – Part of a more extensive resource.

Lowland Mixed Deciduous Woodland:

- *Ocklynge Pit* SNCI [E101] – **1.2** ha [Note: The current status of this SNCI is unknown as the aerial photography suggests that there has been infilling].

Low Weald & Pevensey Natural Area (No. 73)

3.7 This is an exceptional Natural Area containing uncommon habitats and very high concentrations of biodiversity interest. Key nature conservation features of relevance to the Borough are as follows:

Features of National Significance:

- ***Coastal & Floodplain Grazing Marsh*** – This habitat forms part of the natural landscape within Eastbourne Park, at the heart of the Town, and on Langey Levels to the north-east of the Borough.

- ***Lowland Mixed Deciduous Woodland*** – This habitat cloaks the eastern end of the Downs with additional pockets occurring in the north-eastern sector of the Borough, such as Hampden Park.

- ***Rivers & Streams*** – Stream habitats are widespread within the central and eastern areas of the Borough, although most have been modified to form the sewers and drains of the Town drainage network.

3.8 In addition, there are ***Lowland Beech & Yew Woodland***, ***Lowland Wood Pasture & Parkland*** and ***Earth Heritage*** habitats/features of National Significance within this Natural Area. These habitats/features do not appear to occur within the Borough and they are therefore omitted from further discussion.

3.9 Key nature conservation features of Local Significance within this Natural Area of relevance to the Borough are as follows:

[2] Technically outside the South Downs Natural Area boundary, but clearly the boundary must be in error.

Features of Local Significance:

- ***Lowland Meadows*** - This habitat forms an extensive part of Eastbourne Park, at the centre of the Borough.

- ***Standing Open Water & Canals*** – There are a number of balancing lakes, flooded quarry pools and ponds within the Borough.

3.10 In addition, there is ***Wet Woodland*** and **Ancient &/or Species-rich Hedgerows** habitats of Local Significance within this Natural Area. These habitats/features do not appear to occur within the Borough and they are therefore omitted from further discussion.

3.11 The list of nature conservation sites in which these interests receive protection on a statutory or non-statutory basis within the Borough is as follows:

Coastal & Floodplain Grazing Marsh:
- Part of *Langney Levels* SNCI [E1] – **14.6** ha
- *Leeds Avenue Reed Bed* SNCI [E116] – **1.0** ha

Lowland Mixed Deciduous Woodland:
- *The Coppice* SNCI [E96] – **2.2** ha
- Hampden Park & Ham Shaw SNCI [E117] – **17.3** ha

Rivers & Streams:
- Part of *Langney Levels* SNCI [E1] – **<1** ha
- *Langney Sewer* SNCI [E4] – **1.7** ha
- *Crumbles Sewer* SNCI [E18] – **2.2** ha
- *Horsey Sewer* SNCI [E29] – **4.7** ha

Lowland Meadows:
- *Langney Crematorium* SNCI [E14] – **9.7** ha

Standing Open Water & Canals:
- *Langney Centre Pond* [E21] – **0.4** ha

Folkestone to Selsey Bill Natural Area (No. 108)

3.12 This Natural Area includes the maritime cliffs, vegetated shingle along the landward edge of the South Coast, and extends out to sea for 12 miles to include the sea and seabed of this part of the English Channel. The importance of this piece of coastline has long been recognised. It has been protected as a Site of Special Scientific Interest (SSSI) for its wildlife and geology since 1953, as an Area of Outstanding Natural Beauty (AONB) since 1966, and as the UK's first Heritage Coast since 1973.

3.13 Key nature conservation features of relevance to the Borough are as follows:

Features of National Significance:

- ***Coastal Vegetated Shingle*** – Formerly widespread in the north-eastern sector of the Borough, east of Seaside/Pevensey Bay Road, now restricted to the seafront and small pockets within the Sovereign Harbour neighbourhoods.

- ***Maritime Cliffs & Slopes*** – Extensive area within the Borough present along the southern edge of the Eastern Downs, west of Beachy Head.

- ***Earth Heritage*** - The maritime cliffs provide an outstanding example of geological, geomorphological and palaeontological interests. There is a clear overlap with the South Downs Natural Area.

3.14 In addition, there is ***Saline Lagoons*** habitat of National Significance within this Natural Area. This habitat does not appear to occur within the Borough and is therefore omitted from further discussion.

3.15 Key nature conservation features of Local Significance within this Natural Area of relevance to the Borough are as follows:

Features of Local Significance:

- ***Inshore Sub-littoral Rock*** – Occurs beneath Beachy Head and along to the Wish Tower, further outcrops to the north of the Harbour.

- ***Inshore Sub-littoral Sediment*** – Apparently restricted to a few areas beneath Beachy Head.

- ***Littoral Sediment*** – There is no available information on the distribution of this habitat, but areas are present south of the Pier and to the north of the Harbour.

3.16 In addition, there are ***Coastal Saltmarsh*** and ***Coastal Sand Dunes*** habitats of Local Significance within this Natural Area. These habitats do not appear to occur within the Borough and they are therefore omitted from further discussion.

3.17 The list of nature conservation sites in which these interests receive protection on a statutory or non-statutory basis is as follows:

Coastal Vegetated Shingle
- *Prince William Parade* SNCI [E7] – **6.4** ha
- *Sovereign Harbour Beaches* – **1.7** ha

Maritime Cliffs & Slopes:
- *Seaford to Beachy Head* SSSI – Approximately **10** ha (part of a more extensive resource).

Earth Heritage:

- *Seaford to Beachy Head* SSSI – Approximately **195.2** ha.

Inshore Sub-littoral Rock:

- *Beachy Head* Marine Site of Nature Conservation Importance (mSNCI) – Precise area unknown.
- *Hope Point to Beachy Head* Marine Site of Nature Conservation Importance (mSNCI) – Precise area unknown.
- *Seven Sisters* Voluntary Marine Conservation Area (VMA) – Precise area unknown.

Inshore Sub-littoral Sediment:

- *Beachy Head Marine Site of Nature Conservation Importance* (MSNCI) – Precise area unknown.
- Seven Sisters Voluntary Marine Conservation Area (VMA) – Precise area unknown.

Littoral Sediment:

- *Beachy Head Marine Site of Nature Conservation Importance* (MSNCI) – Precise area unknown.
- *Seven Sisters* Voluntary Marine Conservation Area (VMA) – Precise area unknown.

4. NATURAL SYSTEMS

South Downs

4.1 The South Downs lie at a transition between the oceanic climate of Britain and the continental climate of Europe. This gives rise to a unique mixture of flora and fauna, where southerly or continental species can gain a stronghold on the warmer south-facing slopes while more northern and oceanic species are restricted to the cooler north-facing slope.

4.2 Where preserves of unimproved chalk grassland persist, these demarcate areas that have not been ploughed for decades and are fertilized only by grazing animals. These conditions are referred to under ecological terminology as 'unimproved', whereas heavily fertilized or re-seeded grasslands would be referred to as 'improved'.

4.3 The management regime on the Downs was once almost exclusively sheep-grazing, and transhumance was a feature of the landscape. This survives today in Eastbourne as 'drove' routes names within the Town, i.e. Willingdon Drove and Lottbridge Drove. These once linked the low-lying Levels within the high ground of the Downs. With the onset of mechanized farming and plant breeding, arable reversion became a feature of the Downs over the last century and sheep-grazing has since dramatically declined. Silage fields and cereal crops are now abundant, although in recent years a return to more environmentally sensitive farming has started, with farming either on an arable/pasture rotation system or managed as Environmentally Sensitive Area (ESA) grassland.

4.4 Most of the surviving unimproved chalk grassland has been designated as SSSI. These areas are rich in flowering plants with up to 38 plant species recorded per square metre. Many of the plants are limited not only to chalk, but are largely restricted to the South Downs such as Round-headed Rampion *Phyteuma orbiculare*. This plant is thought to be more abundant here than anywhere else in Western Europe, and has earned the local name of "Pride of Sussex". Unimproved chalk grassland is also important for a wide range of butterflies and other invertebrates, many of which are confined to calcareous habitats. Classic species include the Adonis Blue *Lysandra bellargus* and Chalkhill Blue *L. coridon* butterflies, whose caterpillars feed on Horseshoe-vetch *Hippocrepis comosa* which in turn is also limited to chalk and limestone rock.

4.5 In places, the Eastern Downs have developed Chalk Heath, a nationally rare habitat. Approximately 20ha survive at Lullington Heath National Nature Reserve, Belle Tout (Neolithic site) and the Levin Down Nature Reserve. The Chalk Heath develops as a result of thin acidic layers of wind-blown silt (loess) overlying the chalk, giving rise to an extraordinary juxtaposition of acid soil plants like Heather *Calluna vulgaris* and Bell Heather *Erica cinerea* growing alongside lime-loving plants such as Dropwort *Filipendula vulgare* and Salad Burnet *Sanguisorba minor*.

4.6 Rare plant species occur close to the edge of the cliffs, for example Small Hare's-ear *Bupleurum baldense* and Moon Carrot *Seseli libanotis*. Along the chalk cliffs there are further specialists, including the near-endemic

Rock Sea-lavender *Limonium binervosum* ssp. *binervosum* and nesting birds such as Peregrine *Falco peregrinus* and Fulmer *Fulmarus glacialis*.

English Channel

4.7 At the base of the chalk cliffs there are wave-cut platforms and gullies immediately offshore that are of major wildlife importance for seaweeds and marine invertebrates. Where the greenstone deposits outcrop on the seabed there are small reefs, whilst elsewhere is a slow-moving blanket of flint shingle, pebbles and cobbles that are remorselessly dragged to the north-east by longshore drift.

4.8 Mackerel *Scomber scombrus* occur in large shoals along the coast feeding on bait balls of small fish, and these sometimes attract occasional Common Porpoise *Phocoena phocoena* during the summer months.

4.9 The longshore drift of shingle accompanied by storm action once formed extensive deposition area of vegetated and bare shingle between the Pier and Pevensey Bay, in the area that now forms The Crumbles and the Sovereign Harbour residential developments. However this process is now receding (Jennings & Smyth, 1990) while the landward deposits have largely been built over. Remaining shingle areas contain a number of nationally uncommon characteristic plants such as Yellow Horned-poppy *Glaucium flavum* and Sea-kale *Crambe maritima*.

Grazing Levels

4.10 The flat-lying land now occupied by much of Eastbourne Town was formerly grazing levels that would have contained brackish water at the seaward end and freshwater further inland. These would have seasonally flooded and would provided very fertile grazing land. There were no fences or hedgerows, only ditch networks to define land ownership. Where hedgerows do occur these would appear to be 19th Century features.

4.11 These areas would once have had a rich fen landscape, with reedbeds, marshes and floodplain grassland and would have contained large numbers of wetland birds during winter and formed an important stepping stone during passage in spring and autumn. Remnants of this interest survive today with breeding Lapwing *Vanellus vanellus* within Eastbourne Park, over-wintering flocks of Snipe *Gallinago gallinago* and passage birds such as Wood Sandpiper *Tringa glareola*.

5. GEOLOGICAL RESOURCE WITHIN THE BOROUGH

5.1 The geological resource within the Borough can be considered under the following geological attributes:

- Solid Geology – Underlying strata/outcrops with stratigraphical, stratotype, sedimentological, palaeontological and tectonic history value; intimately linked to the **Natural Area** concept.

- Geomorphology – Landform evolution in relation to erosional, glacial and other processes; intimately linked to **Landscape Character** concept.

- Surface Geology - Superficial deposits such as glacial till, peat and alluvium; also influential on soil types and often intimately linked with **Archaeological Value**.

Solid Geology

5.2 The underlying solid geology within the Borough is principally split between the Cretaceous chalk deposits of the South Downs in the south-western half of the Borough, and the Weald Clays and alluvial deposits in the central and eastern half, see Figure **5.1**. A narrow band of Lower Greensand is also present in the north-western sector of the Borough. Beachy Head creates the physical setting for Eastbourne Town, forms the eastern end of the South Downs and marks the start of the Weald formation within south-eastern England.

5.3 The geology is set out in two seminal documents:

- Gallois, R.J.O. 1965. *The Wealden District*. Regional Geological Guide No. 14. British Geological Society.

- Hamblin, R.J.O. 1992. *Geology of the English Channel*. Offshore Regional Report No. 10. British Geological Society.

<u>Chalk: The Eastern Downs & Beachy Head</u>

5.4 The South Downs is an extremely well known geological area within Britain, where the classic vertical chalk cliffs provide a dramatic precipitous coastal feature. The chalk is only exposed to the east of Brighton, and thereafter forms tall sea cliffs and wave-cut shoreline platforms. Beachy Head, the Seven Sisters and Seaford Head are regarded as one of the best stretches of coast anywhere in Britain, and have long been a focus of scientific study.

5.5 Between Brighton and Newhaven the chalk cliff exposures were designated as a Geological Conservation Review (GCR) Grade 1 Site (*A Nature Conservation Review* - Ratcliffe, 1977), reflecting their national importance for research and education. Near Beachy Head, the Downs are regarded

as important for earth science interests, particularly chalk stratigraphy, periglacial geomorphology and the study of chalk landscape evolution. Features of interest include the cliffs and chalk platform beneath, the offshore Greensand reef, and the chalk escarpment at Cow Gap are identified as outstanding for their geological and geomorphological interest.

5.6 The cliffs have been designated SSSI status for their geological and biological importance and the following summary extracts from the SSSI citation of their national geological value:

- Extensive stratigraphically complete exposures of Coniacian, Santonian and lowermost Campanian aged Chalk including the Lewes, Seaford and Newhaven Chalk Members;

- Candidate Global Stratotype sections for the bases of the Santonian and Campanian Stages as well as the recognised stratotypes for the Seaford Chalk and other units of the underlying Lewes Chalk;

- Well documented outcrops over the past hundred years, both for their rich fossil faunas and sedimentological features. Recent studies using both fossil faunas and sedimentological data have assisted in the construction and interpretation of Upper Cretaceous sea-level curves and schemes of sequence stratigraphy reflecting both tectonic events within the basin and extra-basinal global changes in sea level.

5.7 The Chalk that forms the South Downs is regarded as an unusually pure and soft limestone, which is almost entirely confined to north-west Europe, has long been subject to intensive research by geologists from all over the world, including:

- Sir Charles Lyell described many of the geological features of the South Downs in his *Principles of Geology* (Murray, London, 1837);

- Gideon Mantell devoted much time to chalk research; and

- Rory Mortimore has reinterpreted the chalk stratigraphy of North-West Europe using type sites that with few exceptions are located in the South Downs, see *The Chalk of Sussex and Kent* (1997, Geologists' Association, London) where he comments that *"As a medium for investigating the interplay between marine transgressions, tectonic events on Europe's western platform and the cosmic origin of rhythmic sedimentation (Milankovitch Cycles) the Chalk has few equals."*

5.8 The neighbourhoods within the Borough that are principally underlain by Chalk are Willingdon Village, Ratton, Downside, Ocklynge, Cherry Gardens, Summerdown, Old Town, Saffrons, Lower Meads and Meads, i.e. approximately 30% of the Borough neighbourhoods.

Lower Greensand

5.9 There appears to be little information available on the presence of this geological formation within the Borough, either as outcrops or quarries. Its influence, if any, on the topography and vegetation are similarly unknown. It is possible that erosional processes on the Downs have overlain the Lower Greensand with chalk materials.

5.10 There is a Lower Greensand reef offshore which is referred to in section 6.

Wealden Clay

5.11 Eastbourne Town is largely built on a wide alluvial plain with shingle deposits to the east (the 'Crumbles'). These formations represent drift deposits of relatively recent age, while the chalk outcrop dates back to the Cretaceous period. Sporadic deposits of Wealden Clay occur in the area, a formation that is regarded as being extensive to the west but terminates just as it reaches the Pevensey Levels. Woodward (1931) refers to these Wealden clays as forming '… *much of the low flat ground on the way to Polegate* …'.

Geomorphology

Chalk: The Eastern Downs and Beachy Head

5.12 The cliffs have been designated SSSI status for their geological and biological importance and the following summary extracts from the SSSI citation of their national geomorphological value:

- Birling Gap, just outside the Borough, is a key site for periglacial geomorphology and the study of chalk landscape evolution. The sea cliffs at Birling Gap provide the best example of a complete cross-section through a dry valley anywhere in Britain. A complex series of solifluction deposits on the floor of the valley overlie deeply weathered chalk. The deposits have been affected by large scale contortions which may have originated when permafrost melted at the end of the Devensian Stage. A well-developed layer of these involutions underlies the valley sides, merging into the solifluction deposits on the valley floor.

- Cow Gap is an important site for another aspect of periglacial geomorphology and the study of chalk landscape evolution. It is one of a set of otherwise unique amphitheatre-like embayments cut into the face of the Chalk escarpment between Eastbourne and Beachy Head. These features are thought to have been produced by bodies of snow or ice under very cold climatic conditions, which developed at some stage before the late Devensian. Cow Gap, which is truncated by the cliff line, provides the best known exposure of the deposits related to a scarp face embayment. The infill deposits are the product of solifluction and sediments deposited by meltwater, and preserve an important sequence of Devensian late glacial and Flandrian molluscan faunas and a late glacial fossil soil.

- Beachy Head Cave is the largest and best developed example in Britain of a phreatic conduit in chalk. It is the only cave of this type with any significant length of accessible passage. The cave was formed by water flowing at high pressure beneath the water table. It is therefore important for demonstrating the role and existence of conduit flow in chalk. The age of the cave is unknown, but it is clear that it is a relict example of the passages that extend beneath currently active chalk sinks.

- Seaford to Beachy Head is a key site for coastal geomorphology, comprising a cliffbeach-shore platform system developed on chalk. The site includes the classic coastal cliffs of Beachy Head and the Seven Sisters. In contrast with the cliffs at Foreness Point (Kent) and Kingsdown - Dover (Kent) where structural controls prevail, the plan of the Seaford - Beachy Head coastline is controlled primarily by wave energy; with the dominant and prevailing wave energy from the southwest. The beach is one of six major south-west facing beaches in southern England and all of the others differ significantly in geological characteristics. In addition the beach is rapidly and consistently fed by flint from cliff falls.

5.13 Many details of the sedimentology and tectonic structures of the Chalk remain to be investigated. There is also an extensive network of streamless valleys whose origin remains controversial. The permeability of the Chalk ensures that rain is normally absorbed without surface runoff, and this has led to the suggestion that the valleys were created under Ice Age conditions, when permafrost rendered the Chalk impermeable, and summer rain and meltwater flowed off the surface of the Downs.

Lower Greensand

5.14 There is no available information on the geomorphological interest of the Lower Greensand within the Borough.

Wealden Clay & Alluvium

5.15 There is no available information on most of the geomorphological interest of the Wealden Clay & alluvial deposits within the Borough.

5.16 However, within *Prince William Park* SNCI [E7] part of the former shingle deposits have storm beach ridges that are thought to be up to perhaps 600 years old (Hurt, 1998), see Figure **5.2** and Appendix **3**. The orientation of these ridges is between 12° and 19° to magnetic north and this suggests storm waves approaching from the east-south-east.

5.17 This is the only preserved remnant of the former expanse of shingle storm ridges and troughs that spread over the Crumbles area, i.e within the neighbourhoods of Seaside, Kingsmere, Sovereign Harbour South and Sovereign Harbour North. Jennings and Smyth (1990) suggest that these shingle deposits were an ephemeral and inherently unstable feature that have progressively eroded away over the past 500 or so years, and therefore pose a problem for future coastal management.

Surface Geology

Chalk: The Eastern Downs and Beachy Head

5.18 There are pockets of erosional deposits and soils on the Downs, particularly associated with the dry valleys. In addition, thin layers of wind-blown silt (loess) overlie the chalk in places and create Chalk Heath vegetation, where acid- and lime-loving plants occur together.

5.19 Groundwater and surface water drainage from the Downs appears to have created base-enriched alluvium and therefore, where open water and wet/damp soils occur, this allows fen vegetation to thrive on the alluvium within the Town. Wolley-Dod (1970) refers to the processes of rain-wash and talus formation, by which chalk material is carried down the slope.

Lower Greensand

5.20 No information has been obtained on the Lower Greensand within the Borough, however, there may be outcrops within the seabed. Head Ledge extends offshore from the Borough boundary and is composed of Upper Greensand. Here the outcrop of angular boulders is known locally as the 'lobster bed'.

Wealden Clay & Alluvium

5.21 The alluvial deposits within Eastbourne are likely to be similar to those found elsewhere along the Sussex coast. These contain evidence of past inundations by the sea and have a varied thickness, with borehole evidence indicating that in some places the deposits are in excess of 30m depth.

5.22 Evidence obtained from borehole data and pollen analysis taken in Eastbourne Park and at Langney Point, coupled with an interpretation of peat deposition, sea level change and coastal erosion over the last 10,000 years, has provided an insight into the origin of the Park landscape.

5.23 Westerly longshore drift in approximately 8000 BC carried sand along the shoreline and this is thought to have created a sand-bar that blocked the seaward drainage of the local watercourses, i.e. the Bourn, Decoy Stream and Filching Stream. A lagoon then formed stretching eastwards from what is now Queens Hotel near the pier on to Langney, and extending northwards as far as Polegate, i.e. across the area that now forms Eastbourne Park. The distribution of archaeological sites and finds shows a strong correlation with the predicted outline of the prehistoric coastline. The topography predicts that islands (formally known as 'eyes') would have persisted along this coastline, and these coincide with location of Hydneye, Horsey, Anthony and Langney.

5.24 Evidence in soil profiles taken from the Shinewater Bronze-Age Settlement has revealed an alternating sequence of freshwater and marine sediments that have been interpreted as lagoon conditions punctuated by marine inundations. The settlement has been dated back to around 900BC and analysis of its pottery suggests that it was short-lived and flourished between the Late Bronze Age and early Iron Age.

5.25 The archaeological remains within Eastbourne Park are regarded as being of International Importance due to their fine state of preservation within the waterlogged anaerobic peat deposits.

5.26 The soil profiles suggest that the environment then reverted to freshwater when fen conditions then prevailed. Agriculture appears to have become well-established in the area by the 12th Century and land drainage may have commenced sometime after this period.

5.27 Historically referred to as the 'Eastbourne Marshes', the network of drains were excavated pre-1875 which turned the rich organic alluvial deposits within Eastbourne Park into high quality coastal grazing marsh. Today most of the meadows are still grazed or used for silage, and only a few of the meadows appear to have been re-seeded.

5.28 The appearance and description of the Park on the Tythe Map and its apportionment has not been examined for this Report. However, the drainage pattern on the 1879 Ordnance Survey (based upon surveys completed in 1875) appears to be little changed from the present day - with the exception of the major land re-profiling associated with Shinewater Park, the Eastbourne Golfing Park/Eastbourne Miniature Railway site and impacts from the new roads. This indicates that the wetland flora has established within a drainage system that is at least 130 years in age and contains the remnants of the former marsh.

Non-Statutory Geology Sites

5.29 In addition to the *Seaford to Beachy Head* SSSI, there are Regionally Important Geological Sites (RIGS), and possibly County Geological Sites (COGS), designated within the Borough. Some RIGS have been confirmed, see below, but it is unclear whether this is an exhaustive list[3]:

- TV59/10c – *East Sussex Coastal Section: Belle Tout to Birling Gap*, TV552960 to TV563955. Upper Chalk.
- TV59/10d – *East Sussex Coastal Section: Beachy Head Area*, TV563955 to TV593954. Middle/Upper Chalk.
- TV59/10e – *East Sussex Coastal Section: Cow Gap*, TV597957. Gault, Upper Greensand & Lower Chalk.
- TV59/10d – *East Sussex Coastal Section: Holywell Sections and Foyle Track*, TV600965 to TV610978. Upper Greensand to Lower Chalk.

5.30 As well as designated sites, there are also following list of known geology sites in the vicinity of Eastbourne has been compiled based upon surveys between 1960 and 1999:

- Foyle Track at TV600967;

[3] *Prince William Park* SNCI [E7] is not listed but is thought to have a RIGS designation

- Holywell at TV601969 and TV603973;
- Hailsham Road at TQ580053;
- Holywell Quarries at TV603974;
- South of South Cliff Avenue at TV610976;
- Westham Borehole at TQ609053;
- Near Meads Place Farm at TV603979;
- York Road/Hyde Road at TV608988;
- Bourne Street at TV616995;
- Mill Gap Road/Selwyn Road at TV604995;
- Hankham, Westham at TQ619057;
- Eastbourne Laundry at TV609993;
- Whitley Road at TV618999;
- Gore Pit at TV602970;
- Pearl Court at TV612987;
- Parson's Sawmills at TV615998;
- Lion Brewery at TV618991;
- Corner of Carlisle Road at TV612983;
- Polegate at TQ580050;
- Eastbourne Mirror, Pevensey Road at TV615990;
- Hankham – Pevensey No. 1 Borehole at TQ625055;
- Station Road, Polegate at TQ584051;
- Compton Place Road at TV601989;
- Sheepsham (Shepham) Lane, Westham at TQ599054;
- Compton Place at TV601986;
- Staveley Road/Chesterfield Road at TV604975;
- Bedfordwell at TV613998;
- Wish Tower at TV613982; and
- Firle Road at TV618997.

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6. NATURE CONSERVATION RESOURCES

6.1 Eastbourne lies at the crossroads for a number of coastal landscapes. It is situated at the eastern end of the South Downs, on the southern edge of the Weald, near the western edge of Pevensey Levels and lies on the northern coast of the English Channel.

6.2 Within the Borough there is a wide range of nature conservation sites varying in quality up to the nationally important SSSI status; a wide range of habitats including nationally uncommon types such as Chalk Grassland, Reedbed and Vegetated Shingle; and its ecology extends over terrestrial, freshwater and marine resources.

6.3 The Borough of Eastbourne has a number of statutory and non-statutory nature conservation designations that currently cover a total area of **333**ha (i.e. **255.4**ha SSSI and **77.6**ha SNCI).

6.4 The history of nature conservation sites within Eastbourne over the last 50 years has been as follows:

1953 Seaford to Beachy Head notified under National Parks & Access to the Countryside Act 1949.

1966 South Downs given AONB status.

1973 Coastal fringe given Sussex Heritage Coast status.

1986 Seaford to Beachy Head SSSI & Willingdon Down SSSI notified under Wildlife & Countryside Act 1981 and amendments.

1990 Nature Conservation Survey of the Borough commissioned.

2000 Eastbourne Biodiversity Survey commissioned.

2002 Shinewater Park opened.

2003 Supplementary Planning Guidance issued for the designation of 19 SNCIs within Borough.

2005 Eastbourne Park Biodiversity Audit commissioned.

2007a Eastbourne Biodiversity Audit commissioned.

2007b South Downs still under consideration as a National Park following a Public Inquiry, would affect entire area of Eastbourne Downs.

Internationally Designated Sites

6.5 There are no internationally designated nature conservation sites within the Borough boundary. However, Pevensey Levels RAMSAR lies only 0.75km to the east of the Borough boundary and Eastbourne Park is hydrologically linked with this extensive wetland.

Nationally Designated Sites

6.6 ***Proposed South Downs National Park*** - The decision on this designation is still pending. A designation order was signed on December of 2002 and this was presented for public consultation in January 2003. A Public Inquiry was then held between November 2003 and March 2005, during which representations were also made for the South Downs National Park (Variation) Order 2004 and on two Orders which revoke the two existing AONB designations. The inspector's report on his findings was submitted to the Secretary of State for the Environment, but a final decision was delayed by several legal complications which effectively forced a halt to the designation process in November 2005. The Minister decided to reopen the South Downs public inquiry in 2008.

6.7 The proposed National Park boundary would include the majority of the East Hampshire Area of Outstanding Natural Beauty (AONB) and the Sussex Downs AONB. The designation would directly affect the administration of Eastbourne as it would incorporate all of the Downs currently within the Borough, see Figure **6.1**.

6.8 Currently, the 1700 ha of the Eastbourne Downland Estate (variously referred to as the Eastbourne Downland, the Eastern Downs and including Beachy Beach) are subject to the Draft *Eastbourne Downland Management Plan* (Eastbourne Borough Council, Spring 2007). Management of the Eastbourne Downland is in consultation with the South Downs Joint Committee and Natural England.

6.9 The majority of the Eastbourne Downland Estate (1199 ha or 71%) is farmed with either an arable/pasture rotation system or is managed as Environmentally Sensitive Area (ESA) grassland. The remaining 29% is where the majority of the biodiversity interest is found.

6.10 Since the early 1990's there have been fundamental changes to land management within the Estate, reflecting changing farming practice and a commitment to active downland management. Approximately 696 ha of permanent grassland within the farmed area of the Estate has been secured under the ESA scheme, representing 41% of the overall area.

6.11 ***Biological & Geological Sites of Special Scientific Interest*** **(SSSIs)** – There are 2 SSSIs within the Borough both located within the Eastbourne Downland Estate, see Figure **6.2**. These are discussed further below:

6.12 *Willingdon Down* SSSI was designated in 1986, see citation in Appendix **4**. The site is located in the north-western corner of the Borough within the South Downs AONB and covers an area of 60.2ha.

6.13 *Seaford to Beachy Head* SSSI was first designated as a conservation area in 1953 and became an SSSI in 1986, see citation in Appendix **5**. It covers an area of 1102ha (only part of which lies within the Borough) and is located along the eastern and southern parts of the Eastbourne Downland Estate. The site has a wide range of outstanding biological and geological interests, including herb-rich chalk grassland, maritime grasslands, chalk cliffs, chalk heath and Greensand reef. The SSSI was identified as a Geological Conservation Review (GCR) and Nature Conservation Review (NCR) site by Ratcliffe (1977).

6.14 The extensive Eastbourne Park in the centre of the Borough is currently undesignated although following the *Eastbourne Park Biodiversity Assessment Report* (TAP, 2005) it would clearly satisfy the criteria for SSSI selection as set out by the Nature Conservancy Council (1990). A decision on whether Eastbourne Park should be granted SSSI status would be the responsibility of Natural England.

Regionally & Locally Designated Sites

6.15 ***Local Nature Reserves*** (LNRs) – The Borough Council has not designated any part of the Borough with LNR status.

6.16 ***Sites of Nature Conservation Importance*** (SNCIs) – A total of 19 SNCI are distributed throughout the Borough, see Figure **6.2,** citations are provided in Appendix **6**, and each is shown superimposed on aerial maps also in Appendix **6**. These are listed below under their principal habitat type along with their Borough Site Number:

Lowland Calcareous Grassland/Maritime Cliffs:

1. *Hollywell & Crows Nest Steps* SNCI [E77] – **0.8** ha
2. *Ocklynge Cemetery* SNCI [E86] – **8.0** ha
3. *Eastbourne College War Memorial Field* SNCI [E89] – **0.2** ha
4. *Upper Duke's Drive* SNCI [E94] – **0.8** ha
5. *Willingdon Roundabout* SNCI [E98] – **0.7** ha
6. *Cliffs Below The Helen Gardens* SNCI [E78] – **0.6** ha

Lowland Meadows:

7. *Langney Crematorium* SNCI [E14] – **9.7** ha

Coastal & Floodplain Grazing Marsh:

8. *Langney Levels* SNCI [E1] – **14.6** ha
9. *Highfield Industrial Estate* SNCI [E38] – **3.6** ha

Reedbed:

10. *Leeds Avenue Reed Bed* SNCI [E116] – **1.0** ha

Lowland Mixed Deciduous Woodland:

11. *The Coppice* SNCI [E96] – **2.2** ha
12. *Hampden Park & Ham Shaw* SNCI [E117] – **17.3** ha
13. *Ocklynge Pit* SNCI [E101] – **1.2** ha

Rivers & Streams:

14. *Langney Sewer* SNCI [E4] – **1.7** ha
15. *Crumbles Sewer* SNCI [E18] – **2.1** ha
16. *Horsey Sewer* SNCI [E29] – **4.6** ha

Standing Open Water:

17. *Langney Centre Pond* [E21] – **0.4** ha

Coastal Vegetated Shingle

18. *Prince William Parade* SNCI [E7] – **6.4** ha
19. *Sovereign Harbour Beaches* [E118] – **1.7** ha

Photographs of a selection of the SNCIs are provided in Appendix **9**.

6.17 ***Marine Site of Nature Conservation Importance* (mSNCI) & *Voluntary Marine Conservation Area* (VMCA)** – Underwater surveys in the 1980s revealed rich and exciting marine habitats and wildlife along the downland coastline in the sub-littoral and inter-tidal zones, and this has resulted in three non-statutory designations – the *Beachy Head Marine Site of Nature Conservation Importance* mSNCI, *Hope Point to Beachy Head* mSNCI & the *Seven Sisters Voluntary Marine Conservation Area* VMCA. These designations are shown on Figure **6.2**.

6.18 *Beachy Head* mSNCI – This designation refers to the marine complex that includes the greensand reef, citation provided in Appendix **7**.

6.19 *Hope Point to Beachy Head* mSNCI – This designation covers the sub-tidal wave-cut chalk platform that runs beneath the cliff edge of the Eastbourne Downland Estate, citation provided in Appendix **8**.

6.20 *Seven Sisters* VMCA – This contains one of the few remaining lengths of undeveloped coast in South East England. The designation stretches from the Martello Tower at Seaford to the Wish Tower at Eastbourne, and stretches from the cliff top out to sea for 2km. It was set up firstly to protect the marine environment but also to facilitate education, research and recreation.

6.21 ***Ancient Woodland*** – The Sussex Ancient Woodland Inventory only recognises three sites (above 1ha in size), see Figure **6.3**, these being as follows:

- *Beachy Brow Woodland*, lying on the eastern slope of the Downs to the west of Cherry Garden Road.
- *Well Combe Woodland*, lying on the eastern slope of the Downs along Upper Duke's Drive.

- *Cornish Farm Woodland*, lying within Compartment 9 of the Eastbourne Downland Estate (see Figure **13.1**).

6.22 **Informal Nature Reserves** – There appear to be only two informal designations within the Borough, both involving waterbodies, these being as follows:

- Highfield County Junior School Environmental Pond Area.
- Lakelands Conservation Pond.

Eastbourne Park

6.23 The Eastbourne Park Biodiversity Audit Report (December 2005) identified that the Park contains a very significant ecology resource which is currently not given any nature conservation designation. The 2005 Biodiversity Audit recorded habitats and species of sufficient area/quality/rarity for the Park to be considered worthy of Site of Special Scientific Interest (SSSI) status. The following paragraphs are presented to summarise ecology of the Park:

6.24 Comparison with the 1875 First Edition Ordnance Survey indicates that the core area within the Park has remained unchanged over the intervening 130 years, with the same layout of ditch systems present. This is therefore an old landscape where residual ecology from the natural habitats that formerly covered this area might be anticipated.

6.25 Eastbourne Park contains an ancient landscape that was formerly marshland interconnected with Pevensey Levels. An intensive drainage system has converted most of the former marsh into grassland, but marshland remnants persist along the drainage ditch system and in the lowest lying area of the Site within West Langney Level. These areas provide the most botanically interesting parts of the Park, where uncommon wetland plants and invertebrates can still be found.

6.26 Comparison with Pevensey Levels indicates that the Park is very similar in terms of its habitats and drainage. It should be borne in mind that the Pevensey Levels are afforded national and international protection primarily for its wetland interest. The Park therefore provides an area of open space with a concentration of nationally important habitats and species within the heart of Eastbourne Town that still retains much of its ancient farmland character.

6.27 Many of the grasslands have been converted into floristically species-poor pasture, probably through a combination of over-grazing and/or re-seeding, but floristically species-rich remnants still occur where plants typical of ancient grassland persist such as Pepper-saxifrage *Silaum silaus* and Adder's-tongue Fern *Ophioglossum vulgare*.

6.28 The west half of the Site would appear to be base-enriched as a result of drainage from the nearby Downs, the principal drains containing classic

indicators such as Mare's-tail *Hippuris vulgaris* and Water-violet *Hottonia palustris*. Uncommon plant species associated with these areas include Fen Pondweed *Potamogeton chloratus*, Blunt-flowered Rush *Juncus subnodulosus* and the stonewort *Chara hispida*, all extremely localised and uncommon species in Sussex.

6.29 Eastbourne Park is the only known site in Sussex for Fen Pondweed and one of only two known sites in the whole of South-east England. There is a diverse fauna of freshwater snails, water beetles, dragonflies and damselflies. Amongst the Red Data Book aquatic macro-invertebrates that occur within the drainage ditches are strong populations of the Nationally Endangered Shining Ram's-horn *Segmentina nitida*, the Nationally Threatened valve snail *Valvata macrostoma* and Nationally Rare Great Silver Diving Beetle *Hydrophilus piceus*. The Hairy Dragonfly *Brachytron pratense* and Red-eyed Damselfly *Erythromma najas* are also well established here.

6.30 Wetland birds found here include breeding Lapwing *Vanellus vanellus*, Reed Bunting *Emberiza schoeniclus*, Reed Warbler *Acrocephalus scipaceus* and Sedge Warbler *A. schoenobaenus*, all declining species elsewhere in Sussex. Snipe *Galinago gallinago* are present in very high numbers during winter months, and also occur here during the spring passage along with uncommon migrants such as Wood Sandpiper *Tringa glareola*.

6.31 Similar to Pevensey Levels, Eastbourne Park no longer appears to contain Water Vole *Arvicola terrestris* while in 2005 there were unconfirmed reports of Otter *Lutra lutra*, breeding Long-eared Owl *Asio otus* and a confirmed sighting of Bittern *Botaurus stellaris*.

6.32 Summary features of importance that are considered eligible criteria for SSSI status are:

- An extensive drainage network with over 120 species of wetland plant including a number that are Nationally Scarce and Nationally Local, as well as the only Sussex colony of Fen Pondweed and one of perhaps only three remaining colonies of the Blunt-flowered Rush.

- A number of fields with Unimproved Neutral Grassland set amongst extensive Semi-Improved Floodplain Grassland – regarded as an important county resource for this nationally uncommon and declining habitat.

- A wide range of nationally uncommon species and/or Sussex rarities, including the Red Data Book valve snail *Valvata macrostoma*, Great Silver Diving Beetle *Hydrophilus piceus* (the UK's largest water beetle), the moths Dotted Fan-foot *Macrochilo cribrumalis* and *Schoenobius gigantella*, and the stonewort *Chara hispida*.

- A number of uncommon breeding birds associated with wetlands such as Lapwing *Vanellus vanellus*, Reed Bunting *Emberiza schoeniclus*, Reed Warbler *Acrocephalus scipaceus* and Sedge Warbler *A. schoenobaenus* and appears to be an important wintering and/or passage area for Snipe *Gallinago gallinago* and Wood Sandpiper *Tringa glareola*.

7. SUSSEX BIODIVERSITY ACTION PLAN

7.1 The Local Biodiversity Action Plan (LBAP) for Sussex is known as From Sussex to Rio: Action for Biodiversity (Sussex Biodiversity Partnership, 2001 et seq.) and can be found at http://www.biodiversitysussex.org. This distils the habitats and species set out in the UK BAP (HMSO, 1996 et seq.) into pertinent habitats and species that occur within the counties of East and West Sussex.

7.2 Habitats and species occurring within an area are a consequence of the historic landscape and land management practices. Expanding human populations and technological innovations has placed increasing pressure on the natural resources through habitat loss, fragmentation, pollution, drainage, agricultural improvements and changes in farming practices. Climate change is also altering species balances, favouring some species at the expense of others.

7.3 The presence/absence of habitats is relatively easy to confirm. Confirming whether Sussex BAP species occur within the Borough relies on (i) a collation of available data to confirm presence, (ii) an assessment of data quality for its reliability, (iii) the application of historical knowledge and (iv) a consideration of future potential.

7.4 In producing a list of the Sussex BAP species that occur within the Borough this Report has therefore gone beyond simply finding out whether there are current records and has made a judgement based on the level of probability for the species to persist.

Sussex BAP Habitats

7.5 The 13 BAP habitats present within the Borough are listed below, and the distribution of the resources is shown on Figure **7.1** (provided in the rear of this Report as 36 separate sheets) as follows:

- ***Chalk Grassland*** – shown separately as Chalk Grassland (based on known sites and aerial photography);
- ***Neutral Grassland*** – shown as part of the combined Grassland category;
- ***Floodplain Grassland*** – shown as part of the combined Grassland category;
- ***Woodland*** – shown as part of the combined Woodland category;
- ***Hedgerows*** – shown as part of the combined Woodland category;
- ***Verges*** – shown as part of the Amenity Grassland category;
- ***Arable Land*** – shown separately as Arable or Grassy Ley;
- ***Reedbed*** – shown as part of the combined Grassland category;
- ***Rivers & Streams*** – only principal watercourses are shown;
- ***Standing Freshwater Habitats*** – shown separately as Open Water (Freshwater);
- ***Maritime Cliffs & Slopes*** – shown separately as Maritime Cliff;
- ***Vegetated Shingle*** – shown separately as Vegetated & Bare Shingle; and

- ***Marine*** – shown separately as Open Water (Saline).

7.6 Figure **7.1** is an intentional combination of the Eastbourne Park Extended Phase I Map (TAP, November 2005) and mapping of the remainder of the Borough using aerial photographs and relatively limited field truthing. Clearly, these two areas have different mapping resolutions due to survey effort and therefore use different habitat categories. Rather than 'dumb down' the Eastbourne Park map, it was decided that a key would be provided instead to translate between these two mapping areas.

Chalk Grassland

7.7 The UK resource of lowland calcareous grassland is up to 41,000 ha, with no less than 25,000 ha (60%) occurring as Chalk Grassland. The South Downs contains a major concentrations of Chalk Grassland habitat with approximately 4,000 ha (6%), of which approximately 2500 ha occurs within Sussex.

7.8 A massive decline in sheep grazing occurred during this century, and was replaced by arable farming. As a consequence Chalk Grassland was ploughed up on most of the plateau and gentler gradients and especially the south-facing slopes, concentrating the remaining Chalk Grassland resource onto the north-face and steeper slopes.

7.9 Where acidic surface soils have formed due to wind-blown loess, Chalk Heath has developed and the Sussex resource is thought to be up to 100ha in extent. The distribution and area of Chalk Heath within the Eastbourne Downland Estate is not known but one of the more significant areas is around the Belle Tout in Compartment 1 (see Figure **13.1**).

7.10 The distribution of the Chalk Grassland within the Borough is relatively widespread in the south-western half of the Borough, see Figure **7.2**.

7.11 Examples of the best quality Chalk Grassland within the Borough are currently found in the following designated sites:

- *Willingdon Down* SSSI
- *Seaford to Beachy Head* SSSI
- *Hollywell & Crows Nest Steps* SNCI [E77]
- *Cliffs Below The Helen Gardens* SNCI [E78]
- *Ocklynge Cemetery* SNCI [E86]
- *Eastbourne College War Memorial Field* SNCI [E89]
- *Upper Duke's Drive* SNCI [E94]
- *Willingdon Roundabout* SNCI [E98]

7.12 Using the combined floral data collected during the biodiversity surveys in 1990 and 2000 (i.e. the SNCIs, non-SNCIs and School sites) a list of Chalk Grassland Indicator Species occurring within the Borough was compiled, based upon species identified by Kent Wildlife Trust (2005) – see Tables **7.1**, **7.2** and **7.9**. The number of Chalk Grass Land Indicators on these sites

was then plotted on Figure **7.2,** along within any other records for chalk grassland species in the database. This suggests that the Chalk Grassland resource probably formerly extended as far as the line of the A22 Eastbourne Road/A2021 King's Drive.

7.13 The number of chalk grassland indicators per dataset is summarised as follows:

- SNCI Sites – Between 1 to 28 indicators/site, with six sites having at least 12 species/site.
- Non-SNCI Sites - Between 1 to 6 indicators/site.
- School Sites – Between 1 and 2 indicators/site.

Neutral Grassland

7.14 Sussex is regarded as being a stronghold for Unimproved Neutral Grassland, and there are various estimates for the Neutral Grassland resource based on English Nature Inventories, FWAG and independent surveys. The Sussex BAP suggests a conservative estimate of 860 ha of Neutral Grassland in Sussex, with approximately 480 ha in East Sussex based on 60 sites. These totals include Neutral Grassland ranging in ecological value from Unimproved to Poor Semi-Improved quality.

7.15 The absence of Phase I Habitat Survey data for the Downs, over 50% of Open Space sites within the Town and none of the verge habitat, makes it difficult to assess to true extent of Neutral Grassland in the Borough. However, it is assumed that this resource:

1. Principally extends north and eastwards from the area of chalk (in turn roughly defined by the underlying solid geology and the Natural Area boundary).
2. Does not occur on the Downs (where grass leys and Poor Semi-Improved Chalk Grassland would persist instead).
3. Has some overlap with Floodplain Grassland.

7.16 The distribution of this resource is therefore assumed to be concentrated in the northern and eastern half of the Borough, centred around Eastbourne Park and Langney Levels and a network of disparate sites.

7.17 Examples of protected Neutral Grassland within the Borough are currently found in the following designated sites:

- Part of *Langney Levels* SNCI [E1]
- *Langney Crematorium* SNCI [E14]

7.18 Using the combined floral data collected during the biodiversity surveys in 1990 and 2000 (i.e. the SNCIs, non-SNCIs and School sites) a list of Neutral Grassland Indicator Species occurring within the Borough was

compiled, based upon species identified by Kent Wildlife Trust (2005) – see Tables **7.3**, **7.4** and **7.8**. The number of Neutral Grassland Indicators on these sites was then plotted on Figure **7.3** along with any other records for neutral grassland species in the database. This interestingly reveals a concentration of Neutral Grassland Indicators along the scarp face of the Downs, especially in the Meads Neighbourhood of the Borough.

7.19 The number of neutral grassland indicators per dataset is summarised as follows:

- SNCI Sites – Between 1 to 11 indicators/site, with ten sites having at least 6 species/site.
- Non-SNCI Sites - Between 1 to 5 indicators/site.
- School Sites – Between 1 and 3 indicators/site.

Floodplain Grassland

7.20 Floodplain grassland includes typical wet grassland communities that have variously survived as Unimproved and Semi-Improved Grassland, or have been converted through drainage and fertiliser application to more productive agricultural swards. They may have ecological value due to their floristic composition and/or associated bird assemblage.

7.21 The Sussex Wildlife Trust estimates that there are about 11,400 ha of lowland wet grassland in Sussex. The best examples of nationally important areas of grazing marsh are found at Amberley Wildbrooks and Pevensey Levels, while the rivers Arun, Adur, Ouse and Cuckmere all have important areas of floodplain grassland. Just under a half of Sussex floodplains contain lowland wet grassland, however, much of this has been agriculturally improved and is now of little value for wildlife (SWT, 1995).

7.22 The wet grassland resource in East Sussex is estimated at 7720 ha (Dargie, 1993). Within Eastbourne Borough, the entire resource is restricted to Eastbourne Park where seasonal flooding provides sufficient surface water supplies to maintain high quality wet grassland through the year.

7.23 There is currently no designated Floodplain Grassland within the Borough.

Woodland

7.24 Sussex contains a very high percentage cover of woodland, primarily as a result of the extensive stands within the Weald. Much of this resource is Ancient Woodland and a further category has been defined, this being Ghyll Woodland which occurs in the high humidity linear stream-lined valleys. The latter is largely limited to the Weald in southern England and is associated with a mix of oceanic warmth-loving species and northern species occurring in the shade of these southern outliers.

7.25 The majority of the 41,000 ha of woodland in Sussex is under commercial management and of these 14,000 ha have been replanted on Ancient Woodland sites with non-native trees. The remaining 27,000 ha are woods which have been planted, or which have regenerated, on sites that were not previously wooded. The Forestry Commission (Forest Enterprise) practices commercial forestry at nearby Friston Forest and there is a large private woodland estate at West Dean.

7.26 Historically, the Borough appears to have contained few stands of woodland, and the Sussex Ancient Woodland Inventory only recognises three sites (above 1ha in size), see Figure **6.3**, these being as follows:

- *Beachy Brow Woodland*, lying on the eastern slope of the Downs to the west of Cherry Garden Road.
- *Well Combe Woodland*, lying on the eastern slope of the Downs along Upper Duke's Drive.
- *Cornish Farm Woodland*, lying within Compartment 9 of the Eastbourne Downland Estate (see Figure **13.1**).

7.27 Interestingly, although regarded by many as being Ancient Woodland, Hampden Park and Ham Shaw SNCI has developed since the 1st Edition Ordnance Survey and is therefore regarded as being Secondary Woodland. This does not mean that it is not an example of old woodland, or that it does not contain a significant number of Ancient Woodland Vascular Plants (AWVPs) as defined by Rose (1999).

7.28 Examples of protected Woodland within the Borough are currently found in the following designated sites:

- *The Coppice* SNCI [E96]
- *Hampden Park & Ham Shaw* SNCI [E117]

7.29 Using floral data collected during the 1990 and 2000 biodiversity audits within the Borough, see Tables **7.5** to **7.7**, it has been possible to interrogate the data for evidence of AWVPs within the Borough and the numbers of AWVPs per Site has been plotted on Figure **7.4**. No less than 21 AWVPs are now known to occur within the Borough. The distribution of AWVPs confirms that there are no obvious concentrations within the Borough, but does suggest that Hampden Park and Ham Shaw SNCI would appear to be Ancient Woodland based upon a concentration of 12 AWVPs.

7.30 The number of AWVPs per dataset is summarised as follows:

- SNCI Sites – Between 1 to 12 indicators/site, with three sites having at least 6 species/site.
- Non-SNCI Sites - Between 1 to 5 indicators/site.
- School Sites – Up to 2 indicators/site.

Hedgerows

7.31 These are not the traditional field boundaries used within the Borough and therefore this resource is poorly represented. On the Downs, the typical field boundary is post and wire fencing; while on the Levels the boundaries are defined using drainage ditches.

7.32 It is therefore unlikely that any of the hedgerows will be ancient in origin and certainly no assarts would be predicted. *Ad hoc* bands of scrub retained along the banks of drainage ditches occur in places while, where hedgerows do occur, they are likely to be species-poor examples of relatively recent origin.

7.33 None of the hedgerows are therefore considered likely to be regarded as 'important' under the 1997 Hedgerows Regulations.

Verges

7.34 Verges vary considerably in habitat quality both within and between verges. The best examples contain remnants of Unimproved Grassland, the nearest example known to the author being along the B2104 Hailsham Road opposite The Crossways approximately 0.5km north of the Borough boundary, where indicator species such as Dyer's Greenweed *Genista tinctoria* are present.

7.35 Verges are otherwise very dynamic in species composition due to their varied origins, adjacent habitats, roads and railways, age, size and degree of inter-connectivity. They may be artificial due to importation of soils, contain varying amounts of introduced plant species and suffer from varying amounts of disturbance. Even under these influences it is accepted that most of the verges in Sussex contain at least a remnant of the local biodiversity.

7.36 Grass verges within the Borough have been plotted as Amenity Grassland while verges dominated by trees and scrub have been plotted as Wooded Habitats, see Figure **7.1**.

7.37 It is apparent that this resource mostly occurs as very small sites, but these combine to produce a significant area within the Borough. There has been no examination of their quality and, given the often drought-prone nature of grass verges, areas of Ephemeral Bare Ground communities might be anticipated along with uncommon coastal species.

7.38 There is currently only one area with designated Verges within the Borough, this being the chalk grassland roadside verges around Willingdon Roundabout and the southern end of Eastbourne Road.

- *Willingdon Roundabout* SNCI [E98]

Arable Land (including Field Margins)

7.39 There is a considerable area of Arable Land within the Borough, exclusively concentrated within the plateau of the Eastern Downs. Most appear to be grass leys but a comprehensive survey does not appear to have been undertaken of their associated arable weed and bird interest.

7.40 The BAP species Pheasant's-eye *Adonis annua* is known to have its county stronghold on the Eastern Downs where it occurs on open chalky ground and can be considered a flagship species for Arable Land. Despite agricultural intensification, there is potential for additional colonies to still occur within the Borough resource as Salisbury described this species in 1953 as:

'… *once so common in the cornfields of Sussex … as to have been collected and sold in Covent Garden Market*'.

7.41 This habitat category is very difficult to define as within the Eastbourne Downland Estate the farming tends to be either an arable/pasture rotation system or is managed as ESA grassland. Unless all of this resource was field walked, it is not possible to accurately confirm the status of this arable/grassland land mix.

7.42 It is also possible that there will be unploughed headlands and set aside in amongst this resource, the former providing a key chalk grassland resource the latter a transient seed bank.

7.43 There is no currently no designated Arable Land within the Borough.

Reedbeds

7.44 Reedbeds are wetlands dominated by stands of Common Reed *Phragmites australis* where the water table is at or above ground level for part of the year. They tend to incorporate areas of open water such as ditches. Two types of reedbed are generally recognised - Reed Swamp and Reed Fen Reed swamp is permanently waterlogged with a summer surface level of around 200mm and is likely to contain pure stands of Common Reed. Reed Fen has a water level at or below the surface in summer and is likely to be more botanically diverse.

7.45 Reedbeds are a nationally scarce habitat. There is only approximately 5000 ha of Reedbed in the UK at some 900 sites, but only about 50 are greater than 20 ha (Painter, 1994). The resource within Sussex is up to approximately 65 ha, the most significant sites being Filsham Reedbed in Hastings, the Pannel Valley, Rye Harbour Nature Reserve and the reedbeds within Chichester Harbour. Within Sussex wetlands reeds generally form a significant component of the ditch flora but are prevented from colonising further by grazing practices and water level control. These marginal reedbed stands, whilst not forming individual blocks of over 2 ha, do represent a significant part of the Reedbed resource.

7.46 There is a single example of a protected reedbed within the Borough in the following designated site:

- *Leeds Avenue Reed Bed* SNCI [E116]

Rivers & Streams

7.47 There are no rivers within Eastbourne Borough, instead the area historically contained a network of small streams fed from a catchment commencing on high ground to the north and on the Downs to west, and this drained to sea.

7.48 All of the streams have been largely modified over the centuries and interlinked with an extensive drainage network. This is most obvious within Eastbourne Park and Langney Levels. There are two principal drainage networks within Eastbourne Park, these being associated with the following main sewers:

- West-south-west Drainage Network – comprises Lottbridge Sewer, Decoy Stream and Willingdon Sewer; and

- Northern Drainage Network – comprises Willingdon & West Langney Sewer and Langney Sewer.

The drainage exits Eastbourne Park via the Langney Sewer to the north-east, and Crumbles Sewer to the south-east, both ultimately discharging into the sea between tides via gravity fed tidal valves.

7.49 Examples of protected watercourses within the Borough are currently found in the following designated sites:

- Part of *Langney Levels* SNCI [E1]
- *Langney Sewer* SNCI [E4]
- *Crumbles Sewer* SNCI [E18]
- *Horsey Sewer* SNCI [E29]

Standing Freshwater Habitats

7.50 The England Lowland Ponds Survey found evidence for a high turnover of ponds between 1990 and 1996, with over 7% of pond stock either lost or gained. More than one third of the ponds identified in the survey were temporary and were dry in the summer of 1996 and, of the remaining ponds, more than 40% were very shallow with average water depths of less than 250mm.

7.51 There is no information on the number of ponds within Sussex. The first systematic survey of the County is now underway, and data will be used to create a Sussex Ponds Inventory at the Sussex Biodiversity Record Centre.

7.52 There are a number of standing waterbodies within the Borough, all of which appear to be man-made, see Figure **7.5**. These range between the typical circular dewponds on the Downs (mostly concrete-lined but includes at least one traditional clay/flint-lined) which are entirely maintained by incident rainfall, to flooded quarry pools, stock ponds and balancing ponds in the lower lying parts of the Town.

7.53 There are 8 lakes (i.e. waterbodies over 1ha in size) within the Borough, these being as follows:

- Decoy Lake within Hampden Park;
- Shinewater & Hydneye Lakes within Shinewater Park;
- West Langney, Broadwater and Southbourne Lakes within Eastbourne Park; and
- Crumbles Pond within Princes Park.

7.54 There are 77 ponds within the Borough, see Table **7.10**, these being as follows:

- Between 45 and 59 ponds – concentrated in/around Eastbourne Park; and
- Between 16 and 30 dewponds – exclusively found on the Downs (absolute number requires further survey effort, or feedback from the Downland Trees & Woodland Manager).

7.55 There is currently two examples of protected waterbodies within the Borough in the following designated sites:

- *Langney Centre Pond* [E21]
- *Hampden Park & Ham Shaw* SNCI [E117]

Maritime Cliffs & Slopes

7.56 The Eastern Downs including Beachy Head contain one of the best examples of chalk cliffs in the UK, which is protected under various designations including SSSI, AONB and Heritage Coast.

7.57 Chalk cliffs contain fragile porous chalk and are therefore subject to constant erosion, punctuated by major landslips, and therefore the cliffs are constantly changing and the slopes constantly diminishing in area.

7.58 There is only a single length of Maritime Cliff & Slope habitat within the Borough, see Figure **7.6**, and this is variously protected under the following nature conservation designations:

- *Seaford to Beachy Head* SSSI.
- *Cliffs Below The Helen Gardens* SNCI [E78]

Vegetated Shingle

7.59 Vegetated Shingle is a nationally rare habitat type, listed in Annex 1 of the EC Habitats Directive as a habitat of international conservation importance. Japan and New Zealand are the other most important global locations for Vegetated Shingle habitat.

7.60 Sussex has approximately 1000 ha of Vegetated Shingle, the large areas being at Rye Harbour and Dungeness where it occurs as a cuspate forelands shingle. Sussex shingle is mainly carried eastwards along the coast by longshore drift due to prevailing south-westerly winds, although from Selsey Bill in West Sussex it travels westwards. The shingle is deposited as fringing beaches running along the coastline, and is aligned in sub-parallel ridges of differing ages, the oldest ridges generally being the furthest from the present shoreline. Communities on shingle range from the pioneer plant communities on fringing shingle beaches through a lichen-rich turf to gorse scrub on disturbed or marginal areas, bramble on damper patches and, where grazed, to a species-rich turf.

7.61 The Crumbles area in Eastbourne formerly contained an extensive area of this resource, but this was developed for residential housing. Although fragments of the original resource remain, see Figure **7.6**, none of the Crumbles resource received any formal designation and all the best areas have long since been destroyed.

7.62 Examples of the protected Vegetated Shingle within the Borough are currently found in the following designated sites:

- *Prince William Parade* SNCI [E7]
- *Sovereign Harbour Beaches* [E118]

Marine

7.63 Along the seaward edge of the Borough is one of the few remaining lengths of undeveloped coast in south-east England. The magnificent chalk cliffs are matched by a secret underwater world of chalk ridges and gullies. At the base of the cliffs are shingle beaches. As the tide goes out, it reveals a rocky platform, carved into rock pools and channels by the action of the sea. East of Beachy Head there is harder sandstone of the Lower Greensand as well as soft chalk ridges.

7.64 Below the low tide mark, the gullies become deeper and form crevasses that cut through shallow chalk reefs, supporting a rich and diverse marine life of shellfish including piddocks (*Pholas dactylus*, *Barnea parva* and *Hiatlella arctica*), anemones (e.g. *Arctinothoe sphyrodeta* and *Urcticina felina*), kelps (*Laminaria* spp.), sponges (*Halichondria* spp.), bryozoans, hydroids and tubicolous worms. Fish within the chalk gullies include Tompot Blenny *Parablennius gattorugine*, Long-spined Sea Scorpion *Taurulus bubalis* and Leopard-spotted Goby *Thorogobius ephippiatus*. Further out to sea massive blocky sandstone reefs and shipwrecks are surrounded by miles of sand and pebble seabed. The reefs and wrecks attract huge shoals of fish and support rich animal communities. Rays and flatfish glide over the sand feeding on the rich sea life.

7.65 This part of the English Channel within the Borough is variously protected under the following nature conservation designations:

- *Seaford to Beachy Head* SSSI.
- *Seven Sisters Voluntary Marine Conservation Area* (SSVMCA).

7.66 Marine taxa recorded off the Eastbourne Coast was provided by the Booth Museum and this has been collated in Table 7.11.

Sussex BAP Species

7.67 There are a variety of Sussex BAP plants, mammals, birds, amphibians and invertebrates that currently appear to occur within the Borough and these are listed below:

Plant: Pheasant's Eye *Adonis annua*

Habitat Requirements: This is an Archaeophyte species that was once relatively common amongst cornfields on the Downs. It is associated with open disturbed ground on chalky soils. Its seeds appear to be relatively long-lived.

Occurrence within the Borough: It is known from two locations on Beachy Head, see Figure **7.7**. Set-aside within the Arable Land is suitable for this species. There are two post 1990 records.

Mammal: Brown Hare *Lepus europaeus*

Habitat Requirements: Prefer large expanses of open grassland, and occurs widely in farmland throughout Sussex. It is thought that this is an ancient introduced species. Factors affecting the decline of the species are the conversion of grasslands to arable land and a change in planting and cropping regimes. The actual status of the population is unclear but it is generally agreed that the population decline has stabilised over the last ten years to approximately 820,000 individuals.

Occurrence within the Borough: There is no available information on the occurrence of this species, but it would be anticipated to occur on the Downs and on Langney Levels.

Mammal(s): Common Pipistrelle Bat *Pipistrellus pipistrellus,* Soprano Pipistrelle Bat *P. pygmaeus &* Nathusius Pipistrelle Bat *P. nathusii*.

Habitat Requirements: The SAP refers to "Pipistrelle" although it is now recognised that there are three species in the UK. Two of the species are resident in Sussex, Common Pipistrelle which is relatively widespread and Soprano which is more localised. The latter is a vagrant species which appears be able to breed here. Each species have slightly different foraging habitats and all are vulnerable to roost loss or habitat changes that result in a decrease in insect prey abundance or fragmentation of the foraging area.

Occurrence within the Borough: There are number of records for Common Pipistrelle (16 post 1990 records) both within the Town and on the Downland, see Fig. **7.8**, the last being in 1997 which indicates that Borough is very under-recorded. No records exist for the remaining two species and its is likely that this is due to limited bat detector survey work. Soprano Pipistrelle is likely to be present (there are two records post 1990 records outside the Borough for this species), see Figure **7.9**, while Nathusius Pipistrelle is likely to be genuinely rare or absent (there are no available records).

Bird: Skylark *Alauda arvensis*

Habitat Requirements: Skylark is regarded as being widespread on the Downs although the distribution pattern is patchy. Populations are typically found in open, temporary grassland areas (such as set-aside) while heavily wooded areas and urban settings appear to be unsuitable habitats. It is estimated that there may be less than 14,000 breeding pairs in the County. The recent rapid decline over the past 25 years appears to be due to increased trend of autumn-sown cereal crops, a decrease in insect prey availability, arable conversion and early and/or more frequent silage cutting.

Occurrence within the Borough: There is no available data on the relative distribution and numbers of this species, but it would be expected to have a stronghold on the Downs.

Bird: Barn Owl *Tyto alba*

Habitat Requirements: The preferred habitat of Barn Owl is low-lying farmland and woodland edge. Their territories may be as large as 100 ha for a breeding pair and they predominantly forage for small mammals. They nest naturally in cavities in trees, but erected nest boxes are proving successful during the breeding season. Sussex has seen a fall in population numbers since 1932 when 400 breeding pairs were recorded down to 140 breeding pairs in a 1985 survey. It is considered that population decline has since levelled off due to a change in land management.

Occurrence within the Borough: There is little data on the relative distribution and numbers of this species. The 2004 Sussex Bird Report provides a dot map for East Sussex and this does not show any records in the vicinity of Eastbourne Borough or the Eastbourne Downland Estate.

Bird: Song Thrush *Turdus philomelos*

Habitat Requirements: The Song Thrush is a common and widespread species which has declined in numbers by at least 65% over the past 20 years, although numbers have decreased less in south east of England, and more specifically Sussex. Song Thrush migrate from the continent and are well distributed on the Downs during autumn. Adverse weather conditions affect Song Thrush densities as well as changes in farming practices affecting prey distribution and nest sites. The increasing abundance of Sparrowhawk *Accipiter nisus* may also be a factor as they favour Song Thrush as prey.

Occurrence within the Borough: There is no available data on the relative distribution and numbers of this species, but it would be expected to have a stronghold in the parks and mature gardens within the Town.

Bird**:** Swift *Apus apus*

Habitat Requirements: Swifts are frequent summer residents to the UK, and are frequently seen flocking together on warm summer evenings. Swifts spend almost their entire lives on the wing, landing only to nest. Concern is growing at the decline of the swift populations in the UK which is thought to be caused by high standards in house construction that leaves no roof access for nesting sites, combined with the demolition of existing nesting sites.

Occurrence within the Borough: There is no available data on the relative distribution and numbers of this species.

Amphibian: Great Crested Newt *Triturus cristatus*

Habitat Requirements: Great Crested Newt (GCN) require suitable waterbodies in which to breed and surrounding habitat for refuge and hibernation. GCN will spend winter under logs and debris, or even vacated mammal burrows. At the onset of spring they migrate back to their breeding ponds via migration corridors such as hedgerows and ditches to avoid predation. Destruction of any of these habitat features can be detrimental to the population.

Occurrence within the Borough: This species occurs in Willingdon, and within a number of the dewponds on the Eastern Downs including Beachy Head, see Figure **7.10** [Note: 500m radii shown by blue circles represent the accepted limit of each population]. There are also a number of sites immediately

outside the northern/western boundary of the Borough, including Polegate and Westham.

Invertebrate: Glow Worm *Lampyrus noctiluca*

Habitat Requirements: This species occurs nationally in a wide range of broad habitats/features (Tyler, 2002). The structure of the vegetation, in terms of height, density, shade and shelter, is thought to be more important than its composition. A mixture of open grass and some form of cover such as scrub, brambles or woodland edge appears to be preferred rather than homogeneous woodland or grassland. As glow-worm females and the larvae are flightless, accessibility to any site is a significant factor. The suitability of the habitat for snails must also be an important factor.

Occurrence within the Borough: There appear to be between 3 or 4 records for this species at or just inside the Borough boundary, within

the neighbourhood of Sovereign Harbour North, Eastbourne Park and possibly Ratton. This would suggest that the species may be persisting in disturbed ground or chalk grassland within the Borough

Invertebrate: Stag Beetle *Lucanus cervus*

Habitat Requirements: The larva of this species feeds on deadwood in the trunk or roots of a variety a tree species. Adults fly at night and its recent spread in southern England indicates that it is very capable of colonising new sites.

Occurrence within the Borough: Considered unlikely to occur at present (Pratt, 2003), the nearest records for this showy species were from Ringmer. However, there has been a 2007 record from Hill Road in Eastbourne, see Figure **7.11**, which might suggest that this species has colonized the chalk woodland on the eastern slope of the Downs.

7.68 Sussex BAP species for which there is currently insufficient information to determine whether they persist within Eastbourne Borough, and therefore warrant targeted surveys, are as follows:

Mammal: European Otter *Lutra lutra*

Habitat Requirements: The European Otter is a semi-aquatic mammal that forages within wetland habitat for fish and especially Eel *Anguilla anguilla*. Otters are solitary, crepuscular animals that occupy large home ranges. Male territories are generally double the size of female territories and can be up to 40km of linear habitat. Otter populations are currently re-colonising.

Suitability of Eastbourne Borough: The general survey of Eastbourne Park during the 2005 Biodiversity Audit failed to find evidence of

Otter, although there was an unconfirmed report of an Otter in the vicinity of Lottbridge Drove during 2005. The closest known population to Eastbourne is at Wallers Haven in Pevensey, and further east at Rye Harbour. It is likely that this species will colonise Eastbourne Park in the immediate future.

Action Required: Targeted survey of the drainage networks within Eastbourne Park and Shinewater Park.

Mammal: Water Vole *Arvicola terrestris*

Habitat Requirements: This species requires well-vegetated banks along waterbodies, with relatively static water levels, non-intensive bankside management and an absence of their main predator American Mink *Mustela vison***.**

Suitability of Eastbourne Borough: Water Vole populations currently exist in a few pockets in West Sussex and in East Sussex around Rye. There are two post-1990 records for this species, see Figure **7.12**. A general survey of Eastbourne Park in 2005 failed to reveal any evidence of this species, but unconfirmed records were received from Shinewater Park in 2006. It is considered possible that small remnant populations might still persist.

Action Required: Targeted survey of the drainage networks within Eastbourne Park and Shinewater Park.

Invertebrate: Brown-banded Carder Bee *Bombus humilis*

Habitat Requirements: This species is typically associated with large areas land, particularly chalk grassland. Salisbury Plain is currently one of the main strongholds for this rapidly declining species. It has most often been recorded in association with areas of grassland supporting a large number of plant species with long corolla flower types, notably those belonging to the plant families Lamiaceae and Fabaceae.

Suitability of Eastbourne Borough: The extensive nature of the Eastern Downs and nearby Pevensey Levels provides an opportunity for this species to persist. It appears to be able to survive in less extensive areas of flower-rich habitat compared with some bumblebee species, and may be able to persist as meta-populations within a fragmented landscape.

Action Required: Targeted survey of Hymenoptera on the Eastern Downs, extending to the chalk grassland SNCIs within the Borough should this species be confirmed.

Invertebrate: Swollen Spire Shell *Mercuria confusa*

Habitat Requirements: This species has very specialised habitat requirements. It is typically found on bare mud exposed at low tide beneath emergent vegetation such as *Phragmites.australis* or *Glyceria maxima*. It requires water with a very low salinity (1 - 5ppt NaCl) and is typically found in association with freshwater molluscs such as *Lymnaea palustris* and *L. truncatula* and wetland species including *Zonitoides nitidus* and *Carychium minimum*. Some authorities (Baker et al., 1999; Kerney, M.P. in Bratton, 1991) believe that it is more accurate to consider *M. confusa* as a freshwater snail that requires periodic or occasional contact with very slightly saline water. Light livestock poaching appears to be important.

Suitability of Eastbourne Borough: It is known from the River Arun and further sites in West Sussex and it is considered possible that the species extends into the Low Weald and Pevensey Natural Area. There might be potential for this species to persist within vegetated stretches of the tidal sewers of the Town or even within part of Eastbourne Park.

Action Required: Targeted survey of molluscs within the Crumbles Sewer SNCI, Horsey Sewer SNCI and the lower reaches of Eastbourne Park.

Invertebrate*:* Fen Raft Spider *Dolomedes plantarius*

Habitat Requirements: The fen raft spider is a wetland spider dependent on permanent, standing or slow moving water. It is associated with nutrient-poor water of near neutral or alkaline pH.

Suitability of Eastbourne Borough: This species was only discovered in Britain in 1956 at a site on the Norfolk/Suffolk border, in 1988 it was discovered at Pevensey Levels and it has recently been discovered in the Gwent Levels. This species clearly has the ability to remain undetected and the potential habitat areas lie within the relatively inaccessible Eastbourne Park. There are 1990 records for 24 sites within Pevensey Levels, see Figure **7.13**.

Action Required: Targeted survey of the drainage network within Eastbourne Park.

7.68 It is considered unlikely that the following Sussex BAP species occur within the Borough, due to the following reasons:

Plant: Black Poplar *Populus nigra* ssp*. betulifera* – Appears to be largely restricted to West Sussex where 33 individual trees have currently been identified (Black Poplar SAP for Sussex – SWT, 2001 *et seq*.).

Plant: Spiked Rampion *Phyteuma spicata* – Confined to an area between Hadlow Down and Heathfield, therefore does not occur within the Borough.

Invertebrate: Duke of Bergundy *Hamearis lucina* – Restricted to West Sussex, therefore does not occur within East Sussex.

Invertebrate: Marsh Mallow Moth *Hydraecia osseola hucherardi* – The larval foodplant Marsh-mallow *Althaea officinalis* has never been recorded from the Borough, the nearest colonies of the plant occurring in the Cuckmere Valley (Hall, 1980).

Invertebrate: Field Cricket *Gyrillus campestris* – Restricted to West Sussex.

Invertebrate: Scarce Chaser *Libellula fulva* - Does not occur within East Sussex (Belden *et al*.), stronghold being along the River Adur in West Sussex.

8. FLAGSHIP SPECIES WITHIN THE BOROUGH

8.1 In addition to Sussex BAP species, there are also nationally and regionally uncommon species that warrant attention within the Borough. Some of these species, principally mammals, birds, reptiles and amphibians also receive statutory protection under European and national legislation

Key Lichen Species

8.2 Based upon SBRC records for the Borough and the wider Study Area, the following lichens are considered worthy of consideration. They are grouped in accordance with their most likely habitat/feature association:

Chalk Grassland

- *Cladonia convoluta* – A Nationally Rare (RDB3) species found on warm coastal slopes and recorded in the Eastbourne Downland Estate in 1994.

- *Peltigera canina* – A Nationally Scarce dog lichen found on the surface of calcareous soils. Present within the Prince William Parade SNCI [E7] in 2000.

Tree Bark

- *Bacidia incompta* - A Nationally Vulnerable (RDB2) species found on alkaline bark, especially on Elm. Last recorded in 1962, but may survive as Eastbourne is well-endowed with mature elm.

- *Cyphelium notarisii* & *Lecanora sambuci* – The first is a coastal species confined to south-east England, found on tree bark and bare wood (posts and fences); the second a lichen that favours Elder bark. Both regarded as Sussex rarities.

Vegetated Shingle

- *Porpidia soredizodes* – A Nationally Scarce species found on rocks and pebbles. Formerly present on The Crumbles, but may survive in the remnant habitats. Regarded as a Sussex rarity.

- *Diploschistes muscorum, Aspicilia caesiocinerea* & *Cladonia glauca* – Species associated with rocks, pebbles or bare ground. Formerly present on The Crumbles, but may survive in the remnant habitats. Regarded as a Sussex rarity.

Key Lower Plant Species

8.3 Based upon SBRC records for the Borough and the wider Study Area, the following stoneworts, liverworts and mosses are considered worthy of consideration. They are grouped in accordance with their most likely habitat/feature association:

Tree Bark

- **Round-leaved Feather-moss** *Rhynchostegium rotundifolium* – A Nationally Rare moss found on tree boles and exposed roots in hedgerows. Currently only known from perhaps 3 locations in Britain, it was found on a tree in Wilmington in 1991.

Wetland

- **Clustered Stonewort** *Tolypella glomerata* – A Nationally Scarce species associated with temporary pools and draw-down zones, which appears to have been recorded from within Eastbourne Park in 1886.

- **Bristly Stonewort** *Chara hispida* – A stonewort found by The Ash Partnership in one of the drainage ditches within Eastbourne Park in 2005. Currently only known from this and one other site in the County. Regarded as a Sussex rarity.

Key Plant Species

8.4 A provisional floral list of over 425 species from SNCIs, 469 from non-SNCIs, 154 species from Schools and 345 species from Eastbourne Park have been compiled as a result of the Desk Study[4], see Tables **8.1** to **8.4**. These indicate that there is moderately high species richness within the Borough. The species richness is thought to be a consequence of (i) the variety of habitats present, (ii) the unimproved and semi-improved nature of many of the habitats and (iii) the benefit of good botanical recorders having surveyed within the Borough.

8.5 There are a number of nationally and locally restricted species present within the Borough list, and for convenience they have been separated into Natives, Neophytes and Archaeophytes[5]. In addition, where uncommon native species occur within the County as introductions, the additional term County Neophytes has been used.

8.6 Only native species as recognised by Preston *et al*. (2003) have been considered therefore well-known species such as Red Dead-nettle *Galeopsis angustifolia* that occurs within the vegetated shingle have been excluded. Similarly, species for which there appear to be no modern records and were thought to be extinct in Hall (1980), such as Ground-pine *Ajuga chamaepitys*, Deptford Pink *Dianthus armeria* and Field Garlic *Allium oleraceum*, have been excluded.

8.7 The following native species are regarded as the Key Plant Species within the Borough and these have been separated into their respective major habitat types[6]:

[4] Largely based upon SBRC, the 1990 and 2000 survey results, 1998 Sovereign Park survey, 2005 Eastbourne Park survey and lists provided by the County Recorder.

[5] As recognised by Preston *et al*. (2003).

[6] Where species overlap into multiple habitats, the most relevant to the Borough has been used.

Chalk Grassland

- **Small Hare's-ear** *Bupleurum baldense* – Nationally Endangered (RDB1)[7] species, found on Beachy Head at its only known site in Sussex as recently as 1996, this is one of only two mainland populations in Britain.

- **Moon Carrot** *Seseli libanotis* – Nationally Endangered (RDB1) species, a colony on Beachy Head forms one of only three British populations.

- **Early Spider-orchid** *Ophrys sphegodes* & **Lizard Orchid** *Himantoglossum hirsinum* – Nationally Scarce species, respectively regarded as 'very rare' and 'rare' within Sussex (Hall, 1980) and both currently only known from two areas. The majority of the known Early Spider-orchid colonies (at least 5 sites) lie within the Eastbourne Downland Estate.

- **Round-headed Rampion** *Phyteuma orbiculare* & **Field Fleawort** *Tephroseris integrifolia* ssp. *integrifolia* – Nationally Scarce[8] species, restricted to the South Downs, the former at over 10 sites within Eastbourne Downland Estate, the latter at 4 sites in the same area.

- **Burnt Orchid** *Orchis ustulata* – Nationally Scarce species, in Sussex restricted to the Eastern Downs where it is regarded as 'very locally frequent' (Hall (1980), with approximately 9 sites in the Eastbourne Downland Estate.

- **Bulbous Meadow-grass** *Poa bulbosa* & **Early Meadow-grass** *P. infirma* – Nationally Scarce species associated with open trampled short turf, recorded between 1991 and 2000 in the Town and on Beachy Head.

- **Slender Tare** *Vicia parviflora* – Nationally Local species, apparently restricted to downland around Beachy Head and regarded as 'very rare' within Sussex (Hall, 1980). Its current status is unknown.

- **Fragrant Orchid (sub-species)** *Gymnadenia conopsea* ssp. *densiflora* – Nationally Local[9] sub-species, in Sussex restricted to the South Downs (Hall, 1980).

- **Eyebrights** *Euphrasia pseudokerneri* & *E. tetraquetra* - Nationally Local species, the former regarded as 'rare' within Sussex (Hall, 1980) and known from 2 sites one as recently as 2000, the latter re-found at Beachy Head and identified as recently as 1994.

[7] Nationally Endangered – A species that has shown a rapid continuous decline over the last 20 years and now exists at five or fewer 10 km squares. In danger of extinction if causal factors continue to operate.

[8] Nationally Scarce – A species recorded from between 16 to 100 10 km squares of the National Grid since 1980.

[9] Nationally Local – A species recorded from between 100 to 500 10 km squares of the National Grid since 1980.

- **Narrow-leaved Bird's-foot-trefoil** *Lotus glaber* & **Corn Parsley** *Petroselinum segatum* – Nationally Local species, regarded as 'occasional' within Sussex (Hall, 1980).

- **Clustered Bellflower** *Campanula glomerata*, **Early Gentian** *Gentianella anglica* (2 sites), **Horseshoe Vetch** *Hippocrepis comosa*, **Chalk Milkwort** *Polygala calcarea* (2 sites), **Bastard-toadflax** *Thesium humifusum* (over 5 sites) & **Squinancywort** *Asperula cynanchica* – Nationally Local species, the Sussex stronghold being on the South Downs.

- **Field Mouse-ear** *Cerastium arvense* – Nationally uncommon species regarded as 'occasional' on the South Downs (Hall, 1980).

- **Dwarf Gorse** *Ulex minor* – Nationally Local species, appears to have been recorded on the South Downs and the habitat type is therefore presumed to be Chalk Heath. Its current status is unknown.

Maritime Cliffs

- **Rock Sea-lavender** *Limonium binervosum* ssp. *binervosum* – Nationally Vulnerable (RDB1) species, restricted to eastern sea cliffs of the South and North Downs in the UK, and sea cliffs in North-Western France. Recorded from cliffs in the Holywell area in 2000.

- **Golden-samphire** *Inula crithmoides* – Nationally Scarce species, occurring within the Borough at its only known site in Sussex. No information has been acquired on the habitat it is associated with but this is likely to be either cliff or harbourside.

Rock Samphire *Crithmum maritimum* – Nationally Local species, regarded as 'occasional' within Sussex (Hall, 1980) and occurs at the base of the seafront promenade.

Vegetated/Bare Shingle[10]

- **Nottingham Catchfly** *Silene nutans* – Nationally Scarce species, recorded near Langney Point in 2000 and regarded as '*very rare*' within Sussex (Hall, 1980).

- **Sea Pea** *Lathyrus japonicus* – Nationally Scarce species, regarded as 'rare' within Sussex (Hall, 1980). Its current status is unknown.

- **Ray's Knotgrass** *Polygonum oxyspermum* & **Sea Radish** *Raphanus rhaphanistrum* ssp. *maritimus* – Nationally Local species, recorded from Prince William Parade SNCI [E7] in 2000 and regarded as 'very rare' within Sussex (Hall, 1980).

- **Rough Clover** *Trifolium scabrum*, **Knotted Clover** *T. striatum* & **Subterranean Clover** *T. subterraneum* – Nationally Local species, regarded as 'occasional' within Sussex (Hall, 1980).

[10] Includes patches of sand.

- **Sea-kale** *Crambe maritima*, **Yellow-horned Poppy** *Glaucium flavum* & **Sea Couch** *Elytrigia atherica* – Nationally Local species, regarded as 'locally frequent' within Sussex (Hall, 1980).

- **Frosted Orache** *Atriplex laciniata* – Nationally uncommon species (524 10km squares) regarded as 'rare' within Sussex (Hall, 1980) and apparently restricted to Sovereign Harbour.

Wetland

- **Sharp-leaved Pondweed** *Potamogeton acutifolius* – Nationally Rare aquatic species restricted to species-rich calcareous watercourses, regarded as 'rare and local' within two locations in Sussex (Hall, 1980). Recorded from Langney Sewer as recently as 2000.

- **Fen Pondweed** *Potamogeton coloratus* – Nationally Local aquatic species restricted to calcareous watercourses, re-found in 2005 within a few drainage ditches within Eastbourne Park, this is the only site in Sussex.

- **Blunt-flowered Rush** *Juncus subnodulosus* & **Hair-like Pondweed** *Potamogeton filiformis* – Nationally Local species, respectively regarded as 'very rare' and 'rare' within Sussex (Hall, 1980). The former was found in 2005 in Eastbourne Park and this is the only known colony in East Sussex.

- **Frogbit** *Hydrocharis morsus-ranae*, **Opposite-leaved Pondweed** *Groenlandia densa*, **Bladderwort** *Utricularia australis* & **Narrow-leaved Water-plantain** *Alisma lanceolatum* - Nationally Local aquatic species, respectively regarded as 'occasional to locally frequent' within Sussex (Hall, 1980).

Neutral Dry Grassland

- **Fiddle Dock** *Rumex pulcher*, **Pale Flax** *Linum bienne* & **Corn Parsley** (8 sites)– Nationally uncommon species (580 10km squares) regarded as 'occasional to locally frequent' within Sussex (Hall, 1980).

Disturbed Ground

- **Yellow Vetch** *Vicia lutea* – A Nationally Scarce species regarded as 'rare' within Sussex (Hall, 1980), forming a large colony in the car park at the Miniature Railway in Eastbourne Park in 2005.

- **Dittander** *Lepidium latifolium* – Nationally Local species regarded as 'rare' within Sussex (Hall, 1980), occurring at 2 sites within the Borough as a casual record, the most recent in 2000.

- **Broad-leaved Spurge** *Euphorbia platyphyllos* – Nationally Scarce species regarded as 'occasional' within Sussex (Hall, 1980), present along the embankments of Cross Levels Way in 2005.

Woodland

- **Green Figwort** *Scrophularia umbrosa* – Nationally Local species, formally regarded as 'very rare' in Sussex (Hall, 1980) a single colony within the Borough at Wannock Glen found in 1996 is now its only known site in Sussex.

- **Yellow Bird's-nest** *Monotropa hypopitys* – Nationally Local species, regarded as 'rare' within Sussex (Hall, 1980) and occurring within the Borough along Jevington Road in Wannock as an apparently introduced colony.

- **Greater Burnet-saxifrage** *Pimpinella major* – Nationally uncommon species, formally regarded as 'very rare' in Sussex (Hall, 1980) a single colony within the Borough at Wannock is now its only known site in Sussex.

8.8 The following introduced species is also regarded as being of importance within the Borough as it has been selected as a Sussex BAP species:

- **Pheasant's-eye** *Adonis annua* – Nationally Scarce Archaeophyte species, restricted within the County to the Eastern Downs. This species is considered indicative of more sympathetic traditional farming practices.

Key Invertebrate Species

8.9 There is an extensive amount of invertebrate data available as a result of ecological assessment of The Crumbles in the mid-1970's and further records from the 1980's and 1990's. This area was subsequently developed from the 1990's onwards and there is little of the original ecology remaining. Where habitat persists it has invariably been disturbed. The usefulness of this data is therefore questionable, as a more recent survey is certainly required to confirm the potential for the remaining habitat areas. However, in the absence of a better data the more uncommon species previously found here have been included.

8.10 There is extensive wetland invertebrate data from Montague Farm on Hankham Level, part of the nearby Pevensey Levels SSSI. This is hydrologicaly linked with Eastbourne Park but, as this site lies approximately 2km distant from the Borough boundary, these species have been omitted.

8.11 A considerable list of Lepidoptera (butterfly and moth) records was retrieved from the County Recorder for the Borough and the surrounding 2km radius Study Area, covering the period 1980 to 2006. However, no locational information was provided or dates, and therefore this data was of limited value.

Chalk Grassland

- **Silver-spotted Skipper** *Hesperia comma* – Nationally Rare (RDB3)[11] and a UK BAP Priority species, recorded from at least 4 locations on the Eastern Downs within the Borough in recent years.

- **Adonis Blue** *Lysandra bellargus* – Nationally Scarce butterfly which is subject to a UK BAP.

- **White-letter Hairstreak** *Satyrium w-album* – Nationally Scarce butterfly last recorded two decades ago.

- **Grayling** *Hipparchia semele* – A declining species that is threatened with extinction in Sussex.

- **Barred Tooth Striped Moth** *Trichopteryx polycommata* – A Nationally Scarce moth that feeds on Wild Privet, and receives targeted management in part of the Eastbourne Downland Estate.

- **The plume moths** *Platytes alpinella* and *Cynaeda dentalis* – Both Nationally Rare (RDB3) species only known from Beachy Head within the Borough.

- **Toadflax Brocade** *Calophasia lunula* – A Nationally Rare (RDB3) and UK BAP Priority Species only known in the County from waste ground at the western end of the Crumbles and further along to Bexhill.

- **The Pyralids** *Mecyna flavalis* and *Cnaemidophorus rhododactyla* – Both Nationally Threatened (RDB2) species, the former only known from Wilmington Downs and the latter only from Beachy Head.

- **The dung beetle** *Aphodius consputus* – Nationally Rare (RDB3) species from Jevington Downs in 1978.

- **Carthusian Snail** *Monacha cartusiana* – Nationally Rare (RDB3) species mostly restricted to the eastern ends of the North and South Downs, and recorded on Beachy Head in 1994.

- **The Capsid bug** *Placochilus seladonicus* & **rove beetle** *Alevonota gracilenta* – Insufficiently known (RDBK) species recorded from the Eastbourne Downland Estate in 1989 and 1974 respectively.

- **Bomardier Beetle** *Brachinus sclopeta* – Nationally Endangered (RDB1) species associated with cliff edge habitat, recorded from the Eastbourne Downland Estate in 1990.

- **The ground beetles** *Aepus marinus*, *A. robini*, *Amara consularis*, *Zabrus tenebrioides*, *Harpalus ardosiacus*, *H. azureus*, *H. cordatus* and *H. parallelus*; the leaf beetle *Longitarsis anchusae*; the weevils *Trachyphloeus asperatus*, *T. spinimanus*, *Strophosoma faber* and

[11] Nationally Rare – A species that exists as small populations, which are localised or thinly scattered, and is nationally at risk.

Baris picicornis - Nationally Scarce species recorded from the Eastern Downs between 1974 and 1990.

- **The rove beetle** *Silusa rubiginosa* – Nationally Scarce species recorded from Compton Place in 1974.

Woodland

- **The darkling beetle** *Scaphidema metallicum* – A Nationally Scarce species recorded from Eastbourne Downland Estate in 1975.

- **The false-darkling beetle** *Orchesia micans* – A Nationally Scarce species recorded from Compton Place in 1974, associated with bracket fungi on trees.

Wetland

- **Shining Ramshorn** *Segmentina nitida* – Nationally Vulnerable (RDB2)[12] species, only known in the Borough from Eastbourne Park where it was recorded in 2005. There are nearby populations on Pevensey Levels.

- **Wide-mouthed Valve Snail** *Valvata macrostoma* – Nationally Rare (RDB3) species, only known in the Borough from Eastbourne Park where it was recorded in 2005. There are nearby populations on Pevensey Levels.

- **False Orb Pea-mussel** *Pisidium pseudosphaerium* – A Nationally Rare (RDB3) species known from the nearby Pevensey Levels. Un-recorded from the Borough but might well be present within Eastbourne Levels.

- **Great Silver Diving Beetle** *Hydrophilus piceus* and the water beetles *Hydrochus elongatus & H. ignicollis* – Nationally Rare (RDB3) species recorded as recently as 1999 to 2005.

- **The water beetles** *Cercyon lugubris, lividus* - Nationally Scarce species recorded from Borough sites in 1974 to 1978.

- **Variable Damselfly** *Coenagrion pulchellum* – A Nationally Scarce species known from the Hankham and Pevensey Levels. Un-recorded from the Borough but might well be present within Eastbourne Levels.

- **A water boatman** *Microvelia pygmaea* – Formerly present in open water within The Crumbles, may persist in other waterbodies within the Borough.

- **The water beetles** *Haliplus heydeni*, *Hydaticus seminiger*, *Dytiscus circumflexus*, *Helophorus griseus*, *Cercyon lugubris*, *Helochares lividus* – Nationally Scarce species recorded from the Borough over the period 1978 to 2005.

[12] Nationally Vulnerable – A species considered likely to move into 'Endangered' category in the near future, most or all populations are declining and under threat from adverse factors.

Neutral Grassland/Scrub

- **Grey Bush-cricket** *Platycleis albopunctata* - A Nationally Scarce species recorded near Eastbourne Hospital in 1955, might still persist.

Vegetated Shingle & Bare Ground

- **Bombardier Beetle** *Brachinus sclopeta* – Nationally Endangered (RDB1) species recorded from the Crumbles in 1972.

- **The woodworm beetle** *Caenocara bovistae* & **beetle** *Trixagus elateroides* – Nationally Rare (RDB3) species recorded from The Crumbles between 1972 and 1991.

- **Various bugs** *Legnotus picipes*, *Megalonotus sabulicola*, *Tropistethus holosericeus*, *Drymus latus* and *Oliarus panzeri* – All Nationally Scarce species formally present on The Crumbles, but may survive in the remnant habitats.

- **Ground beetles** *Trechus fulvus*, *Bembidion nigropiceum*, *B. decorum*, *B. clarki*, *Calathus cinctus*, *Harpalus ardosiacus*, *Licinius punctatulus* and *Cymindis axillaris*; and rove beetles *Lithocharis obscurella*, *Philonthus fumarius*, *Ocypus nero*, *Quedius ventralis*, *Silusa rubiginosa*, *Dacrila fallax*, *Oxypoda lurida* and *Aleochara ruficornis*; the malachite beetle *Malachius marginellus*; the weevil *Rhynchites tomentosus* and *Ceutorhynchus geographicus* - Nationally Scarce species formally present on The Crumbles, but may survive in the remnant habitats.

Key Protected Species

8.12 **Badger** *Meles meles* - This species appears to be relatively widespread within the western half of the Borough, where its setts are associated with grassland and scrub-covered banks. The abundance of grassland and secondary woodland provides good foraging habitats, interlinking with arable crops and dewponds.

8.13 **Dormouse** *Muscardinus avellanarius* – There are no records for this species within the Borough. This may reflect the former scarcity of woodland and hedgerows within the Borough. Although there is now extensive woodland cover on the eastern slopes of the Downs, the lack of colonising sources may account for its absence. However, this species is also notoriously under-recorded.

8.14 Bats – There are records for no less than 8 species of bat from the wider 5km radius Study Area, see Figure **8.1**, although the majority are of four species, these being as follows:

- **Brown Long-eared Bat** *Plecotus auritus*

- **Common Pipistrelle** *Pipistrellus pipistrellus*

- **Serotine** *Eptesicus serotinus*

- **Whiskered Bat** *Myotis mystacinus*

8.15 In addition, **Daubenton's Bat** *M. daubentonii* and **Soprano Pipistrelle** *P. pygmaeus* have been recorded within the nearby Seven Sisters Country Park on the Downs, while **Natterer's Bat** *Myotis nattereri* has been recorded from the Cuckmere Valley in Alfriston.

8.16 A single record for **Party-coloured Bat** *Vespertillio murinus* from Eastbourne in 2005 represents a vagrant and is not considered further.

8.17 **Harbour Porpoise** *Phocoena phocoena* – There are periodic records for this species off the Borough Coast since the 1940's, and occasional individuals are still observed. Recent distribution patterns demonstrated by JNCC (2003) did not identify any significant number of individuals.

8.18 **Common Bottlenose Dolphin** *Tursiops truncatus* – There are incidental repots for this species off the coast. The distribution of recent records in the English Channel demonstrated by JNCC (2003) identified individuals in the vicinity of Rye Bay and individuals may wander further, see Figure **8.3**.

8.19 **Common Seal** *Phoca vitulina* – Very occasional individuals are observed along the shoreline and in the Outer Harbour, the author having observed individuals in 2005 and 2006.

8.20 Reptiles – There are records for 4 species of reptile, see Figure **8.2**, these being as follows:

- **Slow Worm** *Anguis fragilis* – Relatively widespread within the Borough.

- **Common Lizard** *Lacerta vivipara* – Recorded nearby at Polegate by the author in 2007, and almost certainly occurring relatively widespread through the Borough.

- **Grass Snake** *Natrix natrix* – Recorded from a number of locations within Eastbourne, mainly Eastbourne Park and probably areas linked to its drainage network.

- **Adder** *Vipera berus* – Mostly recorded on the Downs but some records also along the western side of the town. Rabbit control on the Downs is highlighted as a particular threat to this species as they frequently occur within Rabbit holes.

8.21 Amphibians – There are records for the following three species:

- **Great Crested Newt** *Triturus cristatus* – There only appear to be records from dewponds on the Downs, although there is a recent record from a pond near Westham. 60% of the records in the database are for post 1990. The SARG Millenium Report (2000)

refers to records for 5 Great Crested Newt Sites within the Borough, all on the Downs and none in the Town Centre.

- There were 2005 records for Smooth Newt *Triturus vulgaris* and Palmate Newt *T. helveticus* from Eastbourne Park. The SARG Millenium Report (2000) indicates that there are further records for amphibians other than GCN, but there is no further information on these records.

Notifiable Weeds & Invasive Species

8.22 Interestingly, there are few records for notifiable and/or invasive species from the Borough. The relatively detailed survey of Eastbourne Park in 2005, covering an extensive area of the Borough recorded few such species.

8.23 Disturbed ground weeds such as Japanese Knotweed *Fallopia japonica* are present in places[13] but appear to be localised, whilst invasive wetland species such as Floating Pennywort *Hydrocotyle ranunculoides* and Water Fern *Azolla filiculoides* that are present within the nearby Pevensey Levels currently appear to be absent.

[13] The author is certainly aware of significant colonies in Willingdon and Langney.

9. LAND MANAGEMENT

East Downs

9.1 The Eastbourne Downland Estate, which includes both downland SSSIs, is currently managed by Eastbourne Borough Council and a Draft Management Plan was produced in Spring 2007.

9.2 Both of the SSSIs are currently regarded as being in very good condition as a result of the management regime. *Willingdon Down* SSSI is regarded as being in 100% favourable condition while *Seaford to Beachy Head* SSSI is regarded as being 77.29% in favourable condition, with the remainder (22.71) in unfavourable but recovering condition.

SNCIs within the Borough

9.3 The majority of the SNCIs within the Borough require some form of management to maintain their ecological interest. Most require some form of grass cutting to reduce the vigour of the grasses and to halt the spread of colonising scrub. On the whole, most of the SNCI resource within the Borough appears to be maintaining its ecological interest, in particular:

- *Ocklynge Cemetery* SNCI [E86] – A favourable grass mowing regime appears to be in place.
- *Upper Duke's Drive* SNCI – The Borough Council mow the verge in mid/late summer to allow plants to set seed.
- *Willingdon Roundabout* SNCI [E98] – The Borough Council mow the verge in mid/late summer to allow plants to set seed.
- *Langney Levels* SNCI [E1] – Appear to be maintained by cow-grazing at relatively low levels.
- *Hampden Park & Ham Shaw* SNCI [E117] – Well maintained to cope with considerable visitor pressure, set aside quiet areas with little or no public access evident.
- *Langney Sewer* SNCI [E4], *Crumbles Sewer* SNCI [E18] & *Horsey Sewer* SNCI [E29] – Principal watercourses maintained by periodic dredging in sections by the Environment Agency.
- *Langney Centre Pond* [E21] – Maintained with a fringing woodland edge and restricted access.
- *Prince William Parade* SNCI [E7] – Park Wardens patrol here to deter motorbikes, the central boardwalk is very effective at controlling access.

- *Sovereign Harbour Beaches* [E118]– New block stone walkway controls public access and a vegetation shingle community with tall ruderal plants is now developing.

9.4 There are three SNCIs that appear to be scrubbing over incrementally and will soon require urgent intervention to retain their ecological value. These are:

- *Hollywell & Crows Nest Steps* SNCI [E77] – Ornamental scrub threatens to shade out the chalk grassland. Steps urgently required to undertake scrub clearance, accompanied by systemic herbicide treatment of cut stumps (Glyphosate recommended) over winter period.

- *Eastbourne College War Memorial Field* SNCI [E89] – Mature trees require coppicing and/or removal to retain the chalk grassland.

- *Leeds Avenue Reed Bed* SNCI [E116] – Scrub is very evident around the edge of the reedbed and should be cleared back in sections to prevent the reeds dying back. Should be undertaken in phases over two or three years during the winter period, the cut stumps to be treated with a systemic herbicide (Glyphosate recommended).

9.5 A few of the SNCIs are in indeterminate state and require further information on their past condition and discussions on their future management. These include:

- *Langney Crematorium* SNCI [E14] – The ecological interest at this Site appears to have largely disappeared, and this may be due to unfavourable grassland management. The Local Authority should seek dialogue on a more favourable approach to management.

- *The Coppice* SNCI [E96] – No management is evident here as this in completely within a private dwelling. At the same time, woodland is a relatively resilient that does not always require regular management.

- *Ocklynge Pit* SNCI [E101] – Dumping of materials in the pit floor is suspected based on the aerial photographs and glimpses from the gated entrance. Scrubbing up within the pit suspected, which will lead to a decline in the chalk grassland interest though favouring the woodland resource. Clarification on status of the SNCI and agreement with landowner on a way forward urgently required.

10. DEVELOPMENT CONTROL

10.1 The Eastbourne Borough Local Plan (2001 to 2011) adopted in September 2003 sets out the framework of planning policies for addressing the natural resources within the Borough in relation to agreed allocations and development control.

10.2 The relevant planning policies in the Local Plan are reviewed in this section to confirm whether they support the various nature conservation and geological conservation designations, the presence of protected and/or uncommon species, and aspirations for a Borough-wide Green Network.

Natural Environment Policies

10.3 Relevant Policies are regarded as **NE1**, **NE9**, **NE10**, **NE13** to **NE15** and **NE19** to **NE26**, each of which is discussed sequentially below:

Policy NE1: Development Outside the Built-up Area Boundary

Development will not be permitted outside the built-up area boundary as defined on the Proposals Map. Exceptions will only be made where:

a) the proposal is specifically identified elsewhere in this Plan; or
b) the need for a non-urban location can be satisfactorily demonstrated and the proposed development complies with the following considerations:
(i) the development reflects the countryside setting and character, and would be appropriate to the location. In particular developments within the Area of Outstanding Natural Beauty (AONB) will be required to comply with Policy D1 of this Plan. Planning approval for developments in Downland areas outside the AONB will be subject to the same constraints as those within it;
(ii) any buildings are designed to a high standard in terms of siting, scale and materials wherever possible reflecting local distinctiveness and locally sourced materials; would not be visually intrusive; and would include appropriate landscape screening;
(iii) the development does not have an adverse transport impact;
(iv) any nature conservation and archaeological interests on the site are protected;
(v) the development does not adversely affect residential, visual or environmental amenity (see Policies HO20, UHT4 and NE28).

Planning approval will not be granted for development, other than for the needs of agriculture and recreation use, within the countryside gap between Eastbourne/Westham/Pevensey/Pevensey Bay subject to no adverse effect on residential, visual or environmental amenity.

10.4 This Policy should ensure that there are no adverse development incursions that could impact upon designated SSSIs within the Borough, as these all lie within the Downland preserves immediately south of the built-up area boundary.

10.5 The built-up area boundary is approximately consistent with the AONB boundary, and Policy **NE1** and therefore further re-enforced along the SSSI

boundaries by Policy **D1** which seeks to resist development that could harm the AONB designation.

10.6 The intention of Policy **NE1** is also to maintain a countryside gap between the Langney Rise/Sovereign Harbour North neighbourhoods and Pevensey Bay. This is achieved by the consolidation of countryside gaps within Eastbourne Borough and the adjacent Wealden District Council, as shown on Plan 2 of the Local Plan. Considerable protection is therefore available to retain this land during the remaining four year period of the Local Plan.

10.7 However, the weakness of Policy NE1 lies in the precedence for residential housing within Wealden District immediately outside the built-area boundary in the areas of (i) Wannock/Willingdon Village, (ii) north of Willingdon Trees and (iii) east of North Langney neighbourhood areas, respectively. The latter developed area lies with the eastern countryside gap created by Wealden District.

10.8 The effectiveness of Policy **NE1** and ability for the Local Authority to effectively apply the Policy along the eastern Borough boundary is therefore questioned.

10.9 The remainder of the built-up area boundary lies internally within the Borough, running around the perimeter of Eastbourne Park. The intention is clearly to resist development at the Park boundary, yet there are a series of residential housing, mixed and light industrial allocations as well as link road proposals defined within the Park, i.e. outside the built-up area boundary.

10.10 From a nature conservation standpoint, the built-up area boundary surrounding Eastbourne Park would appear to serve little effective purpose, as the successive approval of each allocation would set precedents to permit further infilling.

10.11 At the same time, planning approval would require each of the allocations to address the floodplain implications under **PPS25** as well as the biodiversity impacts under **PPS9**, the latter in the light of the Eastbourne Park Biodiversity Audit Report (The Ash Partnership, November 2005). These guidance documents would pose considerable constraints on the type of development that could be permitted within each allocation.

Policy NE9: Roselands Avenue Household Waste Site

In the event that the use ceases at the Roselands Avenue Household Waste Site it should be used for residential purposes.

10.12 Should the Roselands Avenue Household Waste (RAHW) Site become vacant, it is presently allocated for residential development in the Local Plan.

10.13 This Site could be considered for its potential role as part of a Green Network within the Borough. The following considerations are presented:

- The Site could provide a further stepping stone for a corridor running between Princes Park and the seafront in the east and Eastbourne Park in the west.
- Interlinking sites would include areas of open space along Seaside and Roselands Road, a housing allocation between St Philips Avenue and Astaire Avenue (highlighted on the Proposals Map) and the *Horsey Sewer* SNCI [**E29**].
- The housing allocations land is currently being developed for housing.
- The intervening stepping stones mostly provide isolated pockets of amenity grassland and boundary trees within a very dense residential area.

10.14 It would certainly be desirable to create the rudiments for a functional corridor that could interlink the seafront with Eastbourne Park but (i) the use of the RAHW Site and disperate areas of open space is certainly far from ideal and (ii) there is an adjacent more functional corridor that would be favoured, this running north from the eastern end of Princes Park (east of Lottbridge Drove) across St Anthony's Avenue to Eastbourne Park via the *Crumbles Sewer* SNCI [**E18**] and *Leeds Avenue Reed Bed* SNCI [**E116**].

10.15 Given the pressure to meet the regional housing targets set by the draft South East Plan (SEERA, March 2006), it is recommended that it would be more appropriate to use this Site for its intended housing allocation (under PPS9 guidance), and focus on a more effective northerly corridor linked with Princes Park.

Policy NE10: Bedfordwell Road Depot

A site is reserved for the extension of the Bedfordwell Road Depot. In the event that the depot use ceases at this location, the existing or extended depot site should be used for residential purposes with the retention of the engine and boiler house building provided there is no requirement for any other waste use.

Satisfactory arrangements to ensure retention, future maintenance and use of this building will be material to favourable consideration of redevelopment of any part of the site.

10.16 It is understood that this Site has not yet been granted full planning permission, and that the developer is currently drawing up a flood risk assessment.

10.17 No access was available into the Site during the 2005 surveys for the Eastbourne Park Biodiversity Audit, but the following issues are worthy of consideration:

- Given the location of this Site along the main south-east to north-west railway corridor, retention of habitats along the eastern side of the Depot should be given consideration and/or combined with native landscaping, to enhance the corridor area and buffer against disturbance from the Depot.

- There is a drain running along the western boundary of the Site, linked with further drains running along Tutts Barn Lane, and this should ideally be retained, protected from pollution and enhanced.

- The drainage network around Tutts Barn contains an important concentration of uncommon wetland plants including a colony of Fen Pondweed (for which this and another area within Eastbourne Park provide the only known population in Sussex) and therefore measures to prevent surface water contamination during the construction and operation of the Depot should be sought.

- Any means of increasing the area of surface water drainage within the Depot by means of connected/soakaway drains and/or reedbeds would clearly be beneficial.

- Enhancement of the Depot could both strengthen the railway corridor running through the Site, and retain buffering habitats at the periphery of Eastbourne Park.

Policy NE13: Pollution Mitigation Measures

Planning approval for developments which pose a risk of pollution to air, land or water, will be required to incorporate adequate pollution control measures. Planning permission will be refused where it is considered that a development poses an unacceptable risk of pollution.

Policy NE14: Source Protection Zone

Within the Source Protection Zone shown on the Proposals Map planning permission will be refused for developments that pose an unacceptable risk of pollution to the aquifer.

Policy NE15: Protection of Water Quality

Planning permission will be refused for development which will result in an unacceptable risk to the quality or potential yield of surface and groundwater resources.

10.18 The low-lying nature of central area of Eastbourne Borough has resulted in the extensive flood storage area within Eastbourne Park and, coupled with the extensive drainage network, reedbeds and damp coastal grassland, has resulted in a considerable wetland interest within the Park. This includes 35 nationally uncommon plants as well as numerous nationally uncommon wetland invertebrates and birds. Many of the SNCIs similarly also have considerable wetland interests, especially those formed around the principal sewer network.

10.19 These habitats and species are intimately dependant upon water supply and quality, and therefore strict application of Policies **NE13** to **NE15** is considered necessary to prevent indirect adverse impacts. It is recommended that consideration should also be given to the cumulative effects of the more significant developments.

10.20 Where development sites have (i) potential to influence water supply and/or quality in the Park, (ii) could provide wetland habitats that could buffer or otherwise enhance Eastbourne Park or (iii) could contribute towards corridors within the Green Network, the Local Authority could seek appropriate contributions as land and/or a commuted sum for habitat creation/management elsewhere. In this case, it may be appropriate for the Local Authority to seek the contribution at the start.

10.21 Wherever possible, it is recommended that development should be required to adopt Sustainable Drainage Systems (SuDs) approach, seeking to allow surface water to enter the ground rather than be allowed to run off. This is achieved through the use of porous surface materials, by discharging into swales and attenuating storm flows using balancing ponds. Adopting the SuDs approach thereby provides ecologically valuable features within the site and helps to minimise run-off within the overall catchment.

Policy NE19: Local Nature Reserves

Where a local nature reserve has been designated planning permission will not be granted for development which has an unacceptable impact on the nature conservation interest of the site, either directly or indirectly.

10.22 Local Authorities can designate Local Nature Reserve (LNR) status on land that is either of (i) inherently high ecological/geological value, (ii) of potential ecological/geological value or (iii) of significant community value. The designation is made under the National Parks and Access to the Countryside Act 1949.

10.23 The designation can be used to confirm commitment to safeguarding critical natural assets and could also be used to help deliver critical parts of the Green Network. LNR status is a statutory designation and therefore confers far more protection than an SNCI listing and consideration within the Local Plan.

10.24 This designation can also be very effective for attracting grant sources which in turn can be used to help the Local Authority meet any set up costs. This might include rationalising public access and interpretation, as well as providing funding for the site management.

10.25 Eastbourne Borough Council has yet to set up any LNR's within the Borough. Examples of candidate sites that could benefit from LNR status would include the following:

- Parts of Eastbourne Park with Zones ELW[14] and ELE – to safeguard some of the best examples of the wetland interest.
- *Hampden Park and Ham Shaw* SNCI [**E117**] – to focus on an integrated approach between woodland management and public access.

[14] Zones are defined in para. 3.4 of the Eastbourne Park Biodiversity Audit (The Ash Partnership, November 2005), see also the Phase I Habitat Plan.

- *Leeds Avenue Reed Bed* SNCI [**E116**] – to create an exciting boardwalk resource for local schools and environmental education.

Policy NE20: Sites of Nature Conservation Importance

Development which has an unacceptable adverse effect, directly or indirectly, on the nature conservation interest of a site identified as a Site of Nature Conservation Importance will not be permitted. Where proposals are permitted the Planning Authority will require the proper conservation management of Sites of Nature Conservation Importance. (See Policy NE22).

10.26 There are currently 19 SNCIs designated in the Borough as set out in *Designated Sites of Nature Conservation Interest Supplementary Planning Guidance* (Eastbourne Borough Council, April 2003) and presented on the Borough Plan Proposals Map adopted September 2003.

10.27 This has been effective at safeguarding 19 sites, and a detailed assessment of the quality and management status of these sites during the period 2000 to 2007 has not been confirmed. At the same time, two (11%) of the SNCIs have been damaged during this period as follows:

- *Highfield Industrial Estate* SNCI [**E38**] – This has been effectively destroyed as a result of industrial development within the Site. Only the northern watercourse and bankside vegetation appear to have survived.

Interestingly, although this SNCI was designated on the grounds of its nature conservation interest, the site was developed under Policy **BI4,** but despite the commitments of Policies **NE20** and **NE22** the only mitigation was the planting of a tree screen along the northern boundary.

- *Ocklynge Pit* SNCI [**E101**] – This appears to have been partially/completely in-filled, but cannot be confirmed due to restricted access.

10.28 If the Borough Council regards these sites as part of its critical natural assets, then it may be appropriate to seek LNR status or management agreements with the various site owners in order to safeguard the interest. While Policy **NE20** may provide effective development control if vigorously enforced, in the absence of any means of directing the site management, habitat quality within the SNCI may be allowed to deteriorate. The latter can often be through neglect such as scrub invasion of open grassland or the silting up of wetland features.

10.29 This Report reviews the status of the current SNCIs within the Borough and makes recommendations (i) for their retention or de-notification and (ii) for additional sites to be given consideration, see section 13.

10.30 The wording of Policy **NE20** of the Local Plan allows for the inclusion of future SNCI within Eastbourne and their subsequent safeguarding.

10.31 There are also 2 marine SNCIs (mSNCIs) in the sub-tidal area immediately offshore, therefore outside the Borough boundary. It is recommended that

Policy NE20 should also make reference to these designations and place a similar obligation towards their protection, as landward schemes can bridge the boundary between the Borough and Crown Estate, such as outfalls and piers etc.

Policy NE21: Nature Conservation in Eastbourne Park

A detailed assessment of the nature conservation value of the site, including consideration of:

a) the site's wider importance within the area; and
b) how the nature conservation interest will be maintained and managed, will be required for all planning applications within the Eastbourne Park area, defined on the Proposals Map.

Planning permission for development of sites of importance for nature conservation within the Eastbourne Park will be contingent upon measures to maintain the sites nature conservation value and to secure effective nature conservation management.

Planning permission will be refused where a valuable habitat would be lost or significantly damaged and suitable compensatory provision is either not proposed or would be inappropriate. (see Policy NE22 below).

10.32 The Borough Council has fulfilled its intention to assess the nature conservation interest of Eastbourne Park through commissioning the *Eastbourne Park Biodiversity Audit Report* (The Ash Partnership, November 2005). This clearly sets out the habitat and species interests associated with the Park as defined on the Proposals Map.

10.33 A draft *Eastbourne Park Management Plan (incorporating a Water Level Management Plan)* has been jointly drawn up by East Sussex County Council, Eastbourne Borough Council and Bullens Consultants. This will be used to inform any future Development Plan document in relation to the Park.

10.34 The nature conservation value of Eastbourne Park has been confirmed as being of national importance, i.e. worthy of SSSI status on account of the habitats present and the exceptional number of nationally and regionally uncommon species. There is also internationally important archaeology in the underlying waterlogged ground and the Park is pivotal for flood management within the Borough. While the fate of the Park receives considerable attention within the Local Plan, none of its constituent parts currently have any form of statutory or non-statutory nature conservation designation to help safeguard this interest.

10.35 As set out in para. 10.13, planning approval would require each of the allocations to address the floodplain implications under PPS25 as well as the biodiversity impacts under PPS9, the latter in the light of the *Eastbourne Park Biodiversity Audit Report*. These guidance documents would pose considerable constraints on the type of development that could be permitted within each of the Local Plan allocations.

Policy NE22: Wildlife Habitats

Development will not be permitted that will destroy or has an unacceptable adverse effect on the following habitats which are considered to be of particular nature conservation value in Eastbourne and cannot be satisfactorily moved or replaced under any circumstances:

a) flower-rich old grassland (acid or neutral);
b) flower-rich chalk grassland;
c) ancient species-rich hedgerows;
d) ancient coastal shingle ridges;
e) wave-cut platform.

Development proposals which would result in the loss of any habitats listed below will be required to provide for their relocation or for the creation of equivalent habitat of sufficient size to fully compensate for the loss elsewhere within the site or local area.

a) ponds and reed beds;
b) floodplain grasslands;
c) wet drainage ditches;
d) secondary broad-leaved woodland;
e) scrub of value to breeding birds;
f) semi- improved grassland;
g) disturbed but naturally re-vegetated shingle.

Planning permission will be refused where proposals for relocation or creation of equivalent habitats are considered to be unsatisfactory.

10.36 If vigorously enforced, Policy **NE22** provides a very effective means of development control given the high ecological value of the many of the open spaces within the Borough and the constraints imposed by the limited land availability.

10.37 There is a clear synergy between Policies **NE20** and **NE22**, as any development that might result in adverse impacts upon an SNCI resource would need to provide an appropriate package of compensation and mitigation measures. These combined Policies can be an effective mechanism for development control, but depend upon development control recognising the potential for habitats and/or species to be impacted.

10.38 The intention of this Report is to provide a basic checklist for the ecological assessment of brownfield and amenity sites, as well any developments involving non-statutory designated sites.

Policy NE23: Nature Conservation of Other Sites

Planning permission will be refused for developments which would have a significant adverse effect, either directly or indirectly, on a habitat and/or species of flora and fauna of demonstrable nature conservation importance.

Proposals which would increase the number, size and diversity of areas of nature conservation interest will be permitted subject to compliance with other policies in this Plan

10.39 If vigorously enforced, Policy **NE23** provides an effective means of development control on sites that are not currently worthy of SNCI status, yet still contain ecologically valuable habitats and/or protected species. This can include sites that are currently in unfavourable condition that could, with appropriate management, be enhanced and merit future SNCI status.

Policy NE24: New Development in Eastbourne Park

New developments within Eastbourne Park which are in accordance with the designated use for the site, as set-out on the Proposals Map, and which conform to other plan policies, particularly those for nature conservation, will be permitted provided that the following criteria are met:

a) where changes are proposed to the existing landform these should provide a more distinctive landscape with areas of parkland, woodland, lakes (and other flood storage areas) and watercourses;
b) existing woodland and trees should be retained;
c) landscape features and other materials (e.g. top-soil, turf and reeds) should be conserved;
d) extensive tree and woodland screen planting should be included within the development;
e) appropriate landscaping, including earth mounding and screen planting, should be provided to limit the visual intrusiveness of the built form;
f) appropriate provision is made to enable and improve public access, including provision for the pedestrian, people with disabilities, cyclists, equestrians and those with mobility problems.

10.40 The various allocations and indicative road proposals within the Local Plan will need to conform to this Policy. Given the extensive ecological interest within Eastbourne Park, its suitability for meriting statutory protection under either SSSI or LNR status, and the presence of protected species such as reptiles and birds, it is advised that compatible developments will need to address both direct impacts from the development footprint, as well as indirect impacts on surrounding habitats.

10.41 Following the completion of the *Eastbourne Park Biodiversity Audit Report* (The Ash Partnership, November 2005) and the establishment of the principal habitat and species interests, it is advised that many of the development criteria set out in Policy **NE24** are now regarded as incompatible. These are as follows:

- Criteria **a)** seeks parkland and woodland habitats to be included in the landscaping of any land re-profiling, and this is considered incompatible with the surrounding wetland interest and sensitivity of open ground species such as breeding Lapwing *Vanellus vanellus*. Instead, its is recommended that grassland, marsh, reedbed and open water habitats would be more appropriate.

- Rather than retain woodland and trees as set out in Criteria **b)**, it is recommended that it would more appropriate to remove some of these resources.

- It is recommended that Criteria **d)** should be replaced by the comments presented in paras. 10.43 to 10.46 under Policy **NE25**.

Policy NE25: Tree and Woodland Planting in Eastbourne Park

New development and extensions to existing premises over 1000 square metres within Eastbourne Park will be expected to contribute to the wider tree and woodland screen planting schemes envisaged for the Park. Contributions sought will be directly, fairly and reasonably related in scale and kind to the development proposed.

10.42 Whilst buffering the Park can provide effective visual containment and is important for minimising external disturbances over the 24 hour period such as noise and light pollution, a judgement is required for tree planting within the Park.

10.43 Given the open wetland interest within the Park, extensive woodland planting is clearly inappropriate as it reduces water availability and is incompatible with species such as Lapwing.

10.44 In all cases, the use of carefully sited narrow tree screens, managed hedgerows or low scrubland should be considered as the most appropriate options. The planting of individual trees should be avoided within the centre of the Park, and planting should certainly be avoided along the edge of drainage ditches to avoid shading, infilling by organic debris and ensure unconstrained ditch management conditions.

10.45 It is recommended that an effective template of compatible trees and shrubs for Eastbourne Park should be based on those already present, and those typical of nearby wetlands. This would include species such as Grey Willow *Salix cinerea*, Downy Birch *Betula pubescens*, Guelder Rose *Viburnum opulus*, Alder Buckthorn *Frangula alnus* For taller trees, Crack Willow *Salix fragilis*, Alder *Alnus glutinosa* and Black Poplar *Populus nigra* ssp*. betulifera* would be favoured.

Policy NE26: Protected Species

Where a proposed development could affect a species protected under national legislation or a species of local rarity, the applicant will be required to survey the site and to consult with relevant conservation bodies. Planning permission will be refused where it is considered that the development would be damaging to a species of acknowledged importance.

10.46 This is a very useful Policy for safeguarding protected species that often occur outside designated sites of nature conservation importance. Typical species include Badger, bats, reptiles and amphibians, for example.

10.47 It is important that the Borough Council is presented with adequate species assessments when considering development impacts, and the types of surveys that should therefore be routinely requested from developers have been set out in section 14 of this Report.

Urban Heritage and Townscape Policies

10.48 Relevant Policies are regarded as **UHT6** to **UHT8, UHT15**, **UHT16** and **UHT20**, each of which is discussed sequentially below:

Policy UHT6: Tree Planting

Trees proposed as part of a new development will be required to be of a species that retains the distinctive character of Eastbourne and be of a size to make a significant visual impact to the locality.

10.49 The most distinctive street tree in Eastbourne is the elm, most of which are Wheatley Elms, a cultivar of Small-leaved Elm *Ulmus minor* ssp. *minor*, protected by means of the Dutch Elm Disease Control Area. All native elms in Britain are susceptible to Dutch Elm Disease and therefore any introductions or replanting using mature trees should be avoided as this could possibly introduce the fungal pathogen.

10.50 While it is clearly desirable to plant elm to maintain these characteristic trees within the Borough, it is not possible to acquire disease resistant varieties. Experiments in 2001 at Abertay University in Dundee successfully transferred anti-fungal genes into the genome of an English Elm and the resulting genetically engineered clones were shown to be resistant to Dutch Elm Disease. However, there are currently no plans to release resistant trees into the countryside.

10.51 It is recommended that consideration should be given to the types of trees that are most compatible with the rarer lichens known from the Borough.

Policy UHT7: Landscaping

Development proposals should seek to make improvements to the physical environment through site layout and landscaping. In preparing proposals for development, consideration should be given to landscaping which will include protection and incorporation of existing trees, hedges, shrubs and other natural features on site, including ponds, together with proposals for new planting. The following factors will be taken into account when considering landscape proposals submitted with an application:

a) planning applications should show species, siting, plant size, including girth of trees, and planting density of all trees and shrubs proposed. A clear indication should be given on submitted plans of existing vegetation retained and removed and all new planting (see also Policy NE25);
b) where development is to take place, a condition will be imposed requiring all landscape proposals to be approved before development commences;
c) where appropriate, all or some landscaping works will be required to be carried out before work is started in order to help assimilate the development into the townscape;
d) where appropriate, conditions on planning consents will be imposed or bonds sought to ensure maintenance of replacement landscaping for lost, removed or failed planting within a specified period;

e) where appropriate, usually in visually prominent locations, conditions will be imposed requiring planting species to comprise of indigenous stock that conserve local distinctive character;
f) that the existing biodiversity on the site is not detrimentally affected and schemes that enhance the biodiversity are preferred (see Policies NE20, NE21, NE22, NE23, and NE24).

10.52 The last few decades have been defined by the increasing consideration of sustainable living, acknowledging the need to reduce CO_2 emissions to

combat global warming, and to improve the connection between people and the environment. Landscaping is clearly an important part of these considerations, and can be designed to provide ecological value and contribute to a Green Network both within the public realm and private dwellings of townscape.

10.53 In many parts of Britain, there is an increasing focus on greening up the townscape – replanting street trees and grass verges, and protecting these existing resources from damage during construction and repair work. The Borough Council should consider where landscaping measures to green up the townscape environment can provide such enhancement, and where this could be linked with the Green Network set out in this Report.

10.54 There are now many examples of innovative landscaping solutions within cities and towns. Even prestigious buildings in the heart of London such as the Leban Building of Modern Dance have been given Green Roofs (as part of a City-wide project to retain breeding Black Redstart *Phoenicurus ochruros*).

10.55 It is recommended that the use of Green Roofs in building design should be considered within the townscape for development and redevelopment proposals, particularly where:

- Large industrial buildings are involved;
- Where visual intrusion needs to be minimized; and
- Where a landscape contribution towards establishing the Green Network can be made.

Policy UHT8: Protection of Amenity Space

Development which would result in the loss of important areas of public amenity space shown on the Proposals Map will not be permitted.

Development of other areas of amenity space will only be permitted in exceptional circumstances where it is judged that the space performs no valuable townscape or environmental function and where greater compensatory provision can be made within the vicinity of the site, or where a contribution or improvement can be made to other off-site provision.

10.56 Amenity Space is any space that offers benefit to the locality, this may be as a nature conservation area, as visual relief from the built environment and/or serve as a playing space. The development of Eastbourne has left a legacy of amenity space within the built environment and it is an important characteristic of the town. The Local Plan emphasizes in para. 5.20 that '*It should not therefore be assumed that if a site is not of amenity space significance that it is acceptable to be developed*'.

10.57 Natural England (formerly English Nature) has adopted a policy on public open space which recommends that people living in towns and cities should have:

- An accessible natural green space less than 300m in a straight line from home; and

- At least one accessible 20ha site within 2km of home and one accessible 500ha site within 10 km of home.

Overall, the Borough appears to perform well on both these criteria and therefore it is important to ensure that there is no diminution of this situation through loss of valuable amenity spaces.

10.58 The setting out of much of the existing amenity space within the Green Network helps to rationalize and safeguard these assets as a more coherent resource. In addition to performing a role as interlinking series of habitats, the Green Network can also contribute towards footpath and cycleway networks for example.

10.59 In setting out a Green Network, some changes of use, structure and management will inevitably be required within the amenity space to create key habitats and species-specific corridor features.

10.60 If the balance of public opinion is resistant to change at specific sites, it may be necessary either to seek other local sites either to provide the types of habitat sought by the Green Network or the types of amenity space sought by local residents.

10.61 As land availability is now at such a premium, additional solutions are now readily available:

- Green Roofs are increasingly being used in development and re-development proposals to increase the surface area of ecologically useful land within urban areas.

- Treatment wetlands incorporated within the public realm whether grey water can be treated and a cool wetland oasis allowed to thread within the built environment.

- Use of green walls, screens and planters to install functional stands of trees and shrubs.

- Creation of wildlife gardens designed to maximize habitat and species richness with the available area, using compatible landscaping.

- Butterfly trails to insert nectar-rich planting into amenity space.

- Buildings specifically designed to maximize ecological credits within their EcoHome ratings, giving consideration to external and internal native landscaping, as well as features to attract wildlife such as bird and bat boxes.

Policy UHT15 : Protection of Conservation Areas

Planning application in a conservation area, or affecting the setting of a conservation area, will be required to preserve or enhance the character or appearance of the area.

Policy UHT16 : Protection of Areas of High Townscape Value

Proposals within Areas of High Townscape Value will be required to generally preserve the character and appearance of the area. Development shall:

a) use materials which respect and complement the predominant traditional materials of the location;
b) not allow the loss of traditional materials and features;
c) retain amenity spaces where they form part of the established character of the area; and
d) retain, wherever possible, the existing trees and other important landscape features. In exceptional cases where any such loss is allowed, compensatory provision will be required in terms of quality and quantity.

10.62 Conservation Areas and Areas of High Townscape Value place further constraints on development and re-development proposals as they impose design limitations to ensure compatibility with the local character.

10.63 To ensure that nature conservation interests are not overly constrained, it may be necessary to consider more innovative design solutions using local materials and old-fashioned construction techniques, such as flint walls and espalier trees.

10.64 For species-specific measures as required for mitigation and enhancement reasons, most are highly compatible with Conservation Area status. For example bat roosts within buildings are not visible and only require minor changes to the fabric of the building most of which are acceptable under Listed Building status.

10.65 Bird and bat boxes are now readily available in a variety of species-specific models and come in a variety of colours. When made from woodcrete, these products are also very durable and will certainly provide at least a decade of use. They are specifically designed for attachment to buildings, walls and trees.

10.66 As bird and bat boxes are relatively inexpensive, it is recommended that they should therefore be considered as a basic planning requirement, and will additionally aid the Local Authority in their consideration of biodiversity impacts as required under PPS9.

Policy UHT20: Archaeological Sites and Scheduled Monuments

a) The direct and indirect effects of development proposals on archaeological sites and their settings will be examined before planning applications are determined. Planning permission will not be given without adequate assessment of the archaeological implications.

b) In cases where there are reasonable grounds to suppose that the development proposals will destroy or adversely affect sites of archaeological interest, the applicant will be required to demonstrate prior to permission being considered that:

(i) the character and extent of any archaeological remains surviving on the site;

(ii) the manner in which archaeological remains are to be safeguarded during the course of the development either by their physical preservation in situ, or by record as a result of their excavation and publication. (Preservation by record is regarded as a less satisfactory option);

(iii) benefits of the development outweigh the damage to, or destruction of, the archaeological remains on the site.

c) Development proposals which will have an adverse effect on scheduled monuments and other nationally important archaeological sites and monuments, their settings and amenity value will be refused.

d) Development that would adversely affect other known sites and monuments of archaeological significance will be refused, although permission may be granted if the applicant has demonstrated that particular archaeological sites and monuments will be satisfactorily preserved either in situ or by record. (Preservation by record is regarded as a less satisfactory option).

10.67 Where developments involve designated nature conservation sites, brownfield sites and amenity open space, potential conflicts can arise between the need to examine and record archaeological remains and the inherent ecological interests of the site.

10.68 The need for trial trenches or full scale archaeological digs should only be permitted after the ecological value of the land has been adequately assessed. This would involve an assurance that the habitats and species are not of significant ecological value or that any impacts could be adequately mitigated.

10.69 Impacts upon protected urban species such as Badger and reptiles are considered particularly pertinent, as the presence of mammal holes and the interpretation of whether a site is suitable for reptile occupation, requires the judgement of a professional ecologist.

10.70 On large scale sites such as Eastbourne Park, these types of conflict can be considerable due to the need to work in wet or flood-prone ground. Should habitats require translocation, the action of machinery may be detrimental to the underlying archaeology whilst the need to maintain anaerobic conditions within archaeological deposits may require mitigation solutions that impact upon surrounding habitats and species.

Housing Policies

10.71 Relevant Policies are regarded as **HO4** and **HO5**, each of which is discussed below:

Policy HO4: Housing Allocations

The following sites are allocated for residential development. The policies of this Plan will be applied when planning permission is sought, including:

a) the residential, visual and environmental amenity considerations set-out in Policies HO20, UHT4 and NE28;

b) affordable housing requirement (Policy HO13);
c) infrastructure requirements (Policy IR2), including outdoor playing space contributions (Policy LCF4), education contributions (Policy LCF17) and contributions to libraries (Policy LCF23);
d) net residential densities (Policy HO11).

Policy HO5: Other Housing Commitments

In the event that planning approval should expire planning permission will be granted for the renewal of planning permission for residential development on the following sites, subject to compliance with the policies of this Plan including:

a) the residential, visual and environmental amenity considerations set-out in Policies HO20, UHT4 and NE28;
b) affordable housing requirement (Policy HO13);
c) infrastructure requirements (Policy IR2) including outdoor playing space contributions (Policy LCF4), education contributions (Policy LCF17) and contributions to libraries (Policy LCF23);
d) net residential densities (Policy HO11).

Where planning consents are partially implemented and revisions of new schemes are proposed, the policies of this Plan will be applied.

10.72 The housing allocations set out under Policy **HO4** in the Local Plan seek to provide a total of at least 1170 dwellings during the period 2001 to 2011, based upon minimum targets of between 30 to 50 dwellings/ha. In addition, Policy **HO5** establishes the extent of existing housing commitments where development is either on-going or the Borough Council will grant renewal of planning permission should this expire.

10.73 In light of the aspirations for a Green Network within the Borough, it is recommended that the existing housing allocations should be urgently reviewed with a view to their potential role in this network.

10.74 Clearly there is potential to minimise development in some of these allocations either by:

- Imposing constraints on the accepted built area, thereby increasing land available for the Green Network, Eastbourne Park or other nature conservation considerations; or

- Designing development within a parkland setting, with opportunities for biodiversity gain within the landscaping.

10.75 For some of the housing allocations within the current boundary of Eastbourne Park, the restrictions induced by PPS9 and PPS25 guidance linked with Local Plan constraints imposed by Policies **NE21**, **NE22** and **NE26** would appear to make these non-viable options. If this is indeed the case, the release of these allocations would result in the following:

- Potential to utilise these allocations for nature conservation and flood storage considerations; and

- A deficiency of 680 dwellings during the Local Plan period to 2011, that would need to be made up by seeking high density housing on the remaining allocations and from *ad hoc* planning applications for infill, redevelopment and refurbishment housing schemes.

10.76 The following is a review by neighbourhood of the current status of these allocations:

West Langney Neighbourhood:

Part of of Langney Shopping Centre Car Park
- No planning application yet received.
- Considerable potential to contribute to Green Network.

Land beside Langney Shopping Centre, Kingfisher Drive
- No planning application yet received.
- Considerable potential to contribute to Green Network.

North Langney Neighbourhood:

Oak Tree Cottages
- No planning application yet received.
- Considerable potential to contribute to Green Network.

Hide Hollow Farm
- No planning application yet received.
- Considerable potential to contribute to Green Network.

Roselands Neighbourhood:

Roselands Depot
- No planning application yet received.
- Little potential to contribute towards Green Network.

Land between St. Philip's Avenue & Astaire Avenue
- Development in progress, therefore given no further consideration.

Seaside Neighbourhood:

Lottbridge Drove/Seaside
- No planning application yet received.
- Considerable potential to contribute to Green Network.

Wartling Road

- Development in progress, therefore given no further consideration.
- Considerable potential to contribute to Green Network.

TAVR Centre, Seaside

- No planning application yet received.
- Considerable potential to contribute to Green Network.

Eastbourne Park (abutting the Rodmill, Upperton, Bridgemere, St. Anthony's and Hydneye Neighbourhoods):

Land off Fletching Road

- No planning application yet received.
- Considerable potential to contribute to Eastbourne Park.
- Considerable potential to contribute to Green Network.

Land off Bridgemere Road

- No planning application yet received.
- Considerable potential to contribute to Eastbourne Park.
- Considerable potential to contribute to Green Network.

Vicinity of Tutts Barn Lane

- No planning application yet received.
- Considerable potential to contribute to Eastbourne Park.
- Considerable potential to contribute to Green Network.

King's Drive/Cross Levels Way

- Pre-application discussions in May 2007.
- Considerable potential to contribute to Eastbourne Park.
- Considerable potential to contribute to Green Network.

10.77 Considerations for an effective Green Network within the Borough are provided in section 11, and this builds on the existing framework of designated sites, amenity space and the Local Plan housing allocations.

Business and Industry Policies

10.78 Relevant Policies are regarded as **BI 2** to **BI 5** and **BI 7**, each of which is discussed below:

Policy BI 2: Designated Industrial Areas

Planning permission will be granted for new B1, B2 or B8 uses in the designated industrial areas, subject to the criteria set-out in Policy BI 7 below.

Policy BI 3: Allocations for Class B1 Use

The following sites are allocated for B1 use subject to compliance with the policies of this Plan, including:

a) the criteria set-out in Policy BI 7 ;
b) infrastructure requirements (Policy IR2).

Policy BI 4: Retention of Employment Commitments

In order to retain land for employment purposes planning permission will not be granted for uses other than B1, B2 or B8 uses on land and buildings committed for employment use (subject to Policies BI 3 and BI 4, BI 5). In the event that planning permission expires on the following sites, the Council will grant planning permission for industrial and business uses as specified, subject to other policies in this Plan.

Policy BI 5: Allocations for Class B1, B2 and B8 Use

The following sites are allocated for B1, B2, B8 uses, subject to compliance with the policies of this Plan, including:

a) the criteria set-out in Policy BI 7 ;
b) infrastructure requirements (Policy IR2).

10.79 Under Policy **BI 3**, Class B1 Use developments are currently allocated at the following sites, and these are listed below with recommendations on how their ecological potential could be given consideration:

South Broadwater, between Upperton Farm and Broadwater Lake

- No planning application yet received.
- Considerable potential to contribute to Eastbourne Park.
- Considerable potential to contribute to Green Network.

North West of Hammonds Drive

- This is a 0.94 ha allocation which is considered appropriate for small 'starter units' allowing for any landfill constraints.
- Already partly developed.
- Considerable potential to contribute to Eastbourne Park.
- Considerable potential to contribute to Green Network.

10.80 Under Policy **BI 4**, Class B1, B2 and B8 Use developments are currently allocated at the following sites:

Sovereign Harbour North, Pevensey Road (EB/1995/0267)

- This 8.9ha major allocation is designated for Class B1 use, and is to include aggregate extraction and enabling works to create the initial development platforms.
- Recent planning applications in 2006/07 have been rejected by the Borough Council.
- Considerable potential to contribute to Green Network.

Land adjacent to Willingdon Drove

- This is a 0.49ha allocation.
- Planning status is not known.
- Considerable potential to contribute to Eastbourne Park.
- Considerable potential to contribute to Green Network.

White Knight Laundry, Hammonds Drive

- This is a 0.14ha allocation.
- There is a lapsed outline planning application here.
- Considerable potential to contribute to Eastbourne Park.
- Considerable potential to contribute to Green Network.

10.81 Under Policy **BI 5**, Class B1, B2 and B8 Use developments are currently allocated at the following sites:

Land East of the proposed roundabout at Tutts Barn

- This 7.8ha major allocation is mostly on the site of former railway sidings.
- Planning status is not known.
- Considerable potential to contribute to Eastbourne Park.
- Considerable potential to contribute to Green Network.

Land North West of St Anthony's Hill

- This is a 7.4ha major allocation.
- Planning status is not known.
- Considerable potential to contribute to Eastbourne Park.
- Considerable potential to contribute to Green Network.

10.82 Consideration of the most effective Green Network within the Borough is provided in Section 11, and this builds on the existing framework of designated sites, amenity space and the Borough Plan allocations for business and industrial use.

Policy BI 7: Design Criteria

New business and industrial development will be required to comply with the following:

a) a well designed scheme in terms of siting, scale, and materials (see Policy UHT1);
b) landscaping, tree and shrub planting to help conserve the site and screen it from adjoining main roads or residential areas;
c) appropriate noise reduction measures such as double-glazing, screen walls and noise barriers;
d) safe and convenient access arrangements for pedestrians, people with disabilities, cyclists and those using public transport, including provision of changing/washing facilities (see Policy TR6);
e) adequate off-street car parking (including appropriate provision for people with disabilities), access and loading facilities in compliance with adopted parking standards (see policy TR11), including, where appropriate, adherence to an agreed Travel Plan (see Policy TR3);
f) appropriate measures are included for safety and security, including crime prevention measures in layout and design (see Policy UHT1);
g) Policies of this Plan for environmentally sustainable development, including Policies NE3 (conservation of water resources); NE4 (sustainable drainage systems); NE5 (minimisation of construction waste); NE6 (recycling facilities); NE11 (energy saving measures);
h) provision of recycling facilities accessible to the public.

10.83 Although business parks and industrial land are typically viewed as ecologically sterile this is only due to the historical legacy, with new developments now seeking to incorporate sensitively designed landscaping to provide a more pleasant working environment.

10.84 The typical basic layout for business premises and industrial units requires car parking, buildings and warehouses fed by access roads and all of these tend to be space demanding. It is recommended that ecological design elements compatible with these types of development could include:

- Green Roofs to increase the surface area of ecologically useful land.
- Use of the SUDS approach to surface water drainage and maximize the wetland interest within the Site, especially where .
- Treatment wetlands within the cartilage to deal with surface and foul water supplies or buffer/protect hydrologically-linked adjacent sites, as well as providing an attendant landscaping value.
- Use of green walls, screens and planters to install functional stands of trees and shrubs.
- Buildings specifically designed to maximize ecological credits within their EcoHome ratings, giving consideration to external native landscaping, as well as features to attract wildlife such as bird and bat boxes.

10.85 The design criteria set out under Policy **BI 7** should be amended to take further account of ecological enhancements appropriate for addressing PPS9 as well as providing effective contributions to the Green Network.

Transport Policies

10.86 Relevant Policies are regarded as **TR4** and **TR16** to **TR18**, each of which is discussed sequentially below:

Policy TR4: Quality Bus Corridors

Bus priority measures will be introduced wherever possible along the following routes:

a) A2270 – Willingdon Road/Upperton Road;
b) A2021 – King's Drive;
c) A259 – Seaside/Seaside Road.

New developments which create travel demands along these routes will be expected to design their developments to facilitate access to the routes and/or enhance their effectiveness. Contributions related to the development will be sought to the implementation, improvement and maintenance of these routes where approval is sought for developments generating significant

travel demands. Contributions sought will be directly, fairly and reasonably related in scale and kind to the development proposed.

The Borough Council is seeking to have the Street Tree resource on GIS by December 2007. This will allow a better evaluation of the potential impact of the bus corridor improvements on the tree resource.

10.87 Improvements to the main bus corridors is clearly a Policy that will contribute towards an increasingly sustainable transport solution in the future. It is understood that much of the proposed improvement will involve the rationalization of bus movement using traffic control and separation measures. However, it is recommended that should the improvements include widening or the road corridors, the following considerations should be considered:

- Presence of mature street trees of all of the proposed routes; and
- Location of *Willingdon Roundabout* SNCI [E98] which includes the central island as well as verges on either side of the adjoining Willingdon Road.

10.88 Should road widening occur and the SNCI not be significantly affected, the possibility of creating new chalk grassland habitats along the A2270 and A2021 routes might also be possible and this could also inter-link with SNCI.

Policy TR16: A22 New Route

Bands of interest will be safeguarded for the A22 New Route to allow the County Council, to construct and link the new road to the main highway network. The new roads, known as the Southbourne and Tutts Barn Links follow a south-westward alignment north of the Bridgemere estate (Southbourne link) before connecting (via the Tutts Barn Link) to the Town Centre network west of Whitley Road Bridge.

The new roads are subject to other policies in the Plan but particularly: protection of residential, environmental and visual amenity (see Policies HO20, NE28, UHT4), Setting of the AONB (Policy UHT3); nature conservation (see Policy NE21 and Policy NE22); flood mitigation measures (see Policy US4); provision of adequate landscaping (see policies UHT7, NE24 and NE25).

Policy TR17: St Anthonys/Upperton Farm Links

Land is reserved for the following road schemes:

a) the St. Anthony's link which will connect Langney roundabout at the southern end of Langney Rise to a roundabout on Lottbridge Drove;

b) the Upperton Farm Link which will connect the hospital roundabout with the Southbourne and Tutts Barn Links at the Tutts Barn roundabout.

Land reservations will include land to provide the extensive mounding and screen planting required to minimise the effect of the new roads on the

landscape of Eastbourne Park and proposals will be required to meet the criteria of nature conservation (see Policy NE21 and Policy NE22); landscape policies (see Policy NE24); environmental, residential and visual amenity

policies (Policies NE28, HO20 and UHT4) and flood mitigation measures (Policy US4).

10.89 The effectiveness of by-passes and internal relief roads has been questioned over recent years, with many examples of roads drawing in additional traffic volumes and/or merely moving traffic jams to different parts of the road network.

10.90 From a nature conservation perspective, these two transport Policies represent the most significant adverse impacts within the Borough. If enacted, the proposed road links will result in fundamental changes to Eastbourne Park and to the ability to deliver a Green Network. The following points outline the main areas of concern:

- Substantial landtake required for embankments to provide the required elevations above the floodplain.
- Further fragmentation of the Park through the introduction of an east-west barrier within the Park boundary.
- Significant reduction in the effectiveness of a Green Network, as Eastbourne Park provides the central hub within the heart of Eastbourne.
- Encircling the Park with more roads, with all their incumbent disturbances and pollution, adversely affecting sensitive wildlife as well as potential visitor experience.
- Changes to the hydrological functioning within the Park by altering the flood capacity and requiring flood mitigation elsewhere.
- Substantially reducing the size of the effective open space within the Park.
- Presenting a strong case for future allocations to infill between the road line and the current built-up area boundary, although the Strategic Flood Risk Asessment currently recommends that this is no longer feasible.

10.91 It is advised that there may be little scope for adequately mitigating for the impact of the road footprints on the underlying habitats and species, as there are few areas of Eastbourne Park (other than parts of Shinewater Park) where there are no unimproved or semi-improved grasslands,

ecologically valuable wetland habitats, nationally uncommon species or protected species.

10.92 In addition to translocating and monitoring habitats and species, it is recommended that the only substantive mitigation that would provide some measure of compensation would be the setting up of the Park management, which may need to involve the following types of enhancement:

- Designating the remaining area of the Park as a Local Nature Reserve.
- Creating a Steering Committee for the Park, based on the stakeholders, Local Authority representatives and ecological management advisor(s).
- Establishing and funding a countryside ranger service.
- Managing the Site using grazing animals, water level management, reed and grassland cutting and cyclical dredging of the parts of the ditch network.
- Providing a visitor centre and interpretation.
- Creating a series of footpath/boardwalk trails through the Park to provide a flavour of its beauty and wildlife for residents and visitors.

Policy TR18: Bedfordwell Road Gyratory System

The band of interest reserving land for the construction of a one-way circulation system between the Whitley Road Bridge and the Cavendish Bridge to distribute traffic to and from the A22 New Route when it is completed will be safeguarded.

Policies on residential, environmental and visual amenity will apply (see HO20, NE28 and UHT4). The system will be in accordance with the scheme which was approved in 1990.

10.93 The justification for this traffic improvement proposal is linked to the delivery the A22 new route through Eastbourne Park via Policy **TR16**. If this should not be built, then there may not be a local traffic congestion argument for its construction.

10.94 The location of the gyratory system does not directly or indirectly involve any of the designated nature conservation sites within the Borough. It is also possible that resulting embankments might be available for compatible landscaping to enhance the potential for the railway line to provide a habitat corridor within the Borough-wide Green Network.

Town Centre Policies

10.95 Relevant Policies are regarded as **TC4** and **TC5**, each of which is discussed below:

Policy TC4: Retail Development Adjacent to the Station

Planning permission will be granted for a retail development on land adjacent to Eastbourne Railway Station, together with provision for car parking in line with Policy TR11, provided that:

a) the development is well designed in terms of siting, scale and materials and appropriate landscaping is provided (see Policy UHT1);
b) the development is well located to existing Town Centre pedestrian links;

c) appropriate access arrangements are provided, including provision for taxis and short term dropping off facilities, and access and parking for cyclists;
d) appropriate provision is made for access by people with disabilities and with mobility difficulties;
e) there would be no adverse impact on visual or environmental amenity (see Policies UHT4 and NE28);
f) policies in this Plan in respect of environmentally sustainable development are complied with, including NE3 (conservation of water resources); NE4 (sustainable drainage systems); NE5 (minimisation of construction waste); NE6 (recycling facilities) and NE11 (energy saving measures);
g) appropriate measures are included for safety and security, including crime prevention measures in layout and design (see Policy UHT1); and
h) provision of appropriate infrastructure (see Policy IR2);
i) appropriate vehicular access is maintained to the operational railway that currently exists.

An environmental improvement scheme for the area between Eastbourne Railway Station and the Enterprise Centre will be required as part of the development, including the development of a landscaped pedestrian piazza area

Policy TC5: Mixed Use Scheme at Western End of Terminus Road

Planning permission will be granted for a mixed use development, including additional retail floorspace, residential and leisure elements at the western end of Terminus Road, subject to the following considerations:

a) the development is well designed in terms of siting, scale and materials (see Policy UHT1);
b) the development is well linked to the existing Town Centre and to established pedestrian links;
c) the development to include an integrated transport interchange (see Policy TC1);
d) appropriate access arrangements are provided, including provision of access and parking for cyclists;
e) appropriate provision is made for access by people with disabilities and with mobility difficulties;
f) there would be no adverse effect on residential, visual or environmental amenity (se e Policies HO20, UHT4 and NE28, including views from the Downland (see Policy UHT3);
g) policies in this Plan in respect of environmentally sustainable development are complied with, including NE3 (conservation of water resources); NE4 (sustainable draina ge systems); NE5 (minimisation of construction waste); NE6 (recycling facilities); and NE11 (energy saving measures);
h) appropriate measures are included for safety and security, including crime prevention measures in layout and design (see Policy UHT1); and
i) provision of appropriate infrastructure (see Policy IR2).

10.95 Most of the land in this area of the town centre is currently used for roads, buildings, car parking, vehicle storage and railway operations. A retail

development in the vicinity of the Enterprise Centre and the Railway Station has been proposed to integrate both buildings and respect the Listed Building status of the station. It would be a requirement that this scheme include environmental improvements in the area between the station and the Enterprise Centre.

10.96 The railway line provides an effective habitat corridor running south-easterly through the Borough from the northern end of Willingdon Trees neighbourhood down to the Railway Station. From the Station, open space is then available to link with the Downs via The Saffrons Sports Ground, Compton Place and the Royal Eastbourne Golf Club. However, this corridor of open space breaks down between the Terminus Road and Saffrons Road and therefore the creation of ecologically functional landscaping in this area would help strengthen this part of the Green Network.

10.97 It is recommended that a number of opportunities might be available to create linking habitat using Green Roofs on parts of the proposed new shopping areas such as areas A, 5, 6, 8, 9, 10 and 15 on Plan 7 of the Local Plan (and the associated listing on Table 1).

10.98 In addition, it is recommended that other measures could include the use of green walls, screens and planters to install functional stands of trees and shrubs. The buildings could also be specifically designed to maximize ecological credits within their EcoHome ratings, giving consideration to external and internal native landscaping, as well as features to attract wildlife such as bird and bat boxes.

Tourism Policies

10.99 Relevant Policies are regarded as **TO7** and **TO8**, each of which is discussed sequentially below:

Policy TO7: Preferred Area for Tourist Attractions and Facilities

The following areas are identified as the preferred location for new quality tourist attractions and facilities:

- **King Edwards Parade-Grand Parade-Marine Parade-Royal Parade-Prince William Parade;**
- **Devonshire Park (see PoliciesTC9 and LCF6);**
- **Eastbourne Park (Southbourne Sector);**
- **Sovereign Harbour (two specific areas are identified on the Proposals Map);**
- **Land adjacent to the A22 New Route and Willingdon Drove.**

10.100 The central part of Eastbourne Park (= Zone ELE[1], between the railway line and Lottbridge Drove) is currently designated in the Local Plan for tourism

[1] See para. 3.4 of the *Eastbourne Park Biodiversity Audit*.

attractions and facilities. Feedback from the *Eastbourne Park Biodiversity Audit Report* (The Ash Partnership, November 2005) has indicated that much of this area contains an ecologically valuable resource and, from a biodiversity perspective, would be not considered appropriate for tourism related development.

10.101 It is therefore recommended that, excluding the existing tourism facilities provided by the Eastbourne Miniature Railway and Eastbourne Golfing Park, any further tourist attractions and facilities proposed within Zone ELE should be compatible with the existing ecology here and in the wider context of the Park.

10.102 Based purely on biodiversity considerations, should Eastbourne Park be developed as a tourist attraction for its scenery, natural history and archaeology, it is recommended that it would be appropriate to provide a visitor centre facility. This could also be combined with an office and storage facilities for managing the Park. However, this would of course be subject to planning control and other material considerations.

10.103 It is recommended that purely from a biodiversity consideration, the most ideal locations for a visitor centre would include:

- Within Shinewater Park – as this would impact improved grassland and there is already an established footpath network;
- North-west of Langney Roundabout – as this would impact improved grassland;
- At the end of Leeds Avenue – as this would impact disturbed ground and improved grassland;
- At the end of Hammonds Drive – as this would impact dense scrub;
- At the end of Horsye Road – as this would impact dense scrub; and
- Off Tutts Barn Lane – as this would impact improved grassland.

Leisure & Community Facility Policies

10.104 Relevant Policies are regarded as **LCF1**, **LCF2**, **LCF5**, **LCF7**, **LCF9**, **LCF12** to **LCF15**, **LCF18** and **LCF19**, each of which is discussed sequentially below:

Policy LCF1: Playing Field Allocations

Within Eastbourne Park planning permission will be granted for new playing fields, together with ancillary facilities of changing rooms and pavilions, on the following sites, identified on the Proposals Map:

a) Land off Sevenoaks Road (3.0 hectares);
b) Land in Shinewater (3.6 hectares);
c) Land at Elm Grove (1.0 hectare).

10.105 The development of the allocations shown on the Proposals Map at Sevenoaks Road and Shinewater are regarded as highly appropriate as they involve recently seeded improved grassland of little or no ecological value, and are set with disturbed and recently landscaped areas.

10.106 The use of land at Elm Grove is less clear, and it is recommended that this area would warrant an extended Phase I Habitat Survey based on JNCC (2003) guidance, to confirm its existing ecological potential.

Policy LCF2: Resisting Loss of Playing Fields

Proposals which result in the net loss of playing fields will not be permitted. In exceptional circumstances planning permission will be granted for a development which would result in the loss of playing fields where:

a) alternative provision of equivalent community benefit is made available; or
b) a contribution is provided for either off-site provision of playing fields of equivalent community benefit; or
c) enhancement is made of existing playing fields for wider community use; or
d) in the case of playing fields relating to educational establishments, it has been demonstrated that the development meets an overriding need for educational facilities and that the adverse impact on playing field provision has been kept to the minimum.

In the event that detailed local assessments of the need for playing fields show that provision is clearly in surplus to requirements planning permission may be granted for the loss of playing fields.

10.107 To create the Green Network it will be necessary to draw upon some of the playing fields for habitat contributions. Most consist of amenity grassland surrounded by scattered mature trees and ornamental shrubberies and flowerbeds, although some have a few more habitats such as tree belts and scrub.

10.108 It is recommended that habitat contributions to the Green Network that are considered compatible with the continued use of the playing field would include:

- Linear belts of woodland or scrub;
- Hedgerows;
- Espalier trees;
- Rank grassy headlands; and
- Swales.

Policy LCF5: Eastbourne Sports Park

Planning permission will be granted for sports facilities associated with Eastbourne Sports Park, provided that:

a) the design in terms of siting, scale and materials reflects the site's sensitive location;
b) the development complies with Policy LCF9 of this Plan;
c) the development would not have an adverse effect on visual or environmental amenity (see Policies UHT4 and NE28);
d) any external lighting complies with Policy UHT 13 of this Plan.

10.109 The development of these sports facilities as shown on the Proposals Map is regarded as appropriate as it involves existing amenity grassland of little or no ecological value.

10.110 However, consideration should be given to the location of any external lighting at the sports facility as this could potentially adversely impact upon

Hampden Park and Ham Shaw SNCI [E117]. Light pollution can result in adverse impacts upon bat, bird and moth populations for example.

10.111 The use of downcasters fitted to the lights within the sports pitches, coupled with screening to reduce light spillage is recommended and should be sought by the Borough Council should planning permission be required.

Policy LCF7: Water Recreation

Within Eastbourne Park planning permission will be granted for specified water recreation proposals and associated facilities in the following locations:

a) Lakes within the Shinewater Sector – angling;
b) "Deep Water Lake", West Langney Sector – sailing, windsurfing, rowing, canoeing;
c) Southbourne Lake – angling.

Proposals for water skiing, jet skiing and other motorised sports will be considered on the 'Deep Water Lake', West Langney subject to no detrimental effect on residential and environmental amenity (see Policies HO20 and NE28). Ancillary facilities, such as club houses, will be considered against Policy LCF9 below.

10.112 The use of the Shinewater Lakes (in Zone SP) and Southbourne Lake (in Zone ELE) for angling is accepted, and these waterbodies are now well-stocked with coarse fish.

10.113 Ideally, it is recommended that the Deep Water Lake (in Zone WLL) also known as 'West Langney Lake' should not be actively stocked with fish, in order to provide a refuge for aquatic plants and macro-invertebrates. However, it is accepted that a coarse fishery may establish over time as a small minority of anglers introduce fish.

10.114 The use of Deep Water Lake for water sports is questioned as there are excellent reedbeds developing around this waterbody that provide breeding territories for warblers, and developing this feature for watersports will also create noise disturbance within this Zone. This is the only Zone where breeding Lapwing *Vanellus vanellus* occur. The Shinewater Lakes are regarded as a much better location for water sports, as there are already established footpaths and public disturbance.

10.115 It is recommended that motorised water sports should not be permitted anywhere in the Park, otherwise the noise will be heard widely over a number of the Zones. It is already possible to hear the traffic running along the A22 Cross Levels Ways/Golden Jubilee Way.

Policy LCF9: Recreational Facilities in Eastbourne Park

Planning permission will be granted for recreational facilities within Eastbourne Park provided that:

a) the proposed development reflects the overall parkland setting and character, and would be appropriate to such a location (Policy LCF7 will apply to water recreation proposals) ;
b) any buildings required, including ancillary buildings, shall be designed to a high standard in terms of siting, scale and materials and should not be visually prominent;
c) appropriate landscaping measures are proposed in accordance with Policy NE24 of this Plan;
d) any nature conservation interests are protected (see Policy NE21);
e) the development has good access by public transport, on foot and by bicycle, and is linked to the footpath and cycleway network and provides adequate car parking (see Policy TR11);
f) the development does not adversely affect residential, visual or environmental amenity (see Policies HO20, UHT4 and NE28);
g) appropriate provision is made for people with disabilities and with mobility problems;
h) the development complies with policies in this Plan in respect of environmentally sustainable development, including NE3 (conservation of water resources); NE4 (sustainable drainage systems); NE5 (minimisation of construction waste); NE6 (recycling facilities) and NE11 (energy saving measures);
i) appropriate flood storage measures are provided (see Policy US4).

10.116 Feedback from the *Eastbourne Park Biodiversity Audit Report* (The Ash Partnership, November 2005) has indicated that much of this area contains an ecologically valuable resource and, from a biodiversity perspective, would only be considered suitable for sensitive tourism related development.

10.117 It is recommended that a Steering Group based around the various stakeholders within the Park should be formed. From a biodiversity perspective, it is recommended that the construction of a sensitively located visitor centre, as set out in paras. 10.104 and 10.105 would be considered acceptable (but would obviously be subject to normal planning control and other material considerations).

Policy LCF12: Site Adjacent to the Sovereign Centre

Planning permission will be granted for an additional indoor leisure facility on land adjacent to the Sovereign Centre, subject to Policy LCF11.

10.118 It is recommended that this development could also be used as an opportunity to extend the current area of Vegetated Shingle within the Prince William Parade SNCI [E7], also referred to as the 'Sovereign Park Conservation Area'. The present southern end of amenity grassland and ornamental shrub beds could be stripped away and replaced with a bed of shingle over sand, and sown with a seed crop harvest from the Vegetated Shingle elsewhere within the SNCI. This would not affect the Skate Park, as this lies to the south along the promenade.

10.119 This area forms part of the main green corridor between the seafront and Eastbourne Park, and therefore any habitat provisions could strengthen the functional value of the Green Network at this point.

Policy LCF13: Retention of Allotments

Planning permission will not be granted for any other use on land shown as allotments on the Proposals Map. An exception to this Policy will be made where:

a) it can be satisfactorily demonstrated that there is no longer a requirement for their continued provision; or
b) satisfactory compensatory provision can be made elsewhere and would be available before development commences.

Any exception to this Policy would be subject to the policies of this Plan.

10.120 Allotments can provide favourable habitat for many species of wildlife, so their presence within the Borough can be included within the Green Network aspirations. Most of the main allotment areas lie adjacent to Eastbourne Park, with further areas adjacent to the Downs.

10.121 Allotments can provide important foraging areas for many protected species such as bats and reptiles, and they often have abandoned areas where tall herb communities and scrub can establish temporary or occasionally permanent stands.

Policy LCF14: Sites for Allotments

Planning permission will be granted for allotments on:

a) land to the south-east of Tutts Barn Lane (1.10 hectares);
b) land at the rear of 38-52 Iden Street (0.44 hectares).

10.122 It is advised that the creation of further allotments on these two allocated areas is regarded as acceptable, as these help to rationalize the allotment areas in the vicinity of Eastbourne Park, providing a buffer between the Park and the built-up area boundary.

Policy LCF15: Site Allocated for New School

Land between Leeds Avenue and Tollgate Junior School is allocated for educational purposes, subject to Policies NE20 and NE22 of this Plan.

10.123 The use of this area for a new school runs contrary to the aspirations of the Policy **NE20**, as it would involve the destruction of the *Leeds Avenue Reedbed* SNCI [E116]. There is land to the west of Tollgate Junior School that could be utilised for a new school instead.

10.124 The loss of this SNCI is regarded as highly unacceptable as it would not be possible to adequately mitigate for the loss of established reedbed habitat as required by Policy **NE22**. A new wetland complex of at least comparative size would be required in an area adjacent to Sovereign Park and it would take time to re-create a mature reedbed.

10.125 This SNCI also forms a critical part of the Green Network and its loss would substantially reduce the effectiveness of the intended open space corridor

running between the seafront and Eastbourne Park. It also forms a buffer to the proposed Park boundary. A number of protected species would also be impacted by this Policy, including Grass Snake and breeding warblers.

10.126 It is therefore recommended that this Policy is not enacted on nature conservation and ecology reasons.

Policy LCF18: Extension of Educational Establishments

Planning permission will be granted for additional education facilities within sites identified for educational use on the Proposals Map, provided that:

a) the development has no significant detrimental effect on residential, visual or environmental amenity (see Policies HO20, UHT4 and NE28);
b) the development is acceptable in terms of siting, scale and materials, and appropriate landscaping is provided (see Policy UHT1);
c) the development has good, safe and secure access by public transport, on foot and by bicycle. where access is considered to be inadequate a travel plan and the development of safe routes to school will be required (see Policies TR3 and TR10);
d) appropriate provision is made for access by people with disabilities and with mobility problems.

Educational establishments within conservation areas will be expected to reflect the character and appearance of the conservation area.

10.127 There are approximately 30 proposed extensions to educational establishments (schools and colleges) shown on the Proposals Map. Most of these proposed extensions will involve existing amenity grassland which is regarded as being of negligible ecological value. In places, however, there are pockets of Short Ephemeral Grassland with uncommon plants typical of drought-stressed conditions and seaside locations, as well as patches of Chalk Grassland.

10.128 These areas shown on the Proposals Map provide an excellent opportunity for delivering functional parts of the proposed Green Network, and it is recommended that:

- Parts of these areas could be set aside to provide landscaping compatible with the Green Corridor;

- They typically offer areas of existing negligible habitat/species interest where habitat creation could be relatively un-constrained; and

- The resulting habitats could be used to form School Wildlife Areas, and have additional educational and landscaping benefits within the establishment.

Policy LCF19: All Saint's Hospital

In the event that All Saint's Hospital is declared surplus to health service requirements planning permission will be granted for proposed

developments which reuse the existing All Saint's Hospital, Chapel and their setting and provide the best prospect of ensuring their long term maintenance and use, provided that:

a) the character and setting of the existing listed buildings are preserved and enhanced;
b) the interior of the Chapel is preserved and enhanced;
c) the important interior features of the hospital, are preserved and enhanced;
d) there is no detrimental effect on residential and visual amenity (see Policies HO20 and UHT4);
e) provision of adequate car parking is made (see Policy TR11).

Uses which are likely to be suitable include: residential conversions of the hospital, retention of the Chapel unaltered and some development on the playing field which is no greater in scale and impact than that which already has planning permission (subject to a s.106 agreement) and the provision of public open space. Alternative use of the hospital to allow its preservation and the preservation of the Chapel include hotel (C1); nursing or rest home (C2); offices (part B1); schools and college (C2); hospital (C2); place of worship/religious centre (D1); museum (D1); art gallery (D1); exhibition hall (D1); training centre (D1); assembly and leisure uses (D2); conference centre. Uses which are unlikely to be suitable are those which are predominantly retail (A1); financial and professional services (A2); food and drink (A3); light industry and general industrial uses (part B1 and B2); and storage and distribution (B8).

10.129 This Site is currently being developed for residential housing, and it is understood that it was subject to an ecological assessment.

11. ESTABLISHING A GREEN NETWORK

11.1 This section explores the current policy framework within the Borough, looks at climate change predictions, and sets out from an ecological perspective what the proposed Green Network would need to address.

11.2 Clearly a Green Network would have a multi-functional role and the ecological aspects are only one dimension within a much broader approach to such as Network. The Audit comments are therefore related specifically to the potential ecological contributions and linkages that should be considered.

Background

11.3 Eastbourne is marketed as '*the sunshine coast*' and has an image of being '*a clean, green, attractive, high quality environment*' (*LDF Core Strategy Preferred Options Report* - Eastbourne Borough Council, 2006). The importance of its open space and surrounding landscapes are therefore regarded as key assets for both its residents and tourism trade.

11.4 The spatial objectives for creating a multifunctional green network are summarised in the *Preferred Options Report* for the *LDF Core Strategy* (Eastbourne Borough Council, 2006) as being to:

- To create a multifunctional green network in Eastbourne;
- To ensure new development does not have an adverse impact on Eastbourne's natural resources and greenspaces;
- To improve access to green spaces; and
- [To] conserve and enhance the geology, habitats and species that make Eastbourne unique.

11.5 The Draft SE Plan regards the creation of green networks as being an effective means of achieving access to different types of green spaces which will also be beneficial to biodiversity through improving connectivity. The means of achieving such a network would mainly be through developer contributions into a Green Network Fund via Section 106 Agreements.

LDF Core Strategy

11.6 The *Preferred Options Report* (2006) aims to sustainably accommodate future housing development within Eastbourne, when meeting the draft South East Plan (SEERA, March 2006) recommendation for new housing. Eastbourne is expected to provide an average of 240 new houses per annum, as its contribution towards the 28,900 new houses per annum required for South-East England.

11.7 Eastbourne is constrained by protected downland to the west, by the sea to the south and has been almost completely built up to its administrative boundaries. The limited green field sites available such as Eastbourne Park are in floodplain and are regarded as being of high ecological value. Managing of the existing urban resource therefore appears to be the most feasible option for future growth, through regeneration, replacement and controlled infilling.

Climate Change

11.8 With the advent of the *Stern Review on the Economics of Climate Change 2006* produced on behalf of HM Treasury and Cabinet Office (referred to as the Stern Report), climate change is now finally regarded as a reality. Predicted climate change trends will be as follows, shown here along with supporting weather data from Eastbourne Weather Station (continuously monitored since 1867):

- The Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC, 2001) has forecast that over the next 100 years CO_2 levels will rise to at least double pre-industrial levels, at 550 parts per million (ppm) or possibly reaching 1000 ppm.

- Temperatures are predicted to rise between 1.5°C to 5.8°C over the next 100 years, the fastest rate of change since the end of the last ice age. Here in Eastbourne, 2007 was the warmest on record, the average maximum temperature during April was 17.1°C which significantly exceeded the 135 year average of 12°C, while a record maximum temperature of 24°C on 15 April 2007 beat the previous record of 23.4°C in 1870.

- Little change in the average annual precipitation, but drier summers and wetter winters predicted for South-East England (Hulme *et al*., 2002) with an accompanying increased variation between years.

- The IPCC's Third Assessment Report, published in 2001, projected that the global average sea level may rise by between 90 and 880mm over the next 100 years, Environment Agency modelling sea defences based upon a rise of approximately 300mm.

- Global annual sea surface temperatures have increased by up to 1°C over the past 130 years (MarClim project) and are expected to rise by a further 0.5°C to 1°C over the next 100 years. Areas such as the English Channel are predicted to rise by as much as 4°C (Hughes *et al*., 2002). Here in Eastbourne, the average sea temperature in 2007 was 11.8°C compared to a 135 year average of 8.4°C.

- Natural England (formerly DEFRA) are allowing for a 20% increase in peak flows over a period of 50 years as a precaution for coastal/tidal defences and fluvial flooding.

- The estimated annual costs of stabilising the climate at around 550 ppm CO_2 would be around 1% of global GDP per annum by 2050.

11.9 In the UK, the response of habitats and species to climate change is being urgently examined. The MONARCH Project (UKCIP, 2005) and BEETLE model (Latham, 2006) are assessing the terrestrial ecosystems and the MarClim Project has been established to assess the impact of climate change on rocky shore intertidal biodiversity. The Foresight programme (Office of Science and Technology, 2004) is assessing flood risk management and adaptations.

11.10 The observed and predicted impacts of these major climate changes will be wide ranging and the following list provides a flavour of some of the trends that will occur:

Landward

- Summer droughts and increased risk of summer grass-fires predicted – resulting in the seasonal drying of wetlands and drought-stressed grasslands. This would be detrimental to sites such as Eastbourne Park and the Eastbourne Downland Estate.
- Increased storm frequency predicted – increased risk to woodland and individuals trees. This would be detrimental to street trees within the Town and sites such as Hampden Park & Ham Shaw SNCI [E117].
- Increasingly earlier flowering in plants – affecting pollinators and grazing animals. This would particularly affect floristically species-rich sites such as the Eastbourne Downland Estate.
- Increasingly earlier emergence of many fauna, e.g. butterflies, or breeding behaviour, e.g. nesting birds.
- Changes in the breeding/wintering/migratory bird fauna as a result of climate change-related factors beyond the UK. This would be detrimental to sites such as Eastbourne Park.

Marine

- Rising sea levels, resulting in coastal squeeze – coastal habitats in front of sea defences will be altered or lost. This would be detrimental to sites such as Sovereign Harbour Beaches SNCI [E118].
- Changes in plankton distribution and composition will continue to occur (Continuous Plankton Recorder Survey – SAHFOS, 2004), with increasing warm water (southern) species and declining cold water (northern) species. This may be detrimental to sites such as the offshore mSNCI's and Voluntary Marine Conservation Areas.
- Similar changes to demersal and pelagic fish species will occur. This may be detrimental to sites such as the offshore mSNCI's and Voluntary Marine Conservation Areas.

11.11 Climate change impacts upon biodiversity are regarded as being a major issue. Biodiversity in the UK is largely maintained by means of a series of disparate managed sites of varying size, each of which is subject to various statutory or non-statutory nature conservation designations. The layout of these sites and the criteria used for their designation, however, does not account for the future impacts of climate change.

11.12 The *Preferred Options Report* for the Borough's LDF Core Strategy seeks to place Eastbourne at the forefront of the UK effort to mitigate the impacts of climate change by 2026, by means of energy efficiency and the use of renewable energy technology. Similarly, the *Preferred Options Report* seeks to address climate change impacts through the creation of a Green Network.

Flood Risk

11.13 The *Cuckmere and Sussex Havens Catchment Flood Management Plan: Scoping Report for Consultation* (Environment Agency, March 2005), or CFMP, covers the Willingdon Levels catchment (i.e. Eastbourne Park) as well as the Cuckmere River, Pevensey Levels, Wallers Haven and Combe Haven catchments. Drainage of the Willingdon Levels is assisted by pumps (i.e. Lottbridge Pump) and sewers that deliver the water to the coast where it discharges at low tide under gravity to the sea.

11.14 This document sets objectives principally for addressing flood risk and acknowledges that flood risk is expected to increase in response to rising sea levels and climate change. The CFMP Scoping Report identifies a number of catchment opportunities that can be derived as part of flood risk amelerioration. It concluded that flood risk in the future could be better managed by considering the following ecological principles:

- Acknowledging that flood risk will increase as a result of climate change and sea level rise.
- Changes in land use in response to climate change can significantly influence flood risk, especially through changes in agriculture or forestation within the middle and upper catchments.
- Provision of flood storage within the upper catchments, through the creation of wetlands, and the use of flood meadows.
- Consideration of alternative flood defence strategies in the lower reaches of the catchment can be beneficial and can improve opportunities for biodiversity.

11.15 The creation, maintenance and enhancement of woodland and wetland are therefore seen as important habitats associated with flood risk. In addition, considerations on sea defence strategies will strongly influence coastal habitats such as Vegetated Shingle and Maritime Cliffs.

11.16 The *Draft South Foreland to Beachy Head Shoreline Management Plan* (January 2005) considered the likely impacts of rising sea levels upon the Borough coastline. It assessed the impact upon mSNCIs as being of moderate significance and considered re-creatable within a time scale of 50 to 100 years. In the case of cliff edge and vegetated shingle habitats, any such recreation would have to be on other suitable coastal sites where the necessary dynamic conditions exist. Posford Haskoning (2003) suggests that a policy of managed realignment should be considered for sections of the Crumbles frontage to restore vegetated shingle and create saline

lagoons, though these aspirations appear to be in conflict with recent development of the area.

11.17 Along the Seaford to Beachy Head SSSI the loss of habitat to erosion induced by rising sea levels is assessed as being of high significance. The chalk cliff habitats could only be re-created in an area of coastal chalk, which only occurs in limited locations and it is therefore regarded as being essentially non-recreatable.

What is a Green Network ?

11.18 An effective approach for considering a Green Network[15] is set out within *A Living Landscape for the South East: The Ecological Network Approach to Rebuilding Biodiversity for the 21st Century* (The Wildlife Trusts, 2006). This documents seeks to provide a model for rebuilding the natural environment in South-East England, by providing a new approach for spatial planning and nature conservation agendas.

11.19 The *Living Landscape* document seeks to re-establish landscapes and wilderness on a regional scale, into which discrete areas such as Eastbourne Borough will integrate and contribute its natural resources. The aspirations are to:

- Enhance the ability of the environment to cope with flooding and CO_2 emissions, particularly through the restoration of wetlands and woodlands;
- Create better public access to improve quality of life, and public awareness of the natural environment; and
- Buffer, extend and link the core nature conservation assets to sustain wildlife in the long term and allow for adaptation to climate change.

11.20 Green Networks build on various concepts such as wildlife corridors to facilitate species movement and habitat inter-linkage, the use of green belt to buffer against urban sprawl and interface with surrounding countryside, and the stark warnings from the *Stern Report*.

11.21 There is considerable legislation and policy support for the creation of Green Networks the most important of which are The Habitats Directive (European Council Directive 92/43/EEC), PPS1 *Delivering a Sustainable Development*, PPS9 *Biodiversity and Geological Conservation* and the draft *South East Plan* (SEERA, March 2006).

11.22 It remains unclear how much land is required to conserve rare species and habitats, but it is clear that the present status will be insufficient in the medium to long term. Wildlife requires large, functional areas or networks to provide room for it to break free from isolated fragments of land and to adapt to the rapidly changing climate.

[15] Referred to as Ecological Networks (The Wildlife Trusts, 2006)

11.23 Core principles underlying the creation of a Green Network would include:

- Protection of critical natural capital such as protected/designated nature conservation and/or geological sites, to retain the core biodiversity within the Region.
- Sensitive and multifunctional land management by all of the stakeholders involved.
- Networks to follow the Sussex BAP (and therefore the UK BAP) objectives for protection, restoration and enhancement of Priority Habitats and Species.
- Formation of large interconnected tracts of habitat, as these are more likely to be sustainable in the long term and management can have more reliance on natural processes.
- Large habitat areas must connect with each other, to permit species movement and therefore provide habitats with the flexibility to evolve, change and respond to climate change.
- Sympathetic management of the built and agricultural landscapes surrounding the Green Network, to make this more permeable to species movement.
- Green Networks to support local communities and economies, connecting into towns, cities and villages.

Status within the South East Ecological Network

11.24 To implement the aspirations for rebuilding the natural environment in South-East England it will involve working at the District or Borough level for land-use planning and, similar to BAP objectives for habitats and species, creating partnerships of organisations and individuals.

11.25 The Sussex Biodiversity Record Centre has produced a vision of the South East Ecological Network, and this identifies three key Ecological Networks in and around Eastbourne Borough:

SX12 *Cuckmere Valley and Eastern Downland* – A functional landscape connecting the Cuckmere Valley eastward across the Eastern Downs.

SX13 *Pevensey Levels* – A wetland landscape encompassing the extensive Pevensey Levels resource.

MA02 *Sussex Marine Sites* – A marine area extending west from the intertidal coastline surrounding Eastbourne into the offshore marine preserves running up to the mouth of the Solent.

11.26 The Borough is highlighted in this Ecological Network as providing the following interlinking habitats:

- Wetland habitats interlinking with Pevensey Levels;
- Coastal habitats running between the East Downs and Pevensey Levels; and
- Inter-tidal and marine habitats adjacent to the landward edge of the Borough.

Aspirations for its Green Network

11.27 The distribution of major habitats within the Borough presently has the following distinct patterns:

- Open countryside limited to the Downs in the western third of the Borough, the central Eastbourne Park and a cluster of fields to the east of Langney.
- Woodland is largely restricted to the east escarpment edge of the Downs, descending into the central and northern areas of the town.
- Chalk Grassland in the western half of the Borough, the major concentration being restricted to the Downs in the western third, the original preserve apparently descending as far as Eastbourne Park in the centre of the town.
- Wetland is largely restricted to the town centre.
- Vegetated Shingle outcropping on, and to the rear of, the seafront beach, though originally occurring widely within the Borough east of the A259 Seaside/St.Anthony's Avenue/Pevensey Bay Road.
- Coastal marine habitats running from the undeveloped Heritage Coast along the Downs and beyond the eastern Borough boundary to the undeveloped Rye Harbour Nature Reserve in the north-east; the intervening seafront within the Borough being subject to partial or complete development and beach management.

11.28 This Report has established the boundaries for these habitats, which reflect the underlying geology and historical distributions, as shown on Figures **5.1** and **7.1**.

11.29 In setting out an ecological vision for the Green Network, the aim would be to provide:

- Functional corridors linking amenity space;
- Habitat linkage; and
- New habitats to buffer/enhance particular corridors, and complement particular habitat types.

11.30 To create the Green Network it is therefore recommended that this is achieved through the enhancement, restoration and creation of habitats using existing amenity space, through land and/or financial contributions from development proposals and from the use of innovative design within the townscape.

11.31 One way of creating a Green Network could be based around a consideration of the Borough as shown on Figure **11.1**. Here, based around the central Eastbourne Park and western Downland preserves, the concept involves eight recommended corridors to achieve better inter-linkage as follows:

Hampden Park North-Western Corridor – provides a woodland-dominated corridor linking Eastbourne Park within the Downs via *Hampden Park and Ham Shaw* SNCI, *The Coppice* SNCI and *Willingdon Roundabout* SNCI.

- If such a corridor was adopted, then it would be recommended that Green Network land contributions towards the creation of this Corridor might be sought from extensions to existing educational establishments under Policy **LCF18**.

Saffrons South-Western Corridor – provides a chalk grassland-dominated corridor linking Eastbourne Park with the Downs via the railway line, Saffrons Sports Ground, Compton Place, *Eastbourne College War Memorial Field* SNCI and Royal Eastbourne Golf Course.

- If such a corridor was adopted, then it would be recommended that Green Network land and/or financial contributions towards the creation of this Corridor might be sought from the Town Centre redevelopment under Policies **TC4** and **TC5**.

Seaside South-East Corridor – provides a grassland/vegetated shingle corridor linking Eastbourne Park with the seafront via *Prince William Parade SNCI*, Sovereign Park, *Crumbles Sewer* SNCI, *Leeds Avenue Reed Bed* SNCI and *Horsey Sewer* SNCI.

- If such a corridor was adopted, then it would be recommended that Green Network land contributions towards the creation of this Corridor might be sought from (i) housing allocations under Policy **HO4** and (ii) extensions to existing educational establishments under Policy **LCF18**.

Langney Eastern Corridor – provides a grassland/vegetated shingle corridor linking Eastbourne Park with adjacent countryside near Westham and Pevensey Bay via *Langney Sewer* SNCI and *Langney Levels* SNCI.

- If such a corridor was adopted, then it would be recommended that Green Network land contributions towards the creation of this Corridor might be sought from (i) the Sovereign Harbour North employment area under Policy **BI5** and (ii) extensions to existing educational establishments under Policy **LCF18**.

Langney North-Eastern Corridor – provides a grassland/woodland dominated corridor linking Eastbourne Park with adjacent countryside near Stone Cross via *Langney Centre Pond* SNCI and *Langney Crematorium* SNCI.

- If such a corridor was adopted, then it would be recommended that Green Network land contributions towards the creation of this Corridor might be sought from (i) housing allocations under Policy

  HO4 and (ii) extensions to existing educational establishments under Policy **LCF18**.

Shinewater Park Northern Corridor – provides a wetland/open water dominated corridor linking Eastbourne Park directly with the adjacent Levels of the Willingdon Trees Neighbourhood.

- If such a corridor was adopted, then it would be recommended that Green Network land contributions towards the creation of this Corridor might be sought from (i) housing allocations under Policy **HO4** and (ii) extensions to existing educational establishments under Policy **LCF18**.

Northern Railway Corridor – providing a scrub-lined linear corridor linking Eastbourne Park with the adjacent Levels north of the Willingdon Trees Neighbourhood.

- If such a corridor was adopted, then it would be recommended that Green Network land contributions towards the creation of this Corridor might be sought from (i) Class B1, B2 and B8 Use allocations under Policies **BI 2** to **BI 5** and (ii) possibly from Policy **NE10**.

Eastbourne Seafront Corridor – providing a chalk grassland and vegetated shingle dominated corridor linking the Downs to the south with Pevensey Bay seafront to the north, via the *Holywell & Crows Nest Steps* SNCI, *Cliffs below Helen Gardens* SNCI, Wish Tower Open Space, Sovereign Park, *Prince William Parade* SNCI and *Sovereign Harbour Beaches* SNCI.

- If such a corridor was adopted, then it would be recommended that Green Network land contributions towards the creation of this Corridor might be sought from (i) extension of the Sovereign Sports Centre under Policy **LCF12**, (ii) a housing allocation under Policy **HO4** and (iii) extensions to existing educational establishments under Policy **LCF18**.

11.32 Section 12 sets out some of the ways in which the ecological aspirations for a Green Network could be achieved within the Borough, based on the development control assumptions made within section 10.

12. CREATION, ENHANCEMENT & RESTORATION PROPOSALS

12.1 The aim of this section is to provide Policy direction on how biodiversity gain and contributions towards a Green Network can be effectively used within the Borough.

12.2 Under PPS9 and its associated Government Circular as well as Section 40 of the Natural Environment and Rural Communities Act 2006, developments will need to demonstrate a net gain in biodiversity. The Borough should also be seeking to address Sussex BAP targets, based on the suite of BAP habitats and species set out in section 7 of the Audit.

12.3 To gain Credits under BREEAM and EcoHome Assessments, there is also a need to demonstrate ecological enhancements within a development as well as minimising the ecological impact.

12.4 There are therefore a number of existing requirements, in addition to the Local Plan Policies **NE19** to **NE24** that may be triggered by the need for mitigation and compensation, which seek to create, enhance or restore habitats.

12.5 It is recommended that the following means of addressing biodiversity and mitigation issues are explored:

Habitat Creation

12.6 The principles for habitat creation are to ensure that (i) the soil type and water regime is appropriate, (ii) the presence of nearby invasive species sources is considered and (iii) the maintenance allows for sufficient establishment time.

12.7 Trees require maintenance for a minimum of at least one year to allow them to establish and outgrow competing ground vegetation

12.8 Weeding of seed beds, establishing swards and subsequent new habitats is necessary and highly variable, and may need to occur for at least one year. Typical invasive species include Docks (especially *Rumex obtusifolius* and *R. crispus*) and Ragwort *Senecio jacobaea*, for example.

12.9 Where summer drought conditions are likely to prevail, as often occurs in Eastbourne, relatively drought-resistant habitat creation considerations should be employed, including robust habitats such as calcareous grassland, deep-centred waterbodies or the use of deep topsoils.

Green Roofs

12.10 To minimise the development footprint and provide further landscaping and an amenity resource, Green Roofs could be incorporated onto new build. This innovative solution is based on extensive research and there are now working examples throughout Western Europe. Although traditionally regarded as being composed of turf, green roof design now encompasses a

range of design options. Most suitable for the Town Centre context would be *Sedum* roofs, which are also the most reliable, low maintenance and drought-resistant roof type.

12.11 Green roofs tend to have a similar construction, consisting of a series of functional layers as follows:

- An insulation layer on the top of the building [typically extruded polystyrene or similar] followed by;
- A waterproof layer [such as a Hydrotech waterproofing membrane] followed by;
- A drainage or irrigation layer [usually an absorbance matting/fleece] followed by;
- A mineral subsoil [often sourced from recycled industrial materials such as crushed brick and concrete] followed by;
- A topsoil typically of less than 10mm depth.

Drainage

12.12 All developments and areas with hardstanding and roads should be encouraged to adopt Sustainable Urban Drainage Systems (SUDS) based around permeable materials and discharge to the ground wherever possible.

12.13 Where possible, road run-off and grey water outputs should be discharged into a Treatment Wetland to polish the water before release to ground or into watercourses or sewers. These involve the use of balancing ponds thereby creating open water opportunities and gravity-fed reed beds, thereby creating an uncommon BAP habitat (albeit with limited quality).

Schools & Parks

12.14 These offer excellent opportunities to create areas of high biodiversity and provide a facility for public enjoyment and educational use. Examples of where biodiversity can be introduced include the creation of wildlife gardens, wildlife feeding zones (with nectar plants, bird tables and a freshwater supply) and set-aside within recreation fields.

Maintenance

12.15 The maintenance of existing habitats can be manipulated to allow a different habitat, habitat structure and habitat function to evolve. For example with grassland:

- Amenity Grassland can be cut less frequently, to allow the herb content to flower and set seed, and so create a floristically different sward and provide habitat structure where previously a tightly mown

green desert existed. Grassland left to flower can be sharply edged to create a managed look, rather than a neglected one.

- Grass arisings can be removed by cut and bailing, so reducing the build-up of thatch and the reducing the fertilisation of grassland by clippings or laid grass. Over time a reduction in soil fertility can be achieved so allowing a much wider range of native flowering plants to establish, so creating attractive colourful grassland.

- Large regularly cut grassland areas such as parkland and school playing fields can have varied grass cutting regimes, setting aside uncut areas beside hedgerows and scrub areas to create softer landscapes, or varying the mowing intensity across an area to create grassland with varying sward heights. This approach can be used to create indicative paths.

- Grassland areas can be set aside where trees and shrubs can be introduced using slot planting and maintained using various systems such as mulches, mulch mats, tree guards, systemic herbicides etc. to create scrub (short term), hedgerows and tree screen (medium term) and woodland (long term).

- Plant plugs can be used to introduce perennial plants that can otherwise be different to introduce into a grass sward or woodland floor, e.g. Cowslip *Primula veris* and Primrose *P. vulgaris* respectively.

For example with grassland with scrub and tall herb communities:

- Grassland can be periodically cut and bailed or grazed, to reduce the scrub and tall herb interest and enhance the grassland potential.

- Grassland can be left to form rank areas to deter access, to allow natural succession towards scrub habitat, or to allow a more biodiverse sward to form.

For example with mature scrub and woodland:

- Blocks can be edged to thicken and create a softer edge from the resulting re-growth.

- Cutting to ground level (coppicing) using tractor-mounted flails or hand-operated cutting tools, can be used to create bushy growth from otherwise spindly growth.

- Set aside areas next to woodland can be used to allow natural woodland regeneration through seed germination and the creation of seedlings and saplings.

12.16 Manipulating the level of maintenance can achieve cost savings for a Local Authority and therefore setting out a Borough-wide maintenance strategy can be used to reduce particular overheads and divert resources to other priorities.

12.17 Certain habitat types require specific management to maintain their ecological interest, particularly where there is a need to accommodate the needs of individual plants and animals. Within the Borough, the BAP habitats require the following considerations:

Chalk Grassland, *Neutral Grassland*, *Floodplain Grassland* – Requires active management or rabbit-grazing to maintain the interest, otherwise it rapidly becomes dominated by rank grasses (e.g. False Oat-grass *Arrhenatherum elatius* and Tor-grass *Brachypodium pinnatum*) or scrub. Ideally the management using grazing animals, otherwise cut and bail of the sward in spring and/or late summer can be effective. Regular mowing leaving the arisings on the surface will progressively lead to a decline in habitat quality, and fertilisers should definitely not be used.

Verges – Maintaining tightly mown verges allows short annuals and coastal plants to establish. Where these are wide, consideration should be given to allowing a taller less frequently mown sward to develop.

Woodland – Mature high forest woodland is largely low maintenance, only requiring periodic maintenance mostly for public safety and access reasons. Where mature scrub occurs within a grassland mosaic, cyclical cutting may be necessary to maintain the habitat balance.

Reedbeds – These habitats should be mostly considered as maintenance free, as the dead reeds from the previous year help to maintain the reedbed structure. Periodically reedbeds benefit from cutting to reduce scrub infestations. Old reedbeds sometimes require partial excavation to lower the level of the accumulated plant litter and re-expose open water.

Rivers & Streams – All principal watercourses are maintained by the Environment Agency by dredging on a cyclical basis. Wherever possible, the dredging should occur in relatively short lengths, ideally along alternate banks, the watercourse requiring work over a number of years before the entire length has been dredged.

These habitats may also require clearance of invasive species and this is often best achieved by the stakeholders within a catchment coming together. Eastbourne Park is largely free from invasive species. Potential pernicious species include Giant Hogweed *Heracleum sphondylium* and Floating Pennywort *Hydrocotyle ranunculoides*.

Standing Freshwater - These habitats should be mostly considered as largely maintenance free on the short to medium term. However shallow waterbodies and old water bodies will tend to silt up and turn to marsh and swamp vegetation. Consideration should be given to either (i) partially dredge, (ii) completely dredge or (iii) to retain unmanaged and excavate a new waterbody nearby.

Maritime Cliffs & Slopes – Inherently unstable, these are self-maintaining habitats.

Vegetated Shingle – This generally requires little or no maintenance, other than possible periodic removal of invasive plants such as Red Valerian *Centranthus ruber*.

Marine – This is a maintenance free habitat apart from the need for periodic litter-picking along the strandline.

13. REVIEW OF NATURE CONSERVATION WITHIN THE BOROUGH

13.1 The history of nature conservation within the Borough is outlined in para. 6.4 of the Audit. This has provided a current legacy of 25 designated sites:

- 2 statutorily designated Sites (both SSSIs) that are formally protected under the Wildlife Countryside Act 1981 and amendments;
- 19 non-statutorily designated Sites, comprising 19 terrestrial SNCIs, which receive informal protection under Local Plan Policies **NE20**, **NE22** and **NE26**.
- 3 non-statutorily designated Sites, 2 marine SNCIs and a VMCA, which have yet to be formally designated under Supplementary Planning Guidance.
- 3 informal designations that receive informal protection under Local Plan Policies **NE22**, **NE23** and **NE26**.

13.2 To date the Borough Council has not sought to designate any site in the Borough with Local Nature Reserve (LNR status) under the National Parks and Access to the Countryside Act 1949. This instrument provides a means for statutorily designating areas for their nature conservation, geological, geomorphological, educational and/or amenity value. Should this designation be exercised, further site protection can be afforded to the LNR under Local Plan Policy **NE19**, and Polices **NE22** and **NE26** would also apply.

13.3 In reviewing the current 25 designated sites and other sites that are regarded as being of significant ecological value, a consideration of the full suite of nature conservation designations available has therefore been considered.

Current Statutorily Designated Sites

13.4 Natural England are responsible for reviewing the status of the SSSIs and their boundaries, and the Eastbourne SSSIs were last reviewed between 1986 and 1999.

13.5 The two SSSIs located within the Eastbourne Downland Estate clearly warrant their present status. Both SSSIs continue to maintain some of the largest remaining areas of the Chalk Grassland BAP habitat within the Downs, as well as viable populations of associated BAP and/or uncommon species.

13.6 *Willingdon Down* SSSI has been recently assessed by Natural England as having 100% by area in 'favourable' conservation status. *Seaford to Beachy Head* SSSI is assessed as having 77% by area in 'favourable' conservation status, the remainder being in 'unfavourable but recovering'

conservation status. This indicates that the overall management within the Eastbourne Downland Estate appears to be reaching its objectives.

13.7 Away from the known chalk downland preserves, 1199ha of the Estate is farmed either under an arable/pasture rotation system or managed as Environmentally Sensitive Area (ESA) grassland.

13.8 A *Draft Eastbourne Downland Management Plan* was produced in spring 2007, with the aim of continuing management of the 1700ha Estate now entering its eighth decade. All of the SSSI land within the Borough is addressed within the Management Plan.

Current Non-statutorily Designated Sites

13.9 There are currently 19 SNCIs within the Borough that were formally designated in April 2003. There has been no formal re-assessment of their condition since 2000, and their current status has been reviewed for the Audit, see Table **13.1**.

SNCIs Maintaining their Status

13.10 Based on a cursory field inspection, there appear to have been no significant change to 15 (79%) of the SNCIs, namely *Langney Levels* (No. **E1**), *Langney Sewer* (No. **E4**), *Crumbles Sewer* (No. **E18**), *Langney Centre Pond* (No. **E21**), *Horsey Sewer* (No. **E29**), *Holywell & Crow's Nest Steps* (No. **E77**), *Cliffs below The Helen Garden* (No. **E78**), *Ocklynge Cemetery* (No. **E86**), *Eastbourne War Memorial Field* (**E89**), *Upper Duke's Drive* (No. **E94**), *The Coppice* (No. **E96**), *Willingdon Roundabout* (No. **E98**), *Leeds Avenue Reed Bed* (No. **E116**) and *Hampden Park & Ham Shaw* (No. **E117**).

13.11 In the absence of any detailed survey since 2000, these Sites are therefore assumed to be maintaining their ecological interest, although this may be declining due to lack of management or inappropriate management.

13.12 *Langney Centre Pond* (No. **E21**) noticeably provides a rather limited range of relatively common and widespread habitat types, although it clearly provides an important local facility. However, there is an adjacent area of land (E20) that contains three further woodland ponds within a 100m radius, all set within Wet Woodland that would significantly further enhance this SNCI, see Figure **13.2b**.

13.13 Wet Woodland is a nationally uncommon habitat that only persists in a few scattered locations in the Borough (mostly within Eastbourne Park). This revised cluster of ponds could also feasibly support Great Crested Newt.

13.14 It is therefore recommended that the SNCI boundary of Site **E21** is extended to the east and south to incorporate the adjacent Wet Woodland and its ponds.

13.15 *Upper Duke's Drive* (No. **E94**) contains lengths of shaded banks with chalk grassland and the SNCI currently extends as far as the junction with Baslow Road. Additional shaded roadside banks with chalk grassland

persist further up the hill along Upper Duke's Drive that are considered to be equally ecologically valuable and would therefore warrant inclusion within Site No. **E94**, see Figure **13.2c**.

13.16 While Compartment 7 (see Figure **13.1**) of the Eastbourne Downland Estate includes the southern side of Upper Duke's Drive, the adjacent Compartment 11 (see Figure **13.1**) only includes land to the north of Beachy Head Road. The northern side of Upper Duke's Drive west of the Baslow Road junction lies outside the Estate Management Plan and would therefore only be subject to periodic highways management.

13.17 Hampden Park & Ham Shaw (No. **E117**) extends to the south-west as further parkland with mature trees. This provides a natural extension to the designated area that will include many of qualifying interests such as birds, lichens and woodland plants. It is therefore considered worthy of warranting inclusion within the existing SNCI, see Figure **13.2f**.

SNCIs Adversely Impacted

13.18 Three SNCIs (16%) would appear to have received adverse impacts through damaging actions or unfavourable management over the period 2000 to 2007.

13.19 There has been periodic motorbike activity across the shingle ridges at *Prince William Parade* SNCI (No. **E7**), but the ridge system still remains very evident. Harvesting of Sea Kale has been reported from here, but this perennial species still maintains a small population. Lichen-covered shingle is still present, but there has been no recent survey effort to locate the uncommon lichens such as *Cladonia furcata*, *Coleocaulon aculeatum* and *Peltigera canina*; or for Ray's Knotgrass, Fine-leaved Sheep's-fescue *Festuca filiformis* and Sea Fern-grass *Catapodium marinum*.

13.20 Site **E7** clearly still warrants its SNCI status for both its ecological and geomorphological interest.

13.21 *Langney Crematorium* SNCI (No. **E14**) does not appear to have improved since it was last surveyed, with very few areas found to contain any of the characteristic Unimproved Neutral Grassland indicators. Most of the southern half of the Site had been mown prior to the survey, and appeared to be more typical of Improved Grassland. The northern half appears to maintain some interest in localised patches, and the swamp-filled pond and ditch are still present. It is not known whether Autumn Lady's-tresses *Spirathes spiralis* still occurs here.

13.22 It is therefore questionable whether Site **E14** still maintains sufficient ecological interest to warrant its SNCI designation, and a review of the grassland management along with further botanical survey is recommended.

13.23 There is restricted access into *Ocklynge Pit* SNCI (No. **E101**) and the central floor of the pit with its Chalk Grassland interest appears to have been largely covered by spoil and rubble, based on aerial photographs and glimpses from the Site boundary.

13.24 It is therefore questionable whether Site **E101** still maintains sufficient ecological interest to warrant its SNCI designation, and an urgent review of the Site use along with further botanical survey is recommended.

SNCIs No Longer Warranting their Status

13.25 *Highfield Industrial Estate* (No. **E38**) was developed as industrial units during 2006 to 2007, and has lost most of its ecological value. The only remaining land from the original designation is a length of reed- and scrub-lined sewer and disturbed ground, which together comprise less than 20% of the original area. This has not been surveyed in detail, but the Site appears to have lost is qualifying interest with no obvious wetland habitat remaining to support Sharp-flowered Rush *Juncus acutiflorus* or Saltmarsh Rush *J. gerardii*.

13.26 Given this dramatic loss of habitat area and habitat quality, it is recommended that the SNCI status of Site **E38** is revoked as re-instatement is not feasible.

SNCIs warranting elevation to LNR Status

13.27 There are four SNCIs that are considered appropriate for LNR status, based on the following qualifying reasons:

- *Prince William Parade* **E7**, see Figure **13.2a** – The large and best example of a shingle ridge system in the Borough of great historical, geomorphological and ecological value. An excellent site for teaching field studies with local schools.

- *Willingdon Roundabout* **E98**, see Figure **13.2d** – The well-known island covered in orchids during early summer, that has been carefully managed by the Borough over many decades. A high profile site that requires protection from highways maintenance and road works, such as road/underground services repairs or future road widening schemes.

- *Leeds Avenue Reed Bed* **E116**, see Figure **13.2e** – Possibilities for an exciting boardwalk resource for local schools and local residents.

- *Hampden Park & Ham Shaw* **E117**, see Figure **13.2f** – A well-used recreation area which integrates mature woodland and wetland interests with extensive public access and significant education potential.

Additional Sites Considered Eligible for Designation

13.28 Table **13.1** provides a list of a further 13 sites (including two major areas) that would appear to warrant nature conservation designation. These can be split into the following designation categories:

- 2 currently un-designated sites recommended for statutory designation as LNRs – Eastbourne Park (including Lakelands Conservation Pond) see Figure **13.3a**; and Eastbourne Downland Estate (excluding the SSSIs but including Upland Road, see Figure **13.3c,** and Priory Heights Horse Paddock, see Figure **13.3d**); and

- 5 currently un-designated sites recommended for SNCI status.

- 3 currently un-designated sites recommended as candidate SNCI sites.

Eastbourne Park

13.29 This is the most extensive wetland area within the Borough, containing floodplain grasslands and fen habitats derived from base-rich water percolating from the adjacent Downs, see Figure **13.3a**. It contains 6 Sussex BAP Priority Habitats including coastal floodplain grassland, floristically species-rich ditches, reedbed and open water habitats. The wetland interest is composed of complex of community types that includes at least 6 open water communities, 13 marginal and emergent communities and 4 inundation communities.

13.30 The Park supports a number of Red Data Book species such as Great Silver Diving Beetle *Hydrophilus piceus*, Shining Ram's-horn *Segmentina nitida* and Wide-mouthed Valve Snail *Valvata macrostoma*; significant numbers of breeding Reed Bunting, Reed Warbler & Sedge Warbler; significant numbers of passage migrants such as Snipe; and over 35 uncommon higher plants including the only Sussex site for Fen Pondweed *Potamogeton coloratus* and many County rarities.

13.31 The ecological significance of the Park is such that on the basis of (i) its size and functional landscape, (ii) strategic position in relation to nearby Pevensey Levels, (iii) base-rich drainage network and fen habitats, (iv) diverse range of habitats, (v) uncommon species and (vi) likely very high biodiversity, it would be considered suitable for selection as an SSSI. Indeed it could arguably contain sufficient invertebrate interest and significant populations of some of the more uncommon species, that Site might be eligible for international designation under the Ramsar Convention.

13.32 Seeking a statutory designation under LNR status is therefore considered appropriate to help safeguard this ecological resource and raise its profile within the Borough. It is assumed that Lakelands Conservation Pond which lies within the indicative boundary of the Park would also form part of any such designation.

Eastbourne Downland Estate

13.33 There are currently SSSI designations covering the north-eastern and south-western ends of the Estate, yet the interlinking network of chalk grassland and the north-eastern woodland scarp face remains devoid of

any ecological designation, see **13.3b**. Management aspirations seek to interlink the chalk grassland habitat under ESA and rotational management schemes, yet there is currently no statutory measure that can ensure favourable land management.

13.34 Considerable development control exists within the Estate through the imposition of the Built-up Area boundary and the AONB status. It is therefore arguable that a further nature conservation designation is un-necessary to achieve development control here.

13.35 It is recommended that the core areas of Unimproved Chalk Grassland outside the SSSI boundaries, including any interlinking land that is required to make this a viable management unit, are designated under LNR status. This should ideally include *Priory Heights Horse Paddock* (Site No. E115), see Figure **13.3d**. The LNR status would allow grant sources for management and access to be sought.

13.36 Similarly, the core parts of the wooded scarp could also form part of the same LNR or a separate designation, ideally based upon the Ancient Woodland preserves at Beachy Brow and Well Coombe.

13.37 A separate area of Unimproved Chalk Grassland is *Upland Road* (Site No. E109) which contains an exceptionally floral-rich flora, see Figure **13.3c**. This Site was considered eligible for SNCI status in 2000, but could arguably form part of a wider LNR within the Estate.

13.38 At the same time, the outcome of the National Park Inquiry may place a more widespread blanket restriction on acceptable land management practices and certainly on development control.

13.39 The recommended suite of additional SNCIs are as follows, with qualifying reasons provided on Table **13.1**:

- *Willingdon Golf Course* (No. E113) see Figure **13.3f** & *Royal Eastbourne Golf Course* (Nos. E90 & E108) see Figure **13.3g** – Both originally proposed for SNCI status in 2000. Contain fragments of high quality chalk grassland within amenity grassland.

- *Land adjacent to Seaside Roundabout* (No. E15) see Figure **13.3h**, *Compton Place* (No. E72) see Figure **13.3j** & *Cavendish School* (No. S17) see Figure **13.3l**.

- *Highfield County Junior School Environmental Pond Area* (Site S8A) & adjacent Site S8B, see Figure 1**3.3k**.

- *Southern Road Verge along Beachy Head Road* & adjacent *Meads Reservoir*, see Figure **3.3e** – Not recognised in the 1990 or 2000 surveys. Contain fragments of high quality chalk grassland within amenity grassland.

- *Land adjacent to Crumbles Retail Park, along Harbour Quay* – Not recognised in the 1990 or 2000 surveys, see Figure **3.3i**. Contains remnants of the former Crumbles, and Vegetated Shingle habitat.

Marine Designations

13.40 The inter-tidal areas at the base of the chalk cliffs, including the offshore Greensand Reef, all form part of the Seaford to Beachy Head SSSI.

13.41 The *Hope Point to Beachy Head* mSNCI and *Beachy Head* mSNCI designations would appear to designate the most significant sub-tidal offshore ecological resources. The remaining sub-tidal areas to the east of Beachy Head contain areas of shingle, silt and occasional rocky outcrops all of which would not be considered to be of particular ecological significance.

13.42 Almost all of the significant offshore habitat would therefore appear to be protected under an appropriate nature conservation designation.

Summary in relation to BAP Habitats

13.43 A summary of the BAP habitat resource within the Borough currently protected under existing nature conservation designations, compared to the BAP habitat resource under the recommendations in this review is provided below. This would increase the designated nature conservation resource by 528ha from 701ha to over 1229ha, a 75% increase.

Table **13.2** – BAP Habitat Resource within Eastbourne Borough

BAP Habitat	**Designated Sites currently within Borough** [16]		**Designated Sites under Audit Recommendations**	
	No. Sites	**Area (ha)** [17]	**No. Sites**	**Area (ha)**
Chalk Grassland	8	266.5	**14**	**864.7**
Neutral Grassland	1	25.3	**3**	**426.3**
Floodplain Grassland	1			
Woodland	3	356	**5**	**368.7**
Arable	0	-	0	-
Reedbeds	1	1	**3**	**>4**
Rivers & Streams	3	9.6	3	9.6
Standing Freshwater	1	2.7	**3**	**5.1**
Maritime Cliffs & Slope	2	c.10	2	c.10
Vegetated & Bare Shingle	2	30	**3**	**31**
Marine	3	n/a	3	n/a
Total No. Sites	**25**		**42**	
BAP Habitat Area (ha)		**701.1**		**1229.4**

[16] Assumes loss of Highfield Industrial Estate SNCI

[17] Excludes Eastbourne Park - Where a different mapping procedure was used which prevents areas being calculated.

14. GUIDELINES FOR DEVELOPMENT

14.1 At all times the Local Authority should ensure that suitably qualified and experienced Ecologists have been involved when examining survey results and ecological assessments. Ideally, they should ensure:

- Work to be undertaken by Members and Associates of the Institute of Ecology & Environmental Management (IEEM); and
- Fieldwork to be undertaken by a suitably competent and experienced Ecologist, to be judged on the basis of their Curriculum Vitae.

14.2 Development has potential to impact upon three basic ecological levels:

- Nature Conservation Interests;
- Habitats; and
- Species.

The approach that should be adopted to development should be to follow this sequential test of increasing ecological assessment in accordance with three levels.

14.3 Ecological assessments need to provide a suitably comprehensive survey baseline so that they can demonstrate that have provided sufficiently robust information to allow the development impact to be assessed. This a strict requirement of EIA; is sought by *Planning Policy Statement 9: Biodiversity & Geological Conservation* (ODPM, August 2005) otherwise known as PPS9; and is backed by case law, see R v Cornwall CC ex parte Hardy (2001, JPL 786).

Nature Conservation Interests

14.4 Under the Environmental Impact Assessment Directive (97/11/EC) the scale of an application for development consent needs to be assessed based upon criteria set out in Annexes I and II of the Directive. Should internationally or nationally protected sites be present within a 2km radius of a development, this may also trigger the need for an EIA.

14.5 In relation to Eastbourne Borough, the primary consideration would therefore be in relation to the nearby internationally protected Pevensey Levels RAMSAR to the north-east and to the nationally designated downland SSSI preserves to the south-west.

14.6 Should there be potential for adverse impacts upon such a internationally/nationally designated site, i.e. to affect its integrity, then Natural England may seek an Appropriate Assessment under Regulation 48 of the Habitats Regulations 1994, which implements Article 6(3) of the Habitat Directive (92/43/EEC). In this case, the Competent Authority, which would be Eastbourne Borough Council will require a sufficiently robust assessment to provide information to identify any environmental risk

associated with the development and, where these are considered significant, establish mitigation principles to address these impacts. The aim would be to maintain habitats and species in favourable conservation status.

14.7 Potential ecological impacts from a development to be considered could include for example:

- Altering the local hydrological balance;
- Potential to pollute surface water or ground water supplies;
- Potential to liberate emissions (dust, litter, warmth etc.);
- Potential to disturb during site clearance, construction or operation;
- Potential to shade;
- Potential to impact on species interests associated with the designation such as flight lines for bats or dissection of the landscape used by Great Crested Newt; and
- Potential to liberate invasive species such as plants, alien crayfish, fish or mink.

14.8 The introduction of the *Guidelines for the Ecological Impact Assessment in the UK* (IEEM, 2006) has resulted in an agreed framework for the assessment of impacts on sites, habitats and species. The Borough Council should adopt this assessment framework for any Environmental Assessment as it provides a clear mechanism for assessing development impacts.

Habitats

14.9 Where BAP habitats occur (as listed in para 7.5) any potentially adverse impacts upon these assets requires due consideration within the local and Borough-wide context. These habitats are also listed under Planning Policy **NE22** of the Local Plan as habitats where adverse impacts will be resisted or otherwise will require substantial ecological compensation.

14.10 To ensure that the Local Authority is aware of the habitats involved it should therefore seek for all green field sites, and brown field sites wherever possible, the following:

- An Extended Phase I Habitat Plan (in accordance with JNCC, 2003);

  and

- Suitability for protected, Sussex BAP and/or uncommon species to be determined and/or assessed.

14.11 Extended Phase I Habitat Plan - Seeking this basic information will allow the Planning Officer to receive a colour-coded map that provides information on the habitats present, including any BAP habitats, as well as brief habitat descriptions and a list of Target Notes.

14.12 Species - The Ecologist will need to provide their professional judgement on (i) the raft of protected, Sussex BAP and/or uncommon species that might be present, (ii) on the appropriate survey methodologies that should be employed and (iii) on the need for further surveys. The Planning Officer should ensure they are satisfied with the adopted approach at all times, seeking advise from Natural England or a retained independent Ecologist as necessary[18].

Species

14.13 Should a protected species, BAP species and/or uncommon species be found or suspected, the development will need to demonstrate how it will ensure their will no change in the favourable conservation status of that species. This may involve targeted surveys looking for particular evidence.

14.14 This information is also required under Planning Policy **NE26** of the Local Plan which states that 'the applicant will be required to survey the site and to consult with relevant conservation bodies. Planning permission will be refused where it is considered that the development would be damaging to a species of acknowledged importance'.

14.15 Dependant on the species involved or the nature of the information required one or more of the following types of survey may then be required.

14.16 For European protected species the following best practice guidelines are available:

- Bats – *Bat Mitigation Guidelines* (English Nature, 2004) and *Bat Surveys: Good Practice Guidelines* (Bat Conservation Trust, 2007).
- Dormouse – *Dormouse Conservation Handbook* (English Nature, 1996).
- Great Crested Newt – Information on the type of survey Natural England will be requiring is provided in *Great Crested Newt Mitigation Guidelines* (English Nature, 2001).

14.17 For all other species, there are a number of relevant guiding documents that are required to establish the most appropriate survey technique to be adopted:

- Reptiles – Survey to be based around English Nature (1991 *et seq*.) and HSBI (1999) guidance.

[18] Assuming that the Borough does not employ its own Ecologist.

- Water Vole – Survey to be based upon *Water Vole Conservation Handbook* (Strachan & Moorhouse, 2006).

EASTBOURNE BOROUGH, EAST SUSSEX

2007 EASTBOURNE BIODIVERSITY ASSESSMENT

VOLUME 2 of 2

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Eastbourne Borough Council

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TABLE 7.1 - LIST OF CHALK GRASSLAND INDICATORS WITHIN BOROUGH SNCIs

SPECIES	COMMON NAME	NATIONAL STATUS	SITE CODE															
			SNCI E1	SNCI E7	SNCI E14	SNCI E18	SNCI E29	SNCI E38	SNCI E77	SNCI E78	SNCI E86	SNCI E89	SNCI E94	SNCI E98	SNCI E101	SNCI E108	SNCI E109	SNCI E113	SNCI E115
Anthyllis vulneraria	Kidney Vetch	Native		Y						Y		Y		Y			Y	Y	
Asperula cynanchica	Squinancywort	Native														Y			
Blackstonia perfoliata	Yellow-wort	Native	Y	Y				Y	Y	Y				Y		Y			
Briza media	Quaking-grass	Native	Y								Y		Y	Y		Y	Y	Y	
Campanula glomerata	Clustered Bellflower	Native	Y													Y			
Carlina vulgaris	Carline Thistle	Native	Y						Y							Y			
Centaurea scabiosa	Greater Knapweed	Native							Y	Y						Y	Y	Y	Y
Cirsium acaule	Dwarf Thistle	Native	Y								Y			Y		Y		Y	Y
Coeloglossum viride	Frog Orchid	Native														Y			
Danthonia decumbens	Heath-grass	Native														Y			
Euphrasia pseudokerneri	An eyebright	Native													Y	Y			
Festuca ovina	Sheep's-fescue	Native		Y	Y				Y		Y		Y			Y			
Filipendula vulgaris	Dropwort	Native														Y	Y	Y	
Gentianella amarella	Autumn Gentian	Native	Y													Y			
Helictotrichon pratense	Meadow Oat-grass	Native														Y		Y	
Helictotrichon pubescens	Downy Oat-grass	Native															Y		Y
Hippocrepis comosa	Horseshoe Vetch	Native							Y				Y			Y	Y	Y	
Leontodon hispidus	Rough Hawkbit	Native	Y									Y	Y	Y	Y	Y	Y	Y	Y
Linum catharticum	Fairy Flax	Native	Y									Y		Y		Y	Y	Y	Y
Ophrys apifera	Bee Orchid	Native												Y					
Origanum vulgare	Wild Marjoram	Native		Y				Y		Y					Y			Y	
Pilosella officinarum	Mouse-ear-hawkweed	Native		Y					Y		Y	Y	Y	Y		Y	Y	Y	Y
Pimpinella saxifraga	Burnet Saxifrage	Native	Y	Y		Y			Y			Y		Y	Y	Y	Y	Y	Y
Plantago media	Hoary Plantain	Native						Y			Y	Y		Y	Y	Y	Y	Y	Y
Polygala vulgaris	Common Milkwort	Native														Y	Y		Y
Primula veris	Cowslip	Native										Y		Y		Y		Y	
Ranunculus bulbosus	Bulbous Buttercup	Native		Y								Y		Y					
Rhinanthus minor	Yellow-rattle	Native							Y					Y		Y	Y	Y	Y
Sanguisorba minor	Salad Burnet	Native	Y	Y								Y	Y	Y	Y	Y	Y	Y	Y
Scabiosa columbaria	Lesser Scabious	Native					Y											Y	
Spiranthes spiralis	Autumn Lady's-tresses	Native	Y		Y									Y		Y			
Thymus polytrichus	Wild Thyme	Native	Y								Y			Y		Y	Y	Y	Y
Trisetum flavescens	Yellow Oat-grass	Native							Y					Y		Y		Y	
Viola hirta	Hairy Violet	Native												Y		Y		Y	
		Total No. Indicators =	**12**	**8**	**2**	**1**	**1**	**3**	**9**	**4**	**6**	**9**	**6**	**18**	**6**	**28**	**15**	**20**	**12**

TABLE 7.2 - LIST OF CHALK GRASSLAND INDICATORS ON NON-SNCI SITES WITHIN EASTBOURNE

SPECIES	COMMON NAME	NATIONAL STATUS	SITE CODE								
			E2	E23	E25	E61	E62	E63	E66	E68	E71
Blackstonia perfoliata	Yellow-wort	Native				Y					
Centaurea scabiosa	Greater Knapweed	Native				Y					
Cirsium acaule	Dwarf Thistle	Native						Y			
Festuca ovina	Sheep's-fescue	Native									Y
Helictotrichon pratense	Meadow Oat-grass	Native									
Leontodon hispidus	Rough Hawkbit	Native									
Origanum vulgare	Wild Marjoram	Native									
Pilosella officinarum	Mouse-ear-hawkweed	Native				Y		Y	Y	Y	
Pimpinella saxifraga	Burnet Saxifrage	Native				Y					
Plantago media	Hoary Plantain	Native			Y						
Primula veris	Cowslip	Native								Y	
Ranunculus bulbosus	Bulbous Buttercup	Native	Y	Y							
Rhinanthus minor	Yellow-rattle	Native									
Sanguisorba minor	Salad Burnet	Native					Y				
Scabiosa columbaria	Lesser Scabious	Native									
Spiranthes spiralis	Autumn Lady's-tresses	Native						Y			
Trisetum flavescens	Yellow Oat-grass	Native									Y
Total No. Indicators =			**1**	**1**	**1**	**4**	**1**	**3**	**1**	**2**	**2**

SPECIES	COMMON NAME	NATIONAL STATUS	SITE CODE								
			E80	E88	E90	E95	E99	E100	E103	E107	E110
Blackstonia perfoliata	Yellow-wort	Native									
Centaurea scabiosa	Greater Knapweed	Native						Y		Y	
Cirsium acaule	Dwarf Thistle	Native									
Festuca ovina	Sheep's-fescue	Native	Y	Y							Y
Helictotrichon pratense	Meadow Oat-grass	Native			Y						
Leontodon hispidus	Rough Hawkbit	Native			Y						
Origanum vulgare	Wild Marjoram	Native				Y	Y				
Pilosella officinarum	Mouse-ear-hawkweed	Native		Y							
Pimpinella saxifraga	Burnet Saxifrage	Native	Y		Y				Y		
Plantago media	Hoary Plantain	Native		Y					Y		
Primula veris	Cowslip	Native			Y						
Ranunculus bulbosus	Bulbous Buttercup	Native						Y			Y
Rhinanthus minor	Yellow-rattle	Native								Y	
Sanguisorba minor	Salad Burnet	Native			Y					Y	
Scabiosa columbaria	Lesser Scabious	Native								Y	
Spiranthes spiralis	Autumn Lady's-tresses	Native									
Trisetum flavescens	Yellow Oat-grass	Native			Y						
Total No. Indicators =			**2**	**3**	**6**	**1**	**1**	**2**	**2**	**4**	**2**

TABLE 7.3 - LIST OF NEUTRAL GRASSLAND INDICATOR SPECIES WITHIN BOROUGH SNCIs

SPECIES	COMMON NAME	NATIONAL STATUS	SITE CODE									
			SNCI E1	SNCI E4	SNCI E7	SNCI E14	SNCI E18	SNCI E21	SNCI E29	SNCI E38	SNCI E77	SNCI E86
Achillea ptarmica	Sneezewort	Native										
Briza media	Quaking-grass	Native	Y									Y
Bromus racemosus	Smooth Brome	Native										
Carex disticha	Brown Sedge	Native		Y								
Carex flacca	Glaucous Sedge	Native										
Centaurea nigra	Common Knapweed	Native	Y		Y	Y				Y		
Festuca pratensis	Meadow Fescue	Native										
Helictotrichon pubescens	Downy Oat-grass	Native										
Hordeum secalinum	Meadow Barley	Native	Y	Y		Y						
Lathyrus nissolia	Grass Vetchling	Native						Y		Y		
Lotus pedunculatus	Greater Bird's-foot-trefoil	Native				Y				Y		
Lysimachia nummularia	Creeping Jenny	Native										
Ononis spinosa	Spiny Restharrow	Native										
Petroselinum segetum	Corn Parsley	Native								Y		
Pimpinella saxifraga	Burnet Saxifrage	Native	Y		Y		Y				Y	
Polygala vulgaris	Common Milkwort	Native										
Primula veris	Cowslip	Native										
Pulicaria dysenterica	Common Fleabane	Native	Y	Y		Y		Y	Y	Y		
Rhinanthus minor	Yellow-rattle	Native									Y	
Senecio erucifolius	Hoary Ragwort	Native										
Silaum silaus	Pepper Saxifrage	Native			Y							
Sison amomum	Stone Parsley	Native										
Stachys officinalis	Betony	Native			Y							
Succisa pratensis	Devil's-bit Scabious	Native	Y									
Trifolium fragiferum	Strawberry Clover	Native		Y	Y	Y						
Vicia cracca	Tufted Vetch	Native			Y					Y		
Total No. Indicators =			**6**	**4**	**6**	**5**	**1**	**2**	**1**	**6**	**2**	**1**

SPECIES	COMMON NAME	NATIONAL STATUS									
			SNCI E89	SNCI E94	SNCI E98	SNCI E101	SNCI E108	SNCI E109	SNCI E113	SNCI E115	SNCI E116
Achillea ptarmica	Sneezewort	Native				Y					
Briza media	Quaking-grass	Native		Y	Y		Y	Y	Y		
Bromus racemosus	Smooth Brome	Native				Y					
Carex disticha	Brown Sedge	Native									
Carex flacca	Glaucous Sedge	Native		Y	Y	Y	Y	Y	Y		
Centaurea nigra	Common Knapweed	Native			Y	Y	Y	Y	Y	Y	
Festuca pratensis	Meadow Fescue	Native			Y		Y				
Helictotrichon pubescens	Downy Oat-grass	Native						Y		Y	
Hordeum secalinum	Meadow Barley	Native			Y						
Lathyrus nissolia	Grass Vetchling	Native									
Lotus pedunculatus	Greater Bird's-foot-trefoil	Native									
Lysimachia nummularia	Creeping Jenny	Native									Y
Ononis spinosa	Spiny Restharrow	Native					Y				
Petroselinum segetum	Corn Parsley	Native	Y								
Pimpinella saxifraga	Burnet Saxifrage	Native	Y		Y	Y	Y	Y	Y	Y	
Polygala vulgaris	Common Milkwort	Native					Y	Y		Y	
Primula veris	Cowslip	Native	Y		Y		Y		Y		
Pulicaria dysenterica	Common Fleabane	Native									
Rhinanthus minor	Yellow-rattle	Native			Y		Y	Y	Y	Y	
Senecio erucifolius	Hoary Ragwort	Native				Y	Y	Y	Y		
Silaum silaus	Pepper Saxifrage	Native			Y						
Sison amomum	Stone Parsley	Native	Y								
Stachys officinalis	Betony	Native									
Succisa pratensis	Devil's-bit Scabious	Native	Y				Y		Y	Y	
Trifolium fragiferum	Strawberry Clover	Native	Y		Y						
Vicia cracca	Tufted Vetch	Native				Y		Y	Y		
Total No. Indicators =			**6**	**2**	**10**	**7**	**11**	**9**	**9**	**6**	**1**

TABLE 7.4 - LIST OF NEUTRAL GRASSLAND INDICATORS ON NON-SNCI SITES WITHIN EASTBOURNE

SPECIES	COMMON NAME	NATIONAL STATUS	SITE CODE															
			E5	E6	E17	E19	E23	E24	E37	E39	E43	E44	E53	E61	E63	E66	E68	E71
Achillea ptarmica	Sneezewort	Native																
Bromus racemosus	Smooth Brome	Native																
Carex flacca	Glaucous Sedge	Native																
Centaurea nigra	Common Knapweed	Native	Y	Y	Y	Y		Y	Y					Y	Y	Y	Y	Y
Lotus pedunculatus	Greater Bird's-foot-trefoil	Native							Y									
Petroselinum segetum	Corn Parsley	Native															Y	
Pimpinella saxifraga	Burnet Saxifrage	Native												Y				
Primula veris	Cowslip	Native															Y	
Pulicaria dysenterica	Common Fleabane	Native	Y			Y	Y	Y	Y	Y			Y					
Rhinanthus minor	Yellow-rattle	Native																
Silaum silaus	Pepper Saxifrage	Native						Y	Y								Y	
Trifolium fragiferum	Strawberry Clover	Native									Y	Y						
Vicia cracca	Tufted Vetch	Native					Y	Y										
	Total No. Indicators =		**2**	**1**	**1**	**2**	**2**	**4**	**4**	**1**	**1**	**1**	**1**	**2**	**1**	**1**	**4**	**1**

SPECIES	COMMON NAME	NATIONAL STATUS	SITE CODE															
			E72	E73	E75	E80	E81	E87	E88	E90	E91	E92	E100	E103	E107	E110	E111	E114
Achillea ptarmica	Sneezewort	Native																
Bromus racemosus	Smooth Brome	Native				Y				Y	Y					Y		Y
Carex flacca	Glaucous Sedge	Native								Y								
Centaurea nigra	Common Knapweed	Native	Y		Y	Y	Y	Y	Y	Y		Y	Y	Y	Y			
Lotus pedunculatus	Greater Bird's-foot-trefoil	Native																
Petroselinum segetum	Corn Parsley	Native	Y	Y													Y	
Pimpinella saxifraga	Burnet Saxifrage	Native				Y				Y				Y				
Primula veris	Cowslip	Native								Y								
Pulicaria dysenterica	Common Fleabane	Native	Y															
Rhinanthus minor	Yellow-rattle	Native													Y			
Silaum silaus	Pepper Saxifrage	Native																
Trifolium fragiferum	Strawberry Clover	Native																
Vicia cracca	Tufted Vetch	Native																
	Total No. Indicators =		**3**	**1**	**1**	**3**	**1**	**1**	**1**	**5**	**1**	**1**	**1**	**2**	**2**	**1**	**1**	**1**

TABLE 7.5 - LIST OF AWVPs WITHIN BOROUGH SNCIs

SPECIES	COMMON NAME	NATIONAL STATUS	SNCI E21	SNCI E38	SNCI E77	SNCI E78	SNCI E89	SNCI E96	SNCI E101	SNCI E109	SNCI E117
Acer campestre	Field Maple	Native						Y	Y		Y
Bromopsis ramosa	Hairy-brome	Native									Y
Carex pendula	Pendulous Sedge	Native	Y	Y				Y			Y
Carex remota	Remote Sedge	Native									Y
Carex sylvatica	Wood Sedge	Native						Y			Y
Carpinus betulus	Hornbeam	Native									Y
Festuca gigantea	Giant Fescue	Native						Y			Y
Hyacinthoides non-scripta	Bluebell	Native			Y						
Hypericum androsaemum	Tutsan	Native				Y			Y		
Ilex aquifolium	Holly	Native				Y			Y	Y	Y
Iris foetidissima	Stinking Iris	Native							Y		Y
Malus sylvestris s.s	Crab Apple	Native				Y					
Milium effusum	Wood Millet	Native						Y			
Polystichum setiferum	Soft Shield-fern	Native						Y			
Rosa arvensis	Field Rose	Native							Y		Y
Sorbus aucuparia	Rowan	Native						Y			
Tamus communis	Black Bryony	Native							Y		Y
Ulmus glabra	Wych Elm	Native					Y	Y			
Veronica montana	Wood Speedwell	Native						Y			Y
		Total AWVPs present =	**1**	**1**	**1**	**3**	**1**	**9**	**6**	**1**	**12**

TABLE 7.6 - LIST OF AWVPs ON NON-SNCI SITES WITHIN EASTBOURNE

SPECIES	COMMON NAME	NATIONAL STATUS	SITE CODE									
			E3	E20	E23	E24	E42	E46	E52	E54	E55	E61
Bromopsis ramosa	Hairy-brome	Native										
Carex pendula	Pendulous Sedge	Native		Y		Y		Y	Y			
Carpinus betulus	Hornbeam	Native										
Hyacinthoides non-scripta	Bluebell	Native										
Ilex aquifolium	Holly	Native		Y			Y			Y		
Iris foetidissima	Stinking Iris	Native									Y	Y
Malus sylvestris s.s.	Crab Apple	Native	Y									
Phyllitis scolopendrium	Hart's-tongue Fern	Native										
Ribes rubrum	Red Currant	Native		Y								
Sorbus aucuparia	Rowan	Native		Y	Y							
Tamus communis	Black Bryony	Native		Y								
Ulmus glabra	Wych Elm	Native										
Total No. AWVPs =			**1**	**5**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**

SPECIES	COMMON NAME	NATIONAL STATUS	SITE CODE										
			E68	E72	E73	E80	E81	E85	E90	E93	E97	E110	E114
Bromopsis ramosa	Hairy-brome	Native			Y								
Carex pendula	Pendulous Sedge	Native						Y					
Carpinus betulus	Hornbeam	Native											Y
Hyacinthoides non-scripta	Bluebell	Native											
Ilex aquifolium	Holly	Native	Y			Y	Y		Y		Y	Y	
Iris foetidissima	Stinking Iris	Native	Y	Y								Y	Y
Malus sylvestris s.s.	Crab Apple	Native											
Phyllitis scolopendrium	Hart's-tongue Fern	Native								Y			
Ribes rubrum	Red Currant	Native											
Sorbus aucuparia	Rowan	Native				Y			Y				
Tamus communis	Black Bryony	Native											
Ulmus glabra	Wych Elm	Native	Y										Y
Total No. AWVPs =			**3**	**1**	**1**	**2**	**1**	**1**	**2**	**1**	**1**	**2**	**3**

TABLE 7.7 - LIST OF AWVPs ON EASTBOURNE SCHOOL SITES

SPECIES	COMMON NAME	SITE CODE	
		S8	S13
Acer campestre	Field Maple	Y	-
Ilex aquifolium	Holly	Y	Y
Iris foetidissima	Stinking Iris	-	Y
Total No. Indicators =		**2**	**2**

TABLE 7.8 - LIST OF NEUTRAL GRASSLAND INDICATORS ON EASTBOURNE SCHOOL SITES

SPECIES	COMMON NAME	SITE CODE								
		S6	S10	S13	S14	S15	S17	S20	S21	S22
Centaurea nigra	Common Knapweed	Y	-	-	-	Y	Y	Y	-	-
Hordeum secalinum	Meadow Barley	-	Y	-	-	-	-	-	-	-
Lotus pedunculatus	Greater Bird's-foot-trefoil	Y	-	-	-	-	-	-	-	-
Petroselinum segetum	Corn Parsley	-	-	Y	Y	-	-	-	-	-
Pulicaria dysenterica	Common Fleabane	Y	-	-	-	Y	-	-	Y	-
Trifolium fragiferum	Strawberry Clover	-	-	-	-	-	-	-	-	Y
		3	**1**	**1**	**1**	**2**	**1**	**1**	**1**	**1**

TABLE 7.9 - LIST OF CHALK GRASSLAND INDICATORS ON EASTBOURNE SCHOOL SITES

SPECIES	COMMON NAME	SITE CODE		
		S8	S17	S20
Centaurea scabiosa	Greater Knapweed	Y	-	-
Pilosella officinarium	Mouse-ear-hawkweed	-	Y	-
Pimpinella saxifraga	Burnet Saxifrage	-	-	Y
Thymus praecox	Wild Thyme	-	Y	-
Total No. Indicator Spp. =		**1**	**2**	**1**

TABLE 7.11 - COMBINED LIST OF MARINE TAXA RECORDS (from Booth Museum

TAXA	No. Appearances within 3 Samples (MR15 to MR17)
Actinothoe sphyrodeta	2
Aglaophenia	2
Alcyonium digitatum	3
Aplidium punctum	2
Asterias rubens	3
Bispira volutacornis	1
Buccinum undatum	1
Bugula plumosa	1
Callionymus lyra	1
Cancer pagurus	3
Cellepora pumicosa	1
Centrolabrus exoletus	1
Clavelina lepadiformis	2
Ctenolabrus rupestris	3
Diplosoma	1
Dysidea fragilis	2
Esperiopsis fucorum	1
Flustra foliacea	2
Galathea	1
Halichondria panicea	1
Haliclona oculata	1
Hemimycale columella	1
Hinia reticulata	1
Homarus gammarus	1
Hydrallmania falcata	1
Hymeniacidon perleve	1
Inachus	1
Labrus bergylta	2
Labrus mixtus	1
Membranipora membranacea	1
Molgula	1
Morchellium argus	1
Mytilus edulis	1
Necora puber	2
Nemertesia antennina	3
Parablennius gattorugine	2
Pentapora foliacea	1
Pholas dactylus	2
Phoronis hippocrepia	2
Pleuronectes platessa	1
Pollachius pollachius	2
Polymastia boletiformis	1
Polymastia mamillaris	2
Pomatoceros triqueter	1
Raspailia ramosa	1
Rhodophycota	1
Sabellaria spinulosa	1
Sertularia argentea	1
Spondyliosoma cantharus	1
Stylostichon plumosum	1
Suberites	1
Trisopterus luscus	3
Tubularia indivisa	1
Urticina felina	1

TABLE 7.10 - WATERBODIES WITHIN EASTBOURNE BOROUGH

POND NO.	SITE NAME	GRID REFERENCE	FUNCTION	NATURE CONSERVATION DESIGNATION	STATUS IN 2007
1	Hide Hollow Farm	TQ 629034	Elongate pond within woodland.	None	Unknown. No public access.
2		TQ 629033	Simple pond within woodland.	None	Unknown. No public access.
3	Langney Crematorium	TQ 629032	Simple pond, possibly spring-fed.	**Langney Crematorium SNCI (No. E14)**	Confirmed.
4		TQ 628031	Series of three rectangular artificial ponds.		Confirmed.
5	Crumbles Lake, Princes Park	TQ 627004	Large balancing pond, receiving discharge from Crumbles Sewer. Large numbers of waterfowl present.	None	Confirmed.
6	Langney Centre Pond	TQ 624 028	Large pond, surrounded by mature trees.	**Langney Centre Pond SNCI (No. E21)**	Confirmed.
7	Woodland adjacent to Langney Centre Pond	TQ 625028	Three separate ponds within woodland, possibly part of former clay quarry.	None	Unknown. No public access. Reportedt to suffer from fly-tipping.
8		TQ 625028			
9		TQ 625027			
10	Langney Village Pond	TQ 632022	Large pond.	None	Confirmed.
11	Highfield County Junior School Environmental Pond Area	TQ 609023	Large pond, surrounded by mature trees.	Informal Conservation Area	Confirmed.
12	The Coppice	TQ 595018	Former decoy pond within woodland. Infilled in 1960s, confirmed in 2000 survey.	**The Coppice SNCI (No. E96)**	No longer present.
13	Hampden Park	TQ 599017	Hampden Lake, set within amenity grassland and woodland. Large numbers of waterfowl present.	**Hampden Park & Ham Shaw SNCI (No. E117)**	Confirmed.
14		TQ 600017	? Pond within water garden.		Not examined.
15	Land east of Broadwater Way	TQ 606016	Pond within woodland.	None	Not examined.
16	Junction of Cross Levels Way and Railway	TQ 609015	Balancing pond, infilled with swamp vegetation	None	Not examined.
17	Motcombe Park	TQ 597996	Motcombe Pond, with waterfowl present.	None	Confirmed.
18	Adventure Park	TQ 624999	Pond within activity playground.	None	Confirmed.
19	Compton Place	TQ 602987	? Pond along northern boundary.	None	Not examined.
20	Shinewater Park [**Eastbourne Park**]	TQ 611033	Shinewater Lake.	None	Confirmed.
21		TQ 615028	Hydneye Lake.	None	Confirmed.
22		TQ 613034	Reed-filled scrape.	None	Confirmed.
23		TQ 613033	Reed-filled scrape.	None	Confirmed.
24		TQ 613033	Reed-filled scrape.	None	Confirmed.
25		TQ 615033	Reed-filled scrape.	None	Confirmed.
26		TQ 614031	Round pond, with swamp.	None	Confirmed.
27		TQ 614031	Reed-filled scrape.	None	Confirmed.
28		TQ 615025	Balancing pond.	None	Confirmed.
29		TQ 616025	Balancing pond.	None	Confirmed.
30		TQ 616026	Reed-filled scrape.	None	Confirmed.
31	Land east of Golden Jubilee Way (A22) [**Eastbourne Park**]	TQ 608032	Un-named Lake	None	Confirmed.
32	Willingdon/West Langney Levels [**Eastbourne Park**]	TQ	West Langney Lake.	None	Confirmed.
33		TQ	Un-named Lake.	None	Confirmed.
34		TQ 621023	? Stock pond.	None	Confirmed.
35		TQ 624021	? Stock pond.	None	Confirmed.
36		TQ	Balancing pond	None	Confirmed.
37	Eastbourne Golfing Park	TQ 610015	Water features.	None	Confirmed.
38		TQ 611014	Water features.	None	Confirmed.
39		TQ 612014	Water features.	None	Confirmed.
40		TQ 612014	Water features.	None	Confirmed.
41		TQ 612015	Water features.	None	Confirmed.
42		TQ 613015	Water features.	None	Confirmed.
43	Eastbourne Miniature Railway	TQ 612011	Lake	None	Confirmed.
44	Eastbourne Levels [**Eastbourne Park**]	TQ 609010	Balancing Lake.	None	Confirmed.
45		TQ 603010	Pond surrounded by mature Crack Willows.	None	Confirmed.
46	Eastbourne Downland Estate	TQ 580018	? Pond.	None	Not examined.
47		TQ 583016	Woodland pond.	None	Not examined.
48		TQ 580010	Woodland pond.	None	Not examined.
49		TQ 584020	Pond.	**Willingdon Down SSSI**	Not examined.
50		TQ 582999	Pond.	None	Not examined.
51		TQ 574006	? Dewpond	None	Not examined.
52		TQ 568990	? Dewpond	None	Not examined.
53		TQ 583990	? Dewpond	None	Not examined.
54		TQ 588991	Dewpond	None	Not examined.
55		TQ 576983	? Dewpond	None	Not examined.
56		TQ 567980	? Dewpond	None	Not examined.
57		TQ 577978	? Dewpond	None	Not examined.
58		TQ 567973	Dewpond	None	Not examined.
59		TQ 579971	Dewpond	None	Not examined.
60		TQ 584971	Dewpond	None	Not examined.
61		TQ 590972	Dewpond	None	Not examined.
62		TQ 589970	? Pond	None	Not examined.
63		TQ 588969	Dewpond	None	Not examined.
64		TQ 592965	Dewpond	None	Not examined.
65		TQ 589965	Dewpond	None	Not examined.
66		TQ 589966	Dewpond	None	Not examined.
67		TQ 587968	Dewpond	None	Not examined.
68		TQ 582964	Dewpond	None	Not examined.
69		TQ 573968	Dewpond	None	Not examined.
70		TQ 579964	? Pond	None	Not examined.
71		TQ 576961	Dewpond	None	Not examined.
72		TQ 572960	? Dewpond	None	Not examined.
73		TQ 564963	Dewpond	None	Not examined.
74		TQ 567955	Dewpond	None	Not examined.
75		TQ 571956	Dewpond	None	Not examined.
76		TQ 575954	? Pond	**Seaford to Beachy Head SSSI**	Not examined.
77		TQ 578954	? Pond	None	Not examined.

TABLE XX - PROVISIONAL FLORAL LIST FOR BOROUGH SNCIs

SPECIES	COMMON NAME	NATIONAL STATUS	SITE CODE																						
			SNCI 61	SNCI 64	SNCI 67	SNCI 614	SNCI 618	SNCI 621	SNCI 629	SNCI 638	SNCI 677	SNCI 678	SNCI 686	SNCI 689	SNCI 694	SNCI 696	SNCI 698	SNCI 6101	SNCI 6108	SNCI 6109	SNCI 6113	SNCI 6115	SNCI 6131
Acer campestre	Field Maple	Native														Y		Y					
Acer pseudoplatanus	Sycamore	Neophyte			Y						Y			Y		Y	Y	Y			Y		
Achillea millefolium	Yarrow	Native			Y	Y	Y	Y	Y	Y	Y		Y	Y			Y	Y	Y	Y	Y	Y	Y
Aegopodium podagraria	Ground Elder	Archaeophyt																					
Alopecurus pratensis	Meadow Foxtail	Native																Y					
Anthriscus sylvestris	Cow Parsley	Native																Y					
Arctium minus	Lesser Burdock	Native																					
Arenaria serpyllifolia	Thyme-leaved Sandwort	Native																					
Arrhenatherum elatius	False Oat-grass	Native																					
Artemisia vulgaris	Mugwort	Archaeophyt																					
Arum maculatum	Lords-and-Ladies	Native																					
Asplenium ceterach	Rustyback fern	Native																					
Aster cf. novi-belgii	Confused Michaelmas-daisy	Neophyte																					
Aegilops geniculata	Common Ovard	Native																					
Avena fatua	Common Wild Oat	Archaeophyt			Y			Y					Y										
Bellis perennis	Daisy	Native																					
Betula pendula	Silver Birch	Native																					
Bromus hordeaceus	Soft Brome	Native																					
Bromus racemosus	Smooth Brome	Native																					
Buddleja davidii	Butterfly-bush	Neophyte																					
Calliitriche stagnalis s.s.	Common Water-starwort	Native																					
Calystegia sepium	Hedge Bindweed	Native																					
Calystegia silvatica	Large Bindweed	Neophyte																					
Campanula glomerata	Clustered Bellflower	Native																					
Capsella bursa-pastoris	Shepherd's-purse	Archaeophyt																					
Cardamine pratensis	Cuckoo Flower	Native																					
Carduus nutans	Musk Thistle	Native																					
Carex acutiformis	Lesser Pond-sedge	Native																					
Carex binervis	Green-ribbed Sedge	Native																					
Carex distichia	Brown Sedge	Native																					
Carex flacca	Glaucous Sedge	Native																					
Carex hirta	Hairy Sedge	Native																					
Carex otrubae	False Fox-sedge	Native																					
Carex pendula	Pendulous Sedge	Native																					
Carex remota	Remote Sedge	Native																					
Carex riparia	Greater Pond-sedge	Native																					
Carex sylvatica	Wood Sedge	Native																					
Centaurea nigra	Common Knapweed	Native																					
Centaurea solstitialis	Yellow Star-thistle	Native																					
Centaurium erythraea	Common Centaury	Native																					
Centranthus ruber	Red Valerian	Neophyte																					
Cerastium diffusum	Sea Mouse-ear	Native																					
Cerastium fontanum	Common Mouse-ear	Native																					
Ceratophyllum demersum	Rigid Hornwort	Native																					
Chamerion angustifolium	Rosebay Willowherb	Native																					
Chenopodium album	Fat-hen	Native																					
Chenopodium botrys	Fig-leaved Goosefoot	Archaeophyt																					
Chenopodium polyspermum	Many-seeded Goosefoot	Archaeophyt																					
Cirsium arvense	Creeping Thistle	Native																					
Cirsium palustre	Marsh Thistle	Native																					
Cirsium vulgare	Spear Thistle	Native																					
Clematis vitalba	Traveller's-joy	Native																					
Conium maculatum	Hemlock	Native																					
Corrigiola litoralis	Strapwort	Archaeophyt																					
Cotoneaster simonsii	Himalayan Cotoneaster	Neophyte																					
Crambe cf.maritima	Sea Kale	Native																					
Crataegus monogyn	Hawthorn	Native																					
Crepis capillaris	Smooth Hawk's-beard	Native																					
Crepis sinuicaria	Bristly Hawk's-beard	Neophyte																					
Crithmum maritimu	Rock Samphire	Native																					
Cruciata laevipes	Crosswort	Native																					
Cupressus cf.macrocarpa	Monterey Cypress	Neophyte																					
Cynosurus cristatus	Crested Dog's-tail	Native																					
Dactylis glomerata	Cock's-foot	Native																					
Dactylorhiza fuchsii	Common Spotted-orchi	Native																					
Dianthus deltoides	Maiden-pink	Native																					
Diplotaxis tenuifolia	Perennial Wall-rocket	Native																					
Dittrichia viscosa	Yellow Fleabane	Native																					
Echium vulgare	Viper's-bugloss	Native																					
Elaeagnus angustifolia	Oleaster	Native																					
Elodea canadensis	Canadian Waterweed	Neophyte																					
Elytrigia atherica	Sea Couch	Native																					
Epilobium hirsutum	Great Willowherb	Native																					
Epilobium lanceolatum	Spear-leaved Willowherb	Native																					
Epilobium montanu	Broad-leaved Willowherb	Native																					
Epilobium parviflorum	Hoary Willowherb	Native																					
Epilobium tetragonu	Square-stalked Willowherb	Native																					
Equisetum arvense	Field Horsetail	Native																					
Equisetum telmateia	Great Horsetail	Native																					
Erigeron glaucus	Seaside Daisy	Neophyte																					
Erodium cicutarium agg.	Common Stork's-bi	Native																					
Erysimum cheiri	Wallflower	Archaeophyt																					
Euphorbia cf.helioscopa	Cambridge Milk-parsley	Native																					
Euphorbia helioscopa	Sun Spurge	Archaeophyt																					
Euphorbia peplus	Petty Spurge	Archaeophyt																					
Euphorbia serrulata	Upright Spurge	Native																					
Euphorbia x pseudovirgata	Dwarf Sun Spurge	Native																					
Fagus sylvatica	Common Beech	Native																					
Filipendula ulmaria	Meadowsweet	Native																					
Fragaria vesca	Wild Strawberry	Native																					
Fraxinus excelsior	Ash	Native																					
Galeopsis cf.tetrahit	Common Hemp-nettle	Archaeophyt																					
Galium aparine	Cleavers	Native																					
Galium mollugo(incl. ssp. *erectum*)	Hedge Bedstraw	Native																					
Galium palustre	Common Marsh Bedstra	Native																					
Galium verum	Lady's-Bedstraw	Native																					
Gastridium ventricosum	Nit-grass	Native																					
Geranium dissectum	Cut-leaved Crane's-bill	Archaeophyt																					
Geranium molle	Dove's-foot Crane's-bill	Native																					
Geranium robertianu	Herb Robert	Native																					
Geum urbanum	Wood Avens	Native																					
Groenlandia densa	Various-horned Pondw	Native																					
Gymnadenia conopsea	Fragrant Orchid	Native																					
Hedera helix	Ivy	Native																					
Helianthemum pulverul	Hoary Rock-rose	Native																					
Helminthotheca echioides	Bristly Ox-tongue	Native																					
Heracleum sphondylium	Hogweed	Native																					
Hieracium sp.	A Hawkweed	Native																					
Hyacinthoides hispanica	Spanish Bluebell	Native																					
Hyacinthoides non-scripa	Bluebell	Native																					
Hydrocharis morsus-ranu	Frogbit	Native																					
Hypericum androsaemu	Tutsan	Native																					
Hypericum perforatu	Common St John's-wor	Native																					
Hyoscyamus niger	Cat's-ear	Native																					
Ilex aquifolium	Holly	Native																					
Inula conyza	Ploughman's-Spikenar	Native																					
Iris foetidissima	Stinking Iris	Native																					
Juglans regia	Walnut	Native																					
Juglans regia	Walnut	Neophyte																					
Juncus acutiflorus	Sharp-flowered Rush	Native																					
Juncus articulatus	Jointed Rush	Native																					
Juncus bufonius	Toad Rush	Native																					
Juncus effusus	Soft Rush	Native																					
Juncus gerardi	Saltmarsh Rush	Native																					
Juncus inflexu	Hard Rush	Native																					
Juncus conglomeratu	Compact Rush	Native																					
Juncus subnodulosus	Blunt-flowered Rush	Native																					
Lactuca serriola	Prickly Lettuce	Archaeophyt																					
Lamium album	White Dead-nettle	Native																					
Lamium purpureu	Red Dead-nettle	Archaeophyt																					
Lapsana communis	Nipplewort	Native																					
Lathyrus latifolius	Broad-leaved Everlasting-pe	Neophyte																					
Lathyrus nissolia	Grass Vetchling	Native																					
Lathyrus pratensis	Meadow Vetchling	Native																					
Laurelia sempervi	Tree Mallow	Native																					
Lemna minor	Common Duckweed	Native																					
Lemna minuta	Least Duckweed	Neophyte																					
Lemna trisulca	Ivy-leaved Duckweed	Native																					
Leontodon autumna	Autumn Hawkb	Native																					
Leontodon hispidu	Rough Hawkbit	Native																					
Lepidium draba	Hoary Cress	Neophyte																					
Lepidium ruderal	Narrow-leaved Pepperwo	Archaeophyt																					
Leucanthemum vulga	Ox-eye Daisy	Native																					
Ligustrum vulgar	Wild Privet	Native																					
Limonium binervosusp. binervosum	Rock Sea-lavende	Native																					
Linaria purpurea	Purple Toadflx	Neophyte																					
Linaria vulgaris	Common Toadflx	Native																					
Lolium cf.perenne	Early Rye	Native																					
Lolium perenn	Perennial Rye-grass	Native																					
Lonicera nitida	Wilson's Honeysuckle	Neophyte																					
Lonicera periclymenu	Honeysuckle	Native																					
Lotus corniculatus	Common Bird's-foot-trefo	Native																					
Lotus pedunculatus	Greater Bird's-foot-trefoi	Native																					
Lotus subbiflorus	Hairy Bird's-foot-trefoi	Native																					
Lupinus arboreus	Tree Lupin	Neophyte																					
Lupinus polyphyllus	Garden Lupin	Neophyte																					
Lycium barbarum	Duke of Argyll's-tea-tr	Neophyte																					
Lysimachia nummular	Creeping Jenny	Native																					
Lythrum salicaria	Purple-loosestrife	Native																					
Malus domestica	Cultivated Appl	Archaeophyt																					
Malus sylvestris s.s.	Crab Apple	Native																					
Malva sylvestris	Common Mallow	Archaeophyt																					
Matricaria discoidea	Pineapple-weed	Neophyte																					
Matthiola incana	Hoary Stock	Neophyte																					
Medicago arabica	Spotted Medick	Native																					
Medicago lupulina	Black Medick	Native																					
*Medicago sativa*ssp. *sativa*	Lucerne	Neophyte																					
Melilotus albus	White Melilot	Neophyte																					
Melilotus altissimus	Tall Melilot	Archaeophyt																					
Melilotus officinalis	Ribbed Melilot	Neophyt																					
Melissa officinalis	Balm	Neophyte																					
Mentha aquatic	Water-mint	Native																					
Mercurialis annua	Annual Mercury	Archaeophyt																					
Oenanthe pimpinelloi	Corky-fruited Water-dropwort	Native																					
Ophrys apifera	Bee Orchid	Native																					
Origanum vulgare	Wild Marjoram	Native																					
Papaver rhoeas	Common Poppy	Archaeophyt																					
Persicaria amphibi	Amphibious Bistort	Native																					
Persicaria maculosa	Redshank	Native																					
Petasites fragans	Winter-heliotrope	Neophyte																					
Petroselinum segetu	Corn Parsley	Native																					
Phleum bertolon	Smaller Cat's-tail	Native																					
Phleum pratens	Timothy Grass	Native																					
Phragmites australi	Common Reed	Native																					
Phyllitis scolopendrium	Hart's-tongue Fern	Native																					
Picris echioide	Bristly Ox-tongue	Native																					
Picris hieracioides	Hawkweed Ox-tongue	Native																					
Pimpinella saxifraga	Meadow Burnet	Native																					
Plantago coronopus	Buck's-horn Plantai	Native																					
Plantago lanceolat	Ribwort Plantain	Native																					
Plantago major	Greater Plantain	Native																					
Poa annua	Annual Meadow-gras	Native																					
Poa pratensis	Smooth Meadow-gras	Native																					
Poa trivialis	Rough Meadow-gras	Native																					
Polygala vulgaris	Common Milkwort	Native																					
*Polygonum aviculare*agg.	Knotgrass	Native																					
Polygonum cognatum	Play's Knotgrass	Native																					
Polygonum oxalicu	Sorb-shield-fern	Native																					
Populus x canescens	Grey Poplar	Native																					
Potamogeton crispu	Curled Pondweed	Native																					
Potamogeton natu	Broad-leaved Pondweed	Native																					
Potamogeton pectinat	Fennel Pondweed	Native																					
Potamogeton pusillu	Lesser Pondweed	Native																					
Potentilla anserina	Silverweed	Native																					
Potentilla reptan	Creeping Cinquefoil	Native																					
Prunella vulgaris	Selfheal	Native																					
Prunus spinosa	Blackthorn	Native																					
Quercus cerris	Turkey Oak	Native																					
Quercus ilex	Holm Oak	Neophyte																					
Quercus robur	Pedunculate Oa	Native																					
Ranunculus acris	Meadow Buttercu	Native																					
Ranunculus bulbosu	Bulbous Buttercu	Native																					
Ranunculus ficaria	Lesser Spearwor	Native																					
Ranunculus repen	Creeping Buttercup	Native																					
Ranunculus sceleratu	Celery-leaved Crowfo	Native																					
*Raphanus raphanistrum*ssp. *maritimus*	Sea Radish	Native																					
*Raphanus raphanistrum*ssp. *raphanistrum*	Wild Radish	Archaeophyt																					
Reseda lutea	Wild Mignonette	Archaeophyt																					
Rhamnus catharticu	Buckthorn Kicksaro	Native																					
Rhododendron ponticu	Pontic Rhododendron	Native																					
Ribes uva-crispa	Gooseberry	Native																					
Rorippa palustris	Marsh Yellow-cress	Native																					
Rorippa nasturtium-aquaticu	Water-cress	Native																					
Rosa arvensis	Field Rose	Native																					
Rosa canina agg.	Dog Rose	Native																					
Rubus caesius	Dewberry	Native																					
Rubus fruticosus agg.	Bramble	Native																					
Rubus idaeus	Raspberry	Native																					
Rumex acetosa	Common Sorrel	Native																					
Rumex acetosella	Sheep's Sorrel	Native																					
Rumex conglo	Clustered Dock	Native																					
Rumex hydrolapathu	Water Dock	Native																					
Rumex obtusifolius	Broad-leaved Doc	Native																					
Rumex pulcher	Fiddle Dock	Native																					
Sagina apetal	Common Pearlwor	Native																					
Sagina procumben	Procumbent Pearlwor	Native																					
Salix alba	White Willow	Archaeophyt																					
Salix aurita	Eared Willow	Native																					
Salix caprea	Goat Willow	Native																					
Salix cinerea	Grey Willow	Native																					
Salix fragilis	Crack Willow	Archaeophyt																					
Salix viminalis	Osier	Archaeophyt																					
Sambucus nigr	Elder	Native																					
Sanguisorba minor	Salad Burnet	Native																					
Saponaria officinalis	Soapwort	Archaeophyt																					
Scabiosa atropurpurea	Sweet Scabious	Neophyte																					
Scabiosa columbaria	Lesser Scabious	Native																					
Schoenoplectus tabernaemonta	Grey Club-rush	Native																					
Scrophularia auriculata	Water Figwort	Native																					
Sedum acr	Biting Stonecrop	Native																					
Sedum album	White Stonecrop	Native																					
Senecio aquaticu	Marsh Ragwort	Native																					
Senecio erucifolius	Hoary Ragwort	Native																					
Senecio jacobae	Ragwort	Native																					
Senecio squalidu	Oxford Ragwort	Neophyte																					
Senecio viscosus	Sticky Groundse	Neophyte																					
Senecio vulgaris	Groundse	Native																					
Sherardia arvensis	Field Madder	Native																					
Silaum silaus	Pepper Saxifrag	Native																					
Silene latifolia	White Campio	Native																					
Silene uniflora	Sea Campion	Native																					
Silene vulgaris	Bladder Campio	Native																					
Sinapis arvensis	Charlock	Archaeophyt																					
Sison amomu	Stone Parsley	Native																					
Sisymbrium officinal	Hedge Mustard	Archaeophyt																					
Sisymbrium orientale	Eastern Rocke	Neophyte																					
*Sisymbrium x*pseudo	Alexanders	Archaeophyt																					
Solanum dulcamara	Bittersweet	Native																					
Solanum nigrum	Mind-your-own-business	Neophyte																					
Sonchus arvensis	Field Sow-thistle	Native																					
Sonchus asper	Prickly Sow-thistle	Native																					
Sonchus oleraceu	Common Sow-thistl	Native																					
Sorbus aucuparia	Rowan	Native																					
Sorbus intermedia	Swedish Bus-nee	Native																					
Stachys arvensis	Corn Stachys	Native																					
Stellaria pallida	Lesser Chickweed	Native																					
Stellaria media	Common Chickweed	Native																					
Succisa pratensis	Devil's-bit Scabious	Native																					
Symphytum officina	Common Comfre	Native																					
Tamus communis	Black Bryon	Native																					
Taraxacum (sect.*Ruderalia*)	Dandelion	Archaeophyt																					
Taraxacum (sect.*Vesp.*) agg.	Dandelions	Native																					
Taxus baccata	Yew	Native																					
Teucrium scorodoni	Wood Sage	Native																					
Thalictr	Field Penny-cress	Archaeophyt																					
Thymus polytrichu	Wild Thyme	Native																					
Tilia x europaea	Common Lime	County Neophyt																					
Torilis japonica	Upright Hedge-parsley	Native																					
Torilis nodosa	Knotted Hedge-parsley	Native																					
*Tragopogon pratensis*ssp. *minor*	Goat's-beard	Native																					
Trifolium arvense	Hare's-foot Clover	Native																					
Trifolium cf. campestre	Hop Trefoil	Native																					
Trifolium dubium	Lesser Trefoil	Native																					
Trifolium fragiferum	Strawberry Clove	Native																					
Trifolium pratens	Red Clover	Native																					
Trifolium repens	White Clover	Native																					
Trifolium scabrum	Rough Clover	Native																					
Trifolium striatum	Knotted Clover	Native																					
Tripleurospermum inodoru	Scentless Mayweed	Archaeophyt																					
Tripleurospermum maritimu	Sea Mayweed	Native																					
Trisetum flavescen	Yellow Oat-grass	Native																					
Tussilago farfara	Colt's-foot	Native																					
Typha latifolia	Bulrush	Native																					
Ulex europ	Gorse	Native																					
Ulmus glabra	Wych Elm	Native																					
Ulmus procera	English Elm	Native																					
Urtica dioica	Stinging Nettle	Native																					
*Valeriana*cf.*pyrenu*	Great Mullein	Native																					
Veronica agrestis	Green Field-speedwe	Archaeophyt																					
Veronica anagallis	Water Speedwe	Native																					
Veronica beccabunga	Brooklime	Native																					
Veronica catenat	Pink Water-speedwe	Native																					
Veronica chamaedry	Germander Speedwe	Native																					
Veronica montan	Wood Speedwe	Native																					
Veronica persica	Common Field-speedwe	Neophyte																					
Veronica polysperma	Thyme-leaved Speedw	Native																					
Vicia cracca	Tufted Vetch	Native																					
Vicia hirsuta	Hairy Tare	Native																					
Vicia sativa	Common Vetc	Native																					
Vicia tetrasperm	Smooth Tar	Native																					
Viola arvensis	Field Pansy	Archaeophyt																					
Viola hirta	Hairy Violet	Native																					
Viola odorata	Sweet Violet	Native																					
Vulpia bromoide	Squirrelt Fescue	Native																					

Legend:

- Ancient Woodland Vascular Plant (Rose, 19
- AWV/Indicator Species of Unimproved Neutral Grassland (KWT, 2(
- Indicator Species of Unimproved Neutral Grassland (KWT, 20
- Indicator Species of Unimproved Chalk Grassland (KWT, 2(
- Indicator Species of Unimproved Neutral/Chalk Grassland (KWT, 2(

TABLE XX - FLORAL LIST FOR NON-SNCI SITES WITHIN EASTBOURNE

SPECIES	COMMON NAME	NATIONAL STATUS	SITE CODE																																																			
			E2	E3	E5	E6	E8	E9	E10	E11	E12	E15	E16	E17	E19	E20	E22	E23	E24	E25	E26	E27	E28	E30	E31	E32	E33	E34	E35	E36	E37	E39	E40	E41	E42	E43	E44	E45	E46	E47	E48	E49	E50	E51	E52	E53	E54	E55	E56	E57	E58/59	E60	E61	E62
Acer campestre	Field Maple	Native																																																		
Acer pseudoplantanus	Sycamore	Neophyte														Y		Y						Y		Y																				Y				Y				
Achillea millefolium	Yarrow	Native			Y	Y	Y	Y					Y	Y			Y	Y	Y	Y			Y	Y							Y	Y	Y		Y	Y	Y		Y		Y		Y			Y	Y			Y				Y
Achillea ptarmica	Sneezewort	Native																																																		
Aegopodium podagraria	Ground Elder	Archaeophyte																																																		
Aesculus hippocastanum	Horse Chestnut	Neophyte							Y																																						Y						
Aethusa cynapium	Fool's Parsley	Native									Y																																									
Agrimonia eupatoria	Agrimony	Native																																																		Y	
Agrostis capillaris	Common Bent	Native			Y								Y																																							
Agrostis gigantea	Black Bent	Archaeophyte																																																		
Agrostis stolonifera	Creeping Bent	Native					Y											Y	Y																																	
Aira praecox	Early Hair-grass	Native																																																		
Alisma lanceolatum	Narrow-leaved Water Plantain	Native																																																		
Alisma plantago-aquatica	Water Plantain	Native																																																		
Alliaria petiolata	Garlic Mustard	Native													Y		Y		Y	Y			Y																										Y				
Allium cf. oleraceum	Field Garlic	Native	Where is the record ?																																																	
Alnus glutinosa	Alder	Native																																																		
Alopecurus geniculatus	Marsh Foxtail	Native																																																		
Amelanchier lamarckii	Juneberry	Neophyte																																																		
Anacamptis pyramidalis	Pyramidal Orchid	Native																																																		
Anagallis arvensis	Scarlet Pimpernel	Native		Y			Y				Y																																									
Anisantha sterilis	Barren Brome	Archaeophyte			Y									Y			Y																										Y								Y			
Anthemis cf. cotula	Stinking Chamomile	Archaeophyte																																																		
Anthoxanthum odoratum	Sweet Vernal-grass	Native																																																		
Anthriscus sylvestris	Cow Parsley	Native			Y								Y		Y	Y	Y	Y				Y								Y														Y						Y				
Anthyllis vulneraria	Kidney Vetch	Native															Y																																			
Antirrhinum majus	Snapdragon	Neophyte																																																		
Apium nodiflorum	Fool's Water-cress	Native																																																		
Arctium lappa	Greater Burdock	Archaeophyte			Y		Y													Y																																
Arenaria balearica	Mossy Sandwort	Neophyte																										Y																								
Armoracia rusticana	Horse Radish	Archaeophyte																Y												Y	Y																					
Arrhenatherum elatius	False Oat-grass	Native			Y			Y						Y	Y			Y	Y				Y								Y	Y														Y				Y			Y	
Artemisia vulgaris	Mugwort	Archaeophyte			Y										Y			Y	Y																											Y					Y			
Arum maculatum	Lords-and-ladies	Native														Y																																					
Asperula cynanchica	Squinancywort	Native																																																		
Aspleurium ruta-muraria	Wall-rue	Native																																																		
Aster cf. novi-belgii	Confused Michaelmas-daisy	Neophyte																Y												Y	Y														Y	Y								
Atriplex patula	Common Orache	Native													Y			Y	Y		Y		Y																	Y				Y										
Atriplex prostrata	Spear-leaved Orache	Native		Y	Y		Y	Y			Y				Y			Y	Y	Y																																		
Ballota nigra	Black Horehound	Archaeophyte					Y				Y			Y			Y																																					
Barbarea vulgaris	Winter Cress	Native																																																		
Bellis perennis	Daisy	Native	Y		Y	Y	Y			Y	Y						Y	Y	Y	Y	Y			Y											Y	Y	Y	Y			Y	Y		Y	Y	Y			Y			Y			
Berula erecta	Lesser Water-parsnip	Native																																																		
Beta vulgaris ssp. maritima	Sea Beet	Native																		Y																																	
Bidens tripartita	Trifid Bur-marigold	Native																																																		
Blackstonia perfoliata	Yellow-wort	Native																																																	Y	
Bolboschoenus maritimus	Sea Club-rush	Native																																																		
Brachypodium pinnatum	Tor-grass	Native																																																		
Brachypodium sylvaticum	False-brome	Native																																																	Y	Y
Brassica rapa	Turnip	Archaeophyte																Y																																		
Briza media	Quaking-grass	Native																																																		
Bromopsis erecta	Upright Brome	Native																																																	Y	
Bromopsis ramosa	Hairy-brome	Native																																																		
Bromus hordeaceus	Soft-brome	Native											Y																																						Y	
Bromus racemosus	Smooth Brome	Native																																																		
Bryonia dioica	White Bryony	Native																																																		
Buddleia davidii	Butterfly-bush	Neophyte															Y																	Y							Y												
Callitriche stagnalis s.s.	Common Water-starwort	Native																																																		
Calystegia sepium	Hedge Bindweed	Native			Y					Y	Y					Y	Y	Y	Y												Y		Y											Y			Y			Y	Y			
Campanula glomerata	Clustered Bellflower	Native																																																		
Capsella bursa-pastoris	Shepherd's Purse	Archaeophyte		Y	Y	Y	Y	Y			Y			Y	Y		Y	Y	Y		Y		Y	Y					Y	Y	Y	Y	Y		Y		Y			Y	Y							Y						
Cardamine hirsuta	Hairy Bitter-cress	Native				Y												Y														Y															Y				Y		
Cardamine pratensis	Cuckooflower	Native																																																		
Carduus nutans	Musk Thistle	Native																																																		
Carduus tenuiflorus	Slender Thistle	Native																																																		
Carex acutiformis	Lesser Pond-sedge	Native																																																		
Carex binervis	Green-ribbed Sedge	Native																																																		
Carex disticha	Brown Sedge	Native																																																		
Carex flacca	Glaucous Sedge	Native																																																		
Carex hirta	Hairy Sedge	Native						Y				Y															Y														Y													
Carex otrubae	False Fox Sedge	Native																																																		
Carex panicea	Carnation Sedge	Native																																																		
Carex pendula	Pendulous Sedge	Native														Y			Y																				Y						Y									
Carex remota	Remote Sedge	Native																																																		
Carex riparia	Greater Pond-sedge	Native									Y																																									
Carex sp.	Sedge	Native																																										Y								
Carex sylvatica	Wood Sedge	Native																																																		
Carlina vulgaris	Carline Thistle	Native																																																		
Carpinus betulus	Hornbeam	Native																																																		
Castanea sativa	Sweet Chestnut	Archaeophyte																							Y																											
Catapodium marinum	Sea Fern-grass	Native																																																		
Catapodium rigidum	Fern-grass	Native															Y			Y																										Y	Y						Y	
Cedrus libani	Cedar-of-Lebanon	Neophyte																																																		
Centaurea nigra	Common Knapweed	Native			Y	Y								Y	Y				Y												Y																						Y	
Centaurea scabiosa	Greater Knapweed	Native																																																	Y	
Centaurium erythraea	Common Centaury	Native																																																		
Centranthus ruber	Red Valerian	Neophyte						Y																																					Y							Y	Y
Cerastium diffusum	Sea Mouse-ear	Native																																																		
Cerastium fontanum	Common Mouse-ear	Native																											Y																							
Ceratophyllum demersum	Rigid Hornwort	Native																																																		
Chaerophyllum temulum	Rough Chervil	Native																											Y																							
Chamerion angustifolium	Rosebay Willowherb	Native															Y																														Y				
Chenopodium album agg.	Fat Hen	Native		Y	Y	Y	Y				Y				Y			Y	Y				Y								Y																							
Chenopodium polyspermum	Many-seeded Goosefoot	Archaeophyte					Y												Y				Y								Y																							
Cichorum intybus	Chicory	Archaeophyte																																											Y							
Circaea lutetiana	Enchanter's-nightshade	Native																																														Y			
Cirsium acaule	Dwarf Thistle	Native																																																		
Cirsium arvense	Creeping Thistle	Native		Y	Y		Y	Y				Y			Y			Y	Y				Y								Y		Y											Y		Y	Y	Y		Y			Y	
Cirsium palustre	Marsh Thistle	Native																																																		
Cirsium vulgare	Spear Thistle	Native			Y								Y	Y		Y	Y	Y		Y		Y								Y	Y			Y											Y				Y				
Clematis vitalba	Traveller's-joy	Native			Y							Y		Y																											Y	Y										Y	
Coeloglossum viride	Frog Orchid	Native																																																		
Conium maculatum	Hemlock	Archaeophyte																																																		
Convolvulus arvensis	Field Bindweed	Native		Y									Y			Y			Y	Y										Y	Y	Y									Y				Y						Y			Y	
Conyza canadensis	Canadian Fleabane	Neophyte			Y								Y				Y									Y																Y												
Coronopus didymus	Lesser Swine-cress	Neophyte			Y						Y															Y																												
Coronopus squamatus	Swine-cress	Archaeophyte														Y	Y	Y		Y																																	
Corylus avellana	Hazel	Native																																																		
Cotoneaster cf. simonsii	Himalayan Cotoneaster	Neophyte															Y																																			
Crambe maritima	Sea Kale	Native																																																		
Crataegus monogyna	Hawthorn	Native			Y				Y			Y				Y															Y																							
Crepis capillaris	Smooth Hawk's-beard	Native											Y																																							
Crepis vesicaria	Beaked Hawk's-beard	Neophyte											Y	Y																																						
Crithmum maritimum	Rock Samphire	Native																																																		
Cruciata laevipes	Crosswort	Native																																																		
Cymbalaria muralis	Ivy-leaved Toadflax	Neophyte																										Y											Y													
Cynosurus cristatus	Crested Dog's-tail	Native																																																		
Dactylis glomerata	Cock's-foot	Native	Y		Y			Y					Y	Y	Y		Y	Y	Y	Y	Y		Y								Y	Y				Y	Y	Y							Y		Y							Y	Y
Dactylorhiza fuchsii	Common Spotted-orchid	Native														Y																																				
Danthonia decumbens	Heath-grass	Native																																																		
Daphne mezereum	Mezereon	County Neophyte														Y																																				
Daucus carota	Wild Carrot	Native			Y								Y				Y																											Y							Y	Y
Deschampsia cespitosa	Tufted Hair-grass	Native			Y		Y								Y				Y												Y																							
Deschampsia flexuosa	Wavy Hair-grass	Native																																																		
Digitalis purpurea	Foxglove	Native																																																		
Diplotaxis muralis	Annual Wall-rocket	Neophyte						Y										Y	Y																					Y													
Diplotaxis tenuifolia	Perennial Wall-rocket	Archaeophyte																																																		
Dipsacus fullonum	Wild Teasel	Native															Y	Y																																		
Dryopteris filix-mas	Male Fern	Native							Y																																													
Echium vulgare	Viper's-bugloss	Native			Y										Y		Y	Y	Y				Y																															
Eleocharis palustris	Common Spike-rush	Native																																																		
Elodea canadensis	Canadian Waterweed	Neophyte																																																		
Elytrigia atherica	Sea couch	Native											Y																																							
Elytrigia repens	Common Couch	Native					Y		Y	Y			Y	Y		Y	Y	Y																																		
Epilobium ciliatum	American Willowherb	Neophyte																																																		
Epilobium hirsutum	Great Willowherb	Native			Y							Y				Y		Y	Y		Y										Y																							
Epilobium montanum	Broad-leaved Willowherb	Native			Y						Y							Y			Y		Y	Y																					Y						Y	Y			
Epilobium parviflorum	Hoary Willowherb	Native													Y																																					
Epilobium tetragonum	Square-stalked Willowherb	Native																																																		
Equisetum arvense	Field Horsetail	Native								Y	Y														Y						Y	Y																						
Equisetum fluviatile	Water Horsetail	Native																																																		
Equisetum telemateia	Great Horsetail	Native																																																		
Erigeron acer	Blue Fleabane	Native																																																	Y	
Erigeron glaucus	Seaside Daisy	Neophyte																																																		
Erigeron karvinskianus	Mexican Fleabane	Neophyte																																																		
Erodium cicutarium agg.	Common Stork's-bill	Native																		Y																																	
Erysimum cheiranthoides	Treacle Mustard	Archaeophyte																Y																																		
Erysimum cheiri	Wallflower	Archaeophyte																																																		
Eschscholtzia californica	Californian Poppy	Neophyte																																																		
Euonymus europaeus	Spindle	Native																																																		
Eupatorium cannabinum	Hemp-agrimony	Native									Y							Y			Y			Y																						Y								
Euphorbia helioscopia	Sun Spurge	Archaeophyte						Y			Y																																											
Euphorbia lathyris	Caper Spurge	Archaeophyte																																																		
Euphorbia peplus	Petty Spurge	Archaeophyte		Y				Y		Y	Y								Y	Y	Y								Y		Y				Y	Y					Y					Y		Y	Y			Y			
Euphrasia nemorosa	An eyebright	Native																																																		
Euphrasia pseudokerneri	An eyebright	Native																																																		
Fagus sylvatica	Beech	Native																																											Y							
Festuca arundinacea	Tall Fescue	Native																																																		
Festuca filiformis	Fine-leaved Sheep's-fescue	Native																																																		
Festuca gigantea	Giant Fescue	Native																																																		
Festuca ovina	Sheep's-fescue	Native																																																		
Festuca pratensis	Meadow Fescue	Native																																																		
Festuca rubra	Red Fescue	Native									Y																																								Y	
Filipendula ulmaria	Meadowsweet	Native									Y																																									
Filipendula vulgaris	Dropwort	Native																																																		
Foeniculum vulgare	Fennel	Archaeophyte			Y																									Y																						Y	
Fragaria vesca	Wild Strawberry	Native																																																	Y	
Fraxinus excelsior	Ash	Native						Y							Y							Y	Y																						Y								
Fumaria officinalis	Common Fumitory	Archaeophyte																Y																						Y													
Galega officinalis	Goat's-rue	Neophyte																																																		
Galeopsis angustifolia	Red Hemp-nettle	Archaeophyte																																																		
Galium aparine	Cleavers	Native		Y				Y			Y						Y	Y	Y				Y								Y														Y									
Galium mollugo (incl. ssp . *erectum*)	Hedge Bedstraw	Native																																																		
Galium palustre	Common Marsh Bedstraw	Native									Y																																									
Galium verum	Lady's Bedstraw	Native																																																		Y
Gentianella amarella	Autumn Gentian	Native																																																		
Geranium dissectum	Cut-leaved Crane's-bill	Archaeophyte									Y								Y																																			
Geranium molle	Dove's-foot Crane's-bill	Native			Y	Y		Y						Y			Y	Y	Y				Y								Y				Y												Y			Y				
Geranium robertianum	Herb Robert	Native									Y																																						Y				
Geum urbanum	Wood Avens	Native																																											Y	Y						
Glaucium flavum	Yellow-horned Poppy	Native																		Y																																	
Glechoma hederacea	Ground Ivy	Native															Y	Y												Y															Y								
Glyceria fluitans	Floating Sweet-grass	Native																																																		
Glyceria maxima	Reed Sweet-grass	Native																																																		
Groenlandia densa	Opposite-leaved Pondweed	Native																																																		
Hedera helix	Ivy	Native							Y							Y			Y				Y																						Y	Y	Y			Y			Y	Y
Helictotrichon pratense	Meadow Oat-grass	Native																																																		
Heracleum sphondylium	Hogweed	Native			Y													Y												Y	Y														Y								
Hieracium sp.	A hawkweed	Native																																																		

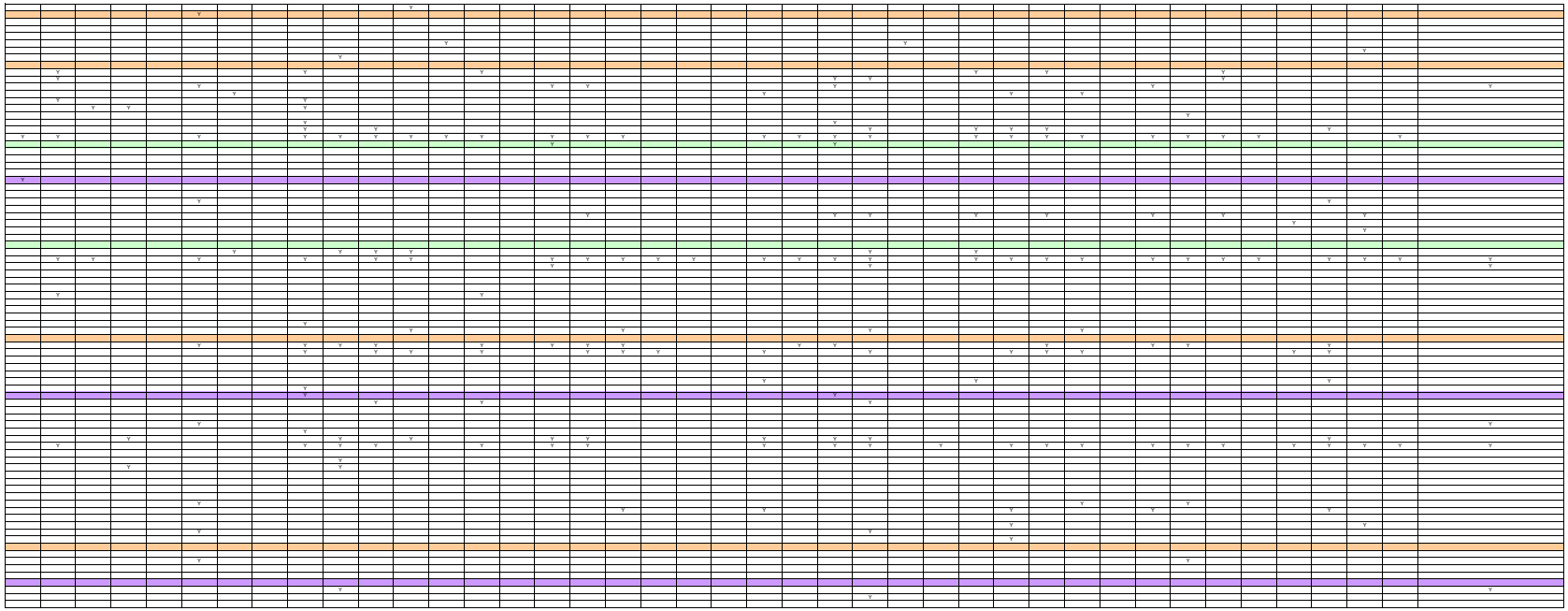
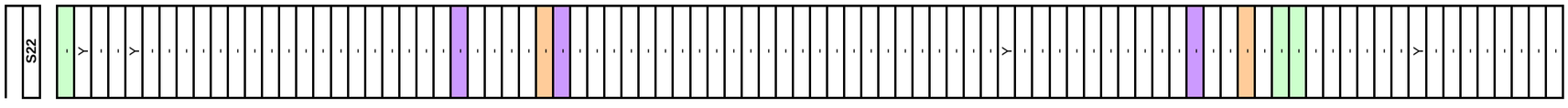


TABLE XX - FLORAL LIST FOR EASTBOURNE SCHOOL SITES

SPECIES	COMMON NAME	SITE CODE																				
		S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18	S19	S20	S21
Acer campestre	Field Maple	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Acer pseudoplantanus	Sycamore	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	Y	-	-	-	-	Y
Achillea millefolium	Yarrow	Y	-	-	Y	-	Y	-	Y	-	Y	-	-	-	Y	Y	Y	Y	Y	-	Y	-
Aegopodium podargraria	Ground Elder	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	Y
Aesculus hippocastanum	Horse Chestnut	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Agrimonia eupatoria	Agrimony	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y
Agrostis capillaris	Common Bent	-	-	-	-	Y	Y	-	-	-	-	-	Y	Y	-	Y	-	Y	-	-	-	-
Alisma plantago-aquatica	Water Plantain	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Alliaria petiolata	Garlic Mustard	-	-	-	-	-	-	-	-	-	Y	-	-	Y	-	-	-	-	-	-	-	-
Anagallis arvensis	Scarlet Pimpernel	-	-	-	-	-	-	-	-	-	-	-	Y	-	Y	-	-	-	-	-	-	-
Anthriscus sylvestris	Cow Parsley	-	-	Y	-	-	Y	-	-	-	-	-	-	Y	Y	-	Y	-	-	-	-	Y
Arctium lappa	Greater Burdock	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Arrhenathepum elatius	False Oat-grass	-	-	Y	-	-	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	Y	-
Artemisia vulgaris	Mugwort	-	-	-	-	-	-	-	Y	-	Y	-	Y	Y	-	-	-	-	-	-	-	-
Aster cf. *novi-belgii*	Confused Michaelmas-daisy	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Atriplex prostrata	Spear-leaved Orache	-	-	-	-	Y	-	-	-	-	-	-	-	Y	Y	Y	Y	-	-	-	-	-
Ballota nigra	Black Horehound	-	-	-	-	-	-	-	Y	-	-	-	-	-	Y	-	Y	-	-	-	-	-
Bellis perennis	Daisy	Y	-	Y	Y	-	Y	-	Y	Y	-	-	-	-	Y	Y	Y	-	Y	-	Y	-
Brachypodium pinnatum	Tor-grass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
Brachythecium sylvaticum	False-Brome	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	Y	-	-	-	-	-
Bromus hordaceus	Soft Brome	-	-	-	-	-	-	-	-	-	-	-	-	Y	Y	-	-	-	-	-	-	-
Anisanthe sterilis	Sterile Brome	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Calystegia sepium	Hedge Bindweed	-	-	-	-	-	Y	-	Y	-	-	-	Y	Y	Y	-	-	-	-	-	-	-
Campanula glomerata	Clustered Bellflower	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-
Capsella bursa-pastoris	Shepherd's-purse	Y	-	Y	Y	-	Y	-	-	-	-	-	Y	-	Y	Y	Y	-	-	-	-	-
Cardamine hirsuta	Hairy Bittercress	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
Castanea sativa	Sweet Chestnut	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y
Catapodium rigidum	Fern-grass	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	Y	-	-	-	-
Centaurea nigra	Common Knapweed	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	Y	-	Y	-	-	Y	-
Centaurea scabiosa	Greater Knapweed	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Centranthus ruber	Red Valerian	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Cerastium fontanum	Common Mouse-ear	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	Y	-	-	-	-	-	-
Chamerion angustifolium	Rose-bay Willowherb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
Chenopodium album agg.	Fat Hen	-	-	Y	-	-	Y	-	-	-	-	-	Y	-	-	Y	-	-	-	-	-	-
Cirsium arvense	Creeping Thistle	-	-	Y	-	Y	Y	-	Y	Y	-	-	-	Y	-	-	-	Y	-	-	-	-
Cirsium vulgare	Spear Thistle	-	-	Y	-	-	Y	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Clematis vitalba	Traveller's-joy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	Y
Convolvulus arvensis	Field Bindweed	-	-	Y	-	-	Y	-	Y	-	-	-	-	Y	-	-	Y	Y	-	-	-	Y
Coronopus squamatus	Swine-cress	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Cotoneaster cf.*simonsii*	Himalayan Cotoneaster	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
Crataegus monogyna	Hawthorn	-	-	Y	-	-	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	Y	-
Cymbalaria muralis	Ivy-leaved Toadflax	-	-	-	-	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-
Dactylis glomerata	Cock's-foot	-	-	-	-	Y	Y	-	Y	-	Y	-	Y	Y	-	Y	Y	-	-	-	-	Y
Daucus carota	Wild Carrot	-	-	Y	-	-	-	-	Y	-	-	-	-	-	-	-	-	Y	-	-	Y	-
Deschampsia cespitosa	Tufted Hair-grass	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diplotaxis muralis	Annual Wall-rocket	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
Elytrigia repens	Couch-grass	-	-	-	-	Y	Y	-	-	-	Y	-	Y	-	-	-	-	-	-	-	-	-
Epilobium hirsutum	Great Hairy Willowherb	-	-	Y	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
Epilobium montanum	Broad-leaved Willowherb	-	-	-	-	-	-	-	-	Y	-	-	-	Y	Y	-	-	-	-	-	Y	-
Epilobium parviflorum	Hoary Willowherb	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Equisetum arvense	Field Horsetail	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conyza canadensis	Canadian Fleabane	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eupatorium cannabinum	Hemp-agrimony	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	Y	Y
Euphorbia peplus	Petty Spurge	-	-	-	-	-	Y	-	-	-	Y	-	-	Y	Y	Y	-	-	-	-	-	-
Foeniculum vulgare	Fennel	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Fraxinus excelsior	Ash	-	-	-	-	-	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	Y
Fraxinus ornus	Manna Ash	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-
Galium aparine	Cleavers	-	-	-	-	-	Y	-	-	-	-	-	-	Y	Y	-	Y	-	-	-	-	-
Galium mollugo (incl. spp. *erectum*)	Hedge Bedstraw	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
Geranium molle	Dove's-foot Crane's-bill	-	-	-	-	-	Y	-	-	-	-	-	Y	-	-	Y	-	-	-	-	-	-
Geranium dissectum	Cut-leaved Crane's-bill	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Geum urbanum	Wood Avens	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Glechoma hederacea	Ground Ivy	-	-	-	-	-	Y	-	-	-	-	-	-	-	Y	-	Y	-	-	-	-	-
Glyceria maxima	Reed Sweet-grass	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hedera helix	Ivy	-	-	-	-	-	Y	-	Y	-	-	-	-	Y	Y	-	Y	Y	-	-	Y	-
Heracelum sphondylium	Hogweed	-	-	-	Y	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	Y
Pilosella officinarium	Mouse-ear-hawkweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
Holcus lanatus	Yorkshire Fog	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hordeum murinum	Wall Barley	-	-	Y	Y	-	-	-	-	-	Y	-	Y	-	-	Y	Y	-	-	-	-	-
Hordeum secalinum	Meadow Barley	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-
Hypochaeris radicata	Cat's-ear	-	-	-	-	-	-	-	Y	Y	Y	-		Y	-	-	-	Y	-	-	-	-
Ilex aquifolium	Holly	-	-	-	-	-	-	-	Y	-	-	-	-	Y	-	-	-	-	-	-	-	-
Iris foetidissima	Stinking Iris	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Juncus effusus	Soft Rush	-	-	Y	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Juncus inflexus	Hard Rush	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lamium purpureum	Red Dead Nettle	-	-	-	-	-	-	-	-	-	-	-	Y	-	Y	Y	-	-	-	-	-	-
Lapsana communis	Nipplewort	-	-	-	-	-	Y	-	-	-	-	-	-	Y	-	-	Y	-	-	-	-	-
Lathyrus pratensis	Meadow Vetchling	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y
Lavatera arborea	Tree Mallow	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leontodon autumnalis	Autumnal Hawkbit	-	-	Y	Y		Y	-	-	Y	Y	-	Y	-	Y	-	Y	Y	-	-	Y	-
Leontodon saxatilis	Lesser Hawkbit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
Leucanthemim vulgare	Ox-eye Daisy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-
Ligustrum vulgare	Wild Privet	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	Y	-
Linaria purpurea	Purple Toadflax	-	-	Y	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Lolium perenne	Perennial Rye-grass	-	-	Y	Y	-	Y	-	-	Y	Y	-	Y	Y	Y	Y	Y	-	-	-	-	-
Lonicera periclymenum	Honeysuckle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
Lotus corniculatus	Common Bird's-foot-trefoil	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	Y	-	Y	-
Lotus pedunculatus	Greater Bird's-foot-trefoil	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Malva sylvestris	Common Mallow	-	-	Y	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	Y	-	-	-
Matricaria discoidea	Pineappleweed	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medicago arabica	Spotted Medick	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medicago lupulina	Black Medick	-	-	-	Y	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Mercurialis annua	Annual Mercury	-	-	-	Y	-	-	-	-	-	-	-	-	Y	Y	-	-	-	-	-	-	-
Mycelis muralis	Wall Lettuce	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Ononis repens	Common Restharrow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
Petroselinum segetum	Corn Parsley	-	-	-	-	-	-	-	-	-	-	-	-	Y	Y	-	-	-	-	-	-	-
Phalaris arundinacea	Reed Canary-grass	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Phleum pratense	Timothy	-	-	-	-	-	Y	-	-	-	-	-	-	Y	-	Y	-	-	-	-	-	-
Phragmites australis	Common Reed	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Picris echioides	Prickly Ox-tongue	-	-	Y	-	-	Y	-	Y	-	-	-	Y	Y	Y	Y	Y	-	Y	-	Y	-
Picris hieracioides	Hawkweed Ox-tongue	-	-	-	-	Y	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-
Pimpinella saxifraga	Burnet Saxifrage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
Plantago lanceolata	Ribwort Plantain	-	-	Y	Y	Y	-	-	Y	Y	Y	-	-	Y	Y	Y	-	Y	-	-	Y	-
Plantago major	Greater Plantain	-	-	Y	Y	-	Y	-	-	-	Y		Y	-	-	Y	Y	-	-	-	-	-
Plantago media	Hoary Plantain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Poa annua	Annual Meadow-Grass	-	-	Y	Y	-	Y	-	-	-	-	-	Y	-	Y	-	Y	-	-	-	-	-
Polygonum aviculare	Knotgrass	-	-	-	-	-	-	-	Y	-	-	-	Y	-	-	Y	Y	-	-	-	-	-
Persicaria maculosa	Redshank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-
Potentilla reptans	Creeping Cinquefoil	-	-	-	Y	-	-	-	Y	-	-	-	-	Y	-	Y	-	Y	Y	-	-	-
Prunella vulgaris	Selfheal	-	-	-	-	-	-	-	-	Y	-	-	-	-	Y	Y	-	Y	-	-	-	-
Prunus spinosa	Blackthorn	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-
Pulicaria dysenterica	Common Fleabane	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	Y
Quercus ilex	Holm Oak	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y
Quercus robur	Pedunculate Oak	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ranunculus repens	Creeping Buttercup	-	-	-	Y	-	Y	-	Y	-	-	-	Y	-	Y	Y	-	-	-	-	-	-
Fallopia japonica	Japanese Knotweed	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Rosa canina agg.	Dog Rose	-	-	-	-	-	Y	-	-	-	-	-	Y	-	-	-	-	-	-	-	Y	-
Rubus fruiticosus agg.	Bramble	-	-	Y	-	-	Y	-	Y	-	-	-	-	Y	Y	-	Y	-	-	-	Y	-
Rumex acetosa	Sorrel	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rumex crispus	Curled Dock	-	-	Y	-	-	Y	-	Y	Y	-	-	Y	Y	-	Y	Y	-	-	-	-	-
Sagina procumbens	Procumbent Pearlwort	-	-	Y	-	-	-	-	-	-	-	-	-	-	Y	Y	-	-	-	-	-	-
Salix fragilis	Crack Willow	-	-	-	-	-	-	-	Y	-	-	-	Y	-	-	-	-	-	-	-	-	-
Sambucus nigra	Elder	-	-	-	-	-	-	-	Y	-	-	-	-	Y	Y	-	Y	-	-	-	-	-
Sanicula europaea	Sanicle	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Senecio jacobaea	Ragwort	-	-	-	-	Y	Y	-	Y	-	-	-	Y	Y	Y	-	Y	-	-	-	Y	Y
Senecio vulgaris	Groundsel	-	-	Y	Y	-	Y	-	-	-	-	-	Y	-	Y	Y	Y	-	-	-	-	-
Sherardia arvensis	Field Madder	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-
Sinapis arvensis	Charlock	-	-	Y	-	-	-	-	-	-	-	-	Y	-	-	Y	-	-	-	-	-	-
Sisymbrium officinale	Hedge Mustard	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-
Sisymbrium orientale	Eastern Rocket	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		Y	-	-	Y	-
Smyrnium olusatrum	Alexanders	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	Y	-	-	-	-	-
Sonchus arvensis	Field Sow-thistle	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	Y	-	-	-	-	-	-
Sonchus asper	Prickly Sow-thistle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
Sonchus oleraceus	Common Sow-thistle	-	-	Y	Y	-	Y	-	Y	-	Y	-	-	Y	Y	-	Y	-	-	-	-	-
Sparganium erectum	Branched Bur-reed	-	-	Y	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Stachys sylvatica	Hedge Woundwort	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Stellaria alsine	Marsh Stitchwort	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stellaria media	Common Chickweed	-	-	Y	-	-	-	-	-	Y	-	-	-	-	-	Y	Y	-	-	-	-	-
Taraxacum officinale agg.	Dandelion	-	-	Y	Y	-	Y	-	Y	Y	-	Y	Y	Y	Y	Y	Y	-	-	-	-	-
Taxus baccata	Yew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y
Thymus praecox	Wild Thyme	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
Tilia x europaea	Common Lime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y
Torilis japonica	Upright Hedge-parsley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
Trifolium dubium	Lesser Trefoil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-
Trifolium fragiferum	Strawberry Clover	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trifolium pratense	Red Clover	-	-	-	-	-	Y	-	-	-	-	-	Y	-	Y	Y	-	Y	-	-	-	Y
Trifolium repens	White Clover	-	-	-	Y	-	Y	-	Y	-	-	-	Y	-	Y	Y	Y	-	Y	-	-	-
Tripleurospermum inodorum	Scentless Mayweed	-	-	Y	-	-	Y	-	-	-	-	-	Y	-	-	Y	-	-	-	-	-	-
Tussilago farfara	Colt's-foot	-	-	-	-	-	-	-	Y	-	-	-	-	Y	-	-	-	-	-	-	-	-
Ulex europaeus	Gorse	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ulmus procera	English Elm	-	-	-	-	-		-	-	Y	-	-	-	-	-	-	Y	-	-	-	-	Y
Urtica dioca	Stinging Nettle	-	-	Y	-	-	Y	-	Y	-	Y	-	Y	Y	-	-	Y	-	-	-	Y	Y
Veronica persica	Common Field Speedwell	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-
Vicia sativa	Common Vetch	-	-	-	-	-	Y	-	Y	-	-	-	Y	-	-	-	-	-	-	-	-	Y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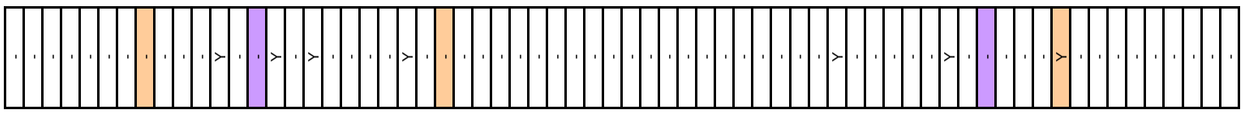

APPENDIX 1 - PROVISIONAL FLORAL FOR EASTBOURNE PARK (Based on 2005 Results)

SPECIES	COMMON NAME	NATIONAL STATUS	COUNTY STATUS	STATUS WITHIN PARK
Horsetails & Ferns (6 spp.)				
Dryopteris felix-mas	Male Fern	-	-	Localised
Equisetum arvense	Field Horsetail	-	-	Widespread
Equisetum fluviatile	Water Horsetail	-	-	Frequent
Equisetum palustris	Marsh Horsetail	-	-	Localised
Ophioglossum vulgatum	**Adder's-tongue Fern**	-	Occasional	Localised
Phyllitis scolopendrium	Hart's-tongue Fern	-	-	Localised
Grasses, Sedges & Rushes (62 spp.)				
Agrostis capillaris	Common Bent	-	-	Widespread
Agrostis stolonifera	Creeping Bent	-	-	Widespread
Alopecurus geniculatus	Marsh Foxtail	-	-	Widespread
Alopecurus pratensis	Meadow Foxtail	-	-	Possibly localised
Anthoxanthum oderatum	Sweet Vernal-grass	-	-	Frequent
Arrhenatherum elatius	False Oat-grass	-	-	Widespread
Bolboschoenus maritimus	Sea Clubrush	-	-	Frequent
Brachypodium sylvaticum	False Brome	-	-	Localised
Bromus mollis	Soft Brome	-	-	Possibly localised
Butomus umbellatus	**Flowering Rush**	-	Occasional (LF)	Localised
Carex acuta	**Slender Tufted-sedge**	-	Occasional	Localised
Carex acutiformis	Lesser Pond-sedge	-	-	Frequent
Carex cf. *caryophyllea*	Spring Sedge	-	-	Localised
Carex disticha	**Brown Sedge**	-	Occasional	Frequent
Carex flacca	Glaucous Sedge	-	-	Localised
Carex hirta	Hairy Sedge	-	-	Widespread
Carex otrubae	False Fox-sedge	-	-	Frequent
Carex pendula	Pendulous Sedge	-	-	Localised
Carex riparia	Greater Pond-sedge	-	-	Widespread
Carex spicata	Spiked Sedge	-	-	Localised
Cortaderia selloana	Pampas-grass	-	-	Localised
Cynosurus cristatus	Crested Dog's-tail	-	-	Frequent
Dactylis glomerata	Cock's-foot	-	-	Widespread
Deschampsia cespitosa	Tufted Hair-grass	-	-	Widespread
Eleocharis palustris	Common Spike-rush	-	-	Frequent
Elytrigia repens	Couch	-	-	Widespread
Festuca arundinacea	Tall Fescue	-	-	Localised
Festuca gigantea	Giant Fescue	-	-	Localised
Festuca ovina	Sheep's Fescue	-	-	Localised
Festuca pratensis	Meadow Fescue	-	-	Localised
Festuca rubra	Red Fescue	-	-	Frequent
Glyceria fluitans	Floating Sweet-grass	-	-	Widespread
Glyceria maxima	Reed Sweet-grass	-	-	Widespread
Glyceria notata	Plicate Sweet-grass	-	-	Frequent
Helictotrichon pubescens	Downy Oat-grass	-	-	Possibly localised
Holcus lanatus	Yorkshire Fog	-	-	Widespread
Hordeum murinum	Wall Barley	-	-	Localised
Hordeum secalinum	Meadow Barley	-	-	Frequent
Juncus articulatus	Jointed Rush	-	-	Frequent
Juncus bufonius	Toad Rush	-	-	Localised
Juncus conglomeratus	Compact Rush	-	-	Localised
Juncus effusus	Soft Rush	-	-	Frequent
Juncus gerardii	Saltmarsh Rush	-	-	Localised
Juncus inflexus	Hard Rush	-	-	Widespread
Juncus subnodulosus	**Blunt-flowered Rush**	-	Very Rare	Localised
Lolium perenne	Perennial Rye-grass	-	-	Widespread
Phalaris arundinacea	Reed Canary-grass	-	-	Frequent
Phleum bertolonii	Smaller Cat's-tail	-	-	Localised
Phleum pratense	Timothy	-	-	Frequent
Phragmites australis	Common Reed	-	-	Widespread
Poa annua	Annual Meadow-grass	-	-	Frequent
Poa trivialis	Rough Meadow-grass	-	-	Frequent
Puccinellia maritima	Common Saltmarsh-grass	-	-	Localised
Schoenoplectus tabernaemontani	**Grey Club-rush**	-	Occasional (LF)	Frequent
Sparganium emersum	Unbranched Bur-reed	-	-	Localised
Sparganium erectum	Branched Bur-reed	-	-	Frequent
Triglochin palustris	**Marsh Arrowgrass**	-	Occasional	Localised
Trisetum flavescens	Yellow Oat-grass	-	-	Localised
Typha angustifolia	Lesser Bulrush	-	-	Localised
Typha latifolia	Bulrush	-	-	Frequent
Unidentified sp.	A Bamboo	-	-	Localised
x Festulolium loliaceum	**Hybrid Fescue**	-	Occasional	Localised

SPECIES	COMMON NAME	NATIONAL STATUS	COUNTY STATUS	STATUS WITHIN PARK
Forbs (221 spp.)				
Achillea millefolium	Yarrow	-	-	Widespread
Aegopodium podagraria	Ground Elder	-	-	Localised
Agrimonia eupatoria	Agrimony	-	-	Localised
Alisma lanceolatum	**Narrow-leaved Water-plantain**	Local	Occasional (LF)	Localised
Alisma plantago-aquatica	Water-plantain	-	-	Frequent
Alliaria petiolata	Hedge Garlic	-	-	Localised
Anagallis arvensis	Scarlet Pimpernel	-	-	Localised

SPECIES	COMMON NAME	NATIONAL STATUS	COUNTY STATUS	STATUS WITHIN PARK
Angelica sylvestris	Wild Angelica	-	-	Localised
Anthriscus sylvestris	Cow Parsley	-	-	Widespread
Apium nodiflorum	Fool's-watercress	-	-	Frequent
Arctium minus	Lesser Burdock	-	-	Localised
Armoracia rusticana	Horseradish	-	-	Localised
Artemisia absinthium	Wormwood	-	-	Localised
Artemisia vulgaris	Mugwort	-	-	Widespread
Asparagus officinalis ssp. *officinalis*	Garden Asparagus	-	-	Localised
Aster (incl. *A. novi-belgi* & x A. *salignus*)	A Michaelmas-daisy	-	-	Localised
Atriplex patula	Common Orache	-	-	Localised
Ballota nigra	Black Horehound	-	-	Localised
Bellis perennis	Daisy	-	-	Localised
Berula erecta	Lesser Water-parsnip	-	-	Frequent
Beta vulgaris ssp. *maritima*	Sea Beet	-	-	Localised
Bidens tripartita	**Trifid Bur-marigold**	-	Occasional to LF	Localised
Brassica nigra	Black Mustard	-	-	Widespread
Callitriche stagnalis agg.	Water-starwort species	-	-	Frequent
Calystegia sepium	Hedge Bindweed	-	-	Frequent
Capsella bursa-pastoralis	Shepherd's-purse	-	-	Localised
Cardamine flexuosa	Wavy Bittercress	-	-	Localised
Cardamine pratensis	Cuckooflower	-	-	Frequent
Centaurea nigra	Knapweed	-	-	Localised
Cerastium fontanum agg.	Common Mouse-ear	-	-	Frequent
Ceratophyllum demersum	Rigid Hornwort	-	-	Frequent
Ceratophyllum submersum	**Soft Hornwort**	Scarce	Rare	Localised
Chelidonium majus	Greater Celandine	-	-	Localised
Chenopodium album agg.	Fat-hen	-	-	Localised
Chenopodium hybridum	**Maple-leaved Goosefoot**	Local	Very Rare	Localised
Chenopodium polyspermum	Many-seeded Goosefoot	-	-	Localised
Cirsium acaule	Dwarf Thistle	-	-	Localised
Cirsium arvense	Creeping Thistle	-	-	Widespread
Cirsium palustre	Marsh Thistle	-	-	Localised
Cirsium vulgare	Spear Thistle	-	-	Widespread
Clematis vitalba	Travellor's-joy	-	-	Localised
Conium maculatum	Hemlock	-	-	Frequent
Conopodium majus	Pignut	-	-	Localised
Convolvulus arvensis	Field Bindweed	-	-	Frequent
Conyza canadensis	Canadian Fleabane	-	-	Frequent
Coronopus squamatus	Swine-cress	-	-	Localised
Crepis capillaris	Smooth Hawk's-beard	-	-	Localised
Crepis vesicaria	Beaked Hawk's-beard	-	-	Localised
Crocosmia paniculata/masoniarum	A Montbretia	-	-	Localised
Cymbalaria muralis ssp. *muralis*	Ivy-leaved Toadflax	-	-	Localised
Dactylorhiza fuchsii	Common Spotted-orchid	-	-	Localised
Dactylorhiza praetermissa	**Southern Marsh-orchid**	-	Occasional	Localised
Datura stramonium	Thorn-apple	-	-	Localised
Daucus carota	Wild Carrot	-	-	Frequent
Diplotaxis tenuifolia	Perennial Wallrocket	-	-	Localised
Dipsacus fullonum	Teasel	-	-	Frequent
Echium vulgare	Viper's-bugloss	-	-	Localised
Elodea canadensis (poss. incl. *E. nuttallii*)	A Waterweed	-	-	Frequent
Epilobium hirsutum	Great Willowherb	-	-	Frequent
Epilobium obscurum	Short-fruited Willowherb	-	-	Localised
Epilobium tetragonum	Square-stalked Willowherb	-	-	Localised
Eupatorium cannabinum	Hemp-agrimony	-	-	Localised
Euphorbia helioscopia	Sun Spurge	-	-	Localised
Euphorbia platyphyllos	**Broad-leaved Spurge**	Scarce	Occasional	Localised
Filipendula ulmaria	Meadowsweet	-	-	Frequent
Foeniculum vulgare	Fennel	-	-	Localised
Galega officinalis	Goat's-rue	-	-	Localised
Galium aparine	Cleavers	-	-	Widespread
Galium mullugo	Hedge Bedstraw	-	-	Widespread
Galium palustre	Common Marsh-bedstraw	-	-	Frequent
Galium verum	Lady's Bedstraw	-	-	Localised
Geranium dissectum	Cut-leaved Crane's-bill	-	-	Widespread
Geranium molle	Soft Crane's-bill	-	-	Widespread
Geranium pratensis	**Meadow Crane's-bill**	-	Occasional	Localised
Geranium robertianum	Herb Robert	-	-	Localised
Glaucium flavum	Yellow-horned Poppy	-	-	Localised
Glechoma hederacea	Ground Ivy	-	-	Widespread
Glyceria maxima	Reed Sweet-grass	-	-	Widespread
Groenlandia densa	**Opposite-leaved Pondweed**	-	Occasional (LF)	Localised
Heracleum sphondylium	Hogweed	-	-	Frequent
Hippuris vulgaris	**Mare's-tail**	-	Occasional	Localised
Hottonia palustris	**Water-violet**	Local	Occasional	Localised
Hydrocaris morsus-ranae	**Frogbit**	Local	-	Frequent
Hypericum perforatum	Common St. John's-wort	-	-	Localised
Hypericum tetrapterum	Square-stalked St.John's-wort	-	-	Localised
Iris foetidissima	Stinking Iris	-	-	Localised
Iris pseudacorus	Yellow Iris	-	-	Frequent
Lactuca serriola	Prickly Lettuce	-	-	Localised
Lamium album	White Dead-nettle	-	-	Localised
Lamium purpureum	Red Dead-nettle	-	-	Localised
Lapsana communis	Nipplewort	-	-	Localised
Lathyrus pratensis	Meadow Vetchling	-	-	Widespread
Lavatera arborea	Tree-mallow	-	-	Localised

Lemna gibba	**Fat Duckweed**	-	Occasional (VLF)	Localised
Lemna minor	Common Duckweed	-	-	Widespread
Lemna minuta	Least Duckweed	-	-	Localised
Lemna trisulca	Ivy-leaved Duckweed	-	-	Frequent
Leontodon autumnalis	Autumn Hawkbit	-	-	Localised
Leontodon saxatilis	Lesser Hawkbit	-	-	Localised
Lepidium draba	Hoary Cress	-	-	Localised
Leucanthemum vulgare	Ox-eye Daisy	-	-	Localised
Linaria purpurea	Purple Toadflax	-	-	Localised
Linum bienne	Pale Flax	-	-	Localised
Lotus corniculatus	Bird's-foot Trefoil	-	-	Localised
Lotus pediculatus	Greater Bird's-foot Trefoil	-	-	Localised
Lycopus europaeus	Gypsywort	-	-	Frequent
Lysimachia nummularia	Creeping Jenny	-	-	Localised
Lysimachia vulgaris	**Yellow Loosestrife**	-	Occasional to LC	Localised
Lythrum salicaria	Purple-loosestrife	-	-	Localised
Malva moschata	Musk Mallow	-	-	Localised
Malva sylvestris	Tree Mallow	-	-	Frequent
Matricaria discoidea	Pineappleweed	-	-	Localised
Medicago arabica	Spotted Medick	-	-	Frequent
Medicago lupulina	Black Medick	-	-	Frequent
Medicago sativa ssp. *sativa*	Lucerne	-	-	Localised
Melilotus albus	White Melilot	-	-	Localised
Melissa officinalis	Balm	-	-	Localised
Mentha aquatica	Water Mint	-	-	Frequent
Mercurialis annua	Annual Mercury	-	-	Localised
Montbretia paniculata/masoniorum	A montbretia	-	-	Localised
Myosotis arvensis	Field Forget-me-not	-	-	Localised
Myosotis laxa	Tufted Forget-me-not	-	-	Localised
Myosotis scorpioides	Water Forget-me-not	-	-	Localised
Myriophyllum spicatum	Spiked Milfoil	-	-	Frequent
Nymphaea alba	White Water-lily	-	-	Localised
Nymphoides peltata	Fringed Water-lily	-	-	Frequent
Oenanthe aquatica	**Fine-leaved Water-dropwort**	-	VL Frequent	Localised
Oenanthe crocata	Hemlock Water-dropwort	-	-	Frequent
Oenanthe fistulosa	Tubular Water-dropwort	-	-	Localised
Oenanthe pimpinelloides	**Corky-fruited Water-dropwort**	Local	Rare	Localised
Onobrychis viciifolia	**Sainfoin**	Local	-	Localised
Papaver rhoeas	Common Poppy	-	-	Localised
Parietaria judaica	Pellitory-of-the-wall	-	-	Localised
Pentaglottis sempervirens	Blue Alkanet	-	-	Localised
Persicaria amphibia	Amphibious Bistort	-	-	Frequent
Persicaria lapathifolia	Pale Persicaria	-	-	Localised
Persicaria maculosa	Redshank	-	-	Frequent
Petasites hybridus	**Butterbur**	-	Rare	Localised
Petroselinum segetum	**Corn Parsley**	Local	Occasional	Localised
Picris echioides	Bristly Oxtongue	-	-	Widespread
Picris hieracioides	Hawkweed Oxtongue	-	-	Localised
Pimpinella saxifraga	Burnet-saxifrage			Localised
Plantago coronopus	Stag's-horn Plantain	-	-	Localised
Plantago lanceolata	Ribwort Plantain	-	-	Widespread
Plantago major	Greater Plantain	-	-	Widespread
Plantago media	Hoary Plantain	-	-	Localised
Polygonum aviculare	Knotgrass	-	-	Localised
Pontaderia cordata	Pickerelweed	-	-	Localised
Potamogeton coloratus	**Fen Pondweed**	Scarce	Thought Extinct	Localised

SPECIES	COMMON NAME	NATIONAL STATUS	COUNTY STATUS	STATUS WITHIN PARK
Potamogeton natans	Broad-leaved Pondweed	-	-	Localised
Potamogeton pectinatus	Fennel-leaved Pondweed	-	-	Localised
Potamogeton pusillus	**Lesser Pondweed**	-	Rare	Localised
Potentilla anserina	Silverweed	-	-	Widespread
Potentilla reptans	Creeping Cinquefoil	-	-	Widespread
Primula veris	Cowslip	-	-	Localised
Prunella vulgare	Self-heal	-	-	Localised
Pulicaria dysenterica	Common Fleabane	-	-	Widespread
Ranunculus acris	Meadow Buttercup	-	-	Frequent
Ranunculus aquatilis	**Common Water-crowfoot**	-	Occasional (LF)	Localised
Ranunculus bulbosus	Bulbous Buttercup	-	-	Localised
Ranunculus circinatus	**Fan-leaved Water-crowfoot**	-	Occasional	Localised
Ranunculus flammula	Lesser Spearwort	-	-	Localised
Ranunculus repens	Creeping Buttercup	-	-	Widespread
Ranunculus sardous	**Hairy Buttercup**	Local	Occasional	Localised
Ranunculus scleratus	Celery-leaved Buttercup	-	-	Frequent
Ranunculus trichophyllus	**Thread-leaved Water-crowfoot**	-	Occasional	Localised
Reseda lutea	Wild Mignonette	-	-	Localised
Reseda luteola	Weld	-	-	Localised
Rhinanthus minor	Yellow-rattle	-	-	Localised
Rorippa nasturtium-aquaticum s.l.	Water-cress	-	-	Frequent
Rorippa palustris	Marsh Yellow-cress	-	-	Localised
Rumex acetosa	Common Sorrel	-	-	Frequent
Rumex conglomeratus	Clustered Dock	-	-	Frequent
Rumex crispus	Curled Dock	-	-	Widespread
Rumex hydrolapathum	Water Dock	-	-	Localised
Rumex obtusifolius	Broad-leaved Dock	-	-	Widespread
Rumex pulcher	**Fiddle Dock**	Local	Occasional (LF)	Localised
Sagittaria sagittifolia	Arrowhead	-	-	Localised
Samolus valerandi	Brookweed	-	-	Localised

Scrophularia auriculata	Water Figwort	-	-	Localised
Senecio erucifolius	Hoary Ragwort	-	-	Frequent
Senecio jacobaea	Common Ragwort	-	-	Widespread
Senecio vulgare	Groundsel	-	-	Localised
Siccisa pratensis	Devil's-bit Scabious	-	-	Localised
Silaum silaus	Pepper-saxifrage	-	-	Localised
Silene alba	White Campion	-	-	Localised
Sinapis arvenis	Charlock	-	-	Localised
Sison amonum	Stone Parsley	-	-	Localised
Smyrnium olusatrum	Alexanders	-	-	Localised
Solanum dulcamara	Bittersweet	-	-	Frequent
Solanum nigrum	Black Nightshade	-	-	Localised
Solidago canadensis	Canadian Goldenrod	-	-	Localised
Sonchus arvensis	Perennial Sow-thistle	-	-	Localised
Sonchus asper	Prickly Sow-thistle	-	-	Localised
Sonchus oleraceus	Smooth Sow-thistle	-	-	Frequent
Spergularia media	Lesser Sea-spurrey	-	-	Localised
Spirodela polyrhiza	**Greater Duckweed**	-	**Occasional (VLC)**	Frequent
Stachys palustris	Marsh Woundwort	-	-	Localised
Stachys sylvatica	Hedge Woundwort	-	-	Frequent
Stellaria graminea	Lesser Stitchwort	-	-	Localised
Symphytum officinale	Comfrey	-	-	Localised
Tanacetum parthenium	Feverfew	-	-	Localised
Taraxacum officinale agg.	Dandelion	-	-	Frequent
Torylis japonica	Upright Hedge-parsley	-	-	Localised
Tragopogon pratensis	Goat's-beard	-	-	Localised
Trifolium arvense	Hare's-foot Clover	-	-	Localised
Trifolium dubium	Lesser Trefoil	-	-	Localised
Trifolium fragiferum	Strawberry Clover	-	-	Localised
Trifolium pratense	Red Clover	-	-	Widespread
Trifolium repens	White Clover	-	-	Widespread
Tripleurospermum inoderatum	Scentless Mayweed	-	-	Frequent
Tussilago farafara	Coltsfoot	-	-	Localised
Urtica dioica	Nettle	-	-	Widespread
Urtica urens	Small Nettle	-	-	Localised
Verbascum thapsus	Great Mullein	-	-	Localised
Veronica beccabunga	Brooklime	-	-	Localised
Veronica catenata	Pink Water-speedwell	-	-	Frequent
Veronica persica	Common Field-speedwell	-	-	Frequent
Veronica serpyllifolia ssp. *serpyllifolia*	Thyme-leaved Speedwell	-	-	Localised
Vicia cracca	Tufted Vetch	-	-	Frequent
Vicia hirsuta	Hairy Tare	-	-	Localised
Vicia lutea	**Yellow-vetch**	**Local**	**Rare**	Localised
Vicia sativa	Common Vetch	-	-	Frequent
Vicia tetraspermum	Smooth Tare	-	-	Localised

SPECIES	COMMON NAME	NATIONAL STATUS	COUNTY STATUS	STATUS WITHIN PARK
Trees & Shrubs (51 spp.)				
Acer campestre	Field Maple	-	-	Tree planting
Acer pseudoplatanus	Sycamore	-	-	Localised, also tree planting
Alnus glutinosa	Alder	-	-	Localised, also tree planting
Betula pendula	Silver Birch	-	-	Tree planting
Buddleja davidii	Butterfly-bush	-	-	Localised
Choisya ternata	Mexican Orange	-	-	Tree planting
Clematis vitalba	Traveller's-joy	-	-	Localised
Cornus sanguinea	Dogwood	-	-	Tree planting
Corylus avellena	Hazel	-	-	Tree planting
Crataegus monogyna	Hawthorn	-	-	Widespread, also tree planting
Cytisus scoparius	Broom	-	-	Tree planting
Daphne laureola	Spurge-laurel	-	-	Localised
Euonymus europaeus	Spindle	-	-	Tree planting
Fallopia baldschuanica	Russian-vine	-	-	Localised
Fraxinus excelsior	Ash	-	-	Localised, also tree planting
Hedera colchica	Persian Ivy	-	-	Localised
Hedera helix	Ivy	-	-	Widespread
Hippophae rhamnoides	Sea Buckthorn	-	-	Tree planting
Humulus lupulus	Hop	-	-	Localised
Ilex aquifolium	Holly	-	-	Tree planting
Ligustrum ovalifolium	Garden Privet	-	-	Localised
Lonicera japonica	Japanese Honeysuckle	-	-	Localised
Malus sylvestris s.l.	Apple	-	-	Localised
Pinus sp(p).	Pine	-	-	Tree planting
Populus alba	White Poplar	-	-	Tree planting
Populus sp(p).	Poplars	-	-	Tree planting
Populus tremula	Aspen	-	-	Tree planting
Populus x *canadensis*	Hybrid Black-poplar	-	-	Localised, also tree planting
Prunum avium	Wild Cherry	-	-	Tree planting
Prunus spinosa	Blackthorn	-	-	Widespread, also tree planting
Pyrus sp.	A pear	-	-	Localised
Quercus ilex	Holm Oak	-	-	Tree planting
Quercus robur	Pedunculate Oak	-	-	Localised, also tree planting
Rosa canina agg.	Dog Rose	-	-	Localised, also tree planting
Rosa sp(p).	An Ornamental Rose	-	-	Tree planting
Rubus fruticosus agg.	Bramble	-	-	Widespread
Salix alba	White Willow	-	-	Localised, also tree planting
Salix caprea	Goat Willow	-	-	Localised, also tree planting
Salix cinerea	Grey Willow	-	-	Localised, also tree planting
Salix fragilis	Crack Willow	-	-	Localised, also tree planting
Salix viminalis	Osier	-	-	Tree planting
Sambucus nigra	Elder	-	-	Localised, also tree planting
Sorbus aria	Common Whitebeam	-	-	Tree planting
Sorbus aucuparia	Rowan	-	-	Tree planting
Tamarix gallica	Tamarisk	-	-	Tree planting
Taxus baccata	Yew	-	-	Tree planting
Ulex europaeus	European Gorse	-	-	Tree planting
Ulmus glabra	Wych Elm	-	-	Localised, also tree planting
Vibernum opulus	Guelder-rose	-	-	Tree planting
Vinca major	Greater Periwinkle	-	-	Localised
Vitis vinifera	Grape-vine	-	-	Localised
X Cupressocyperis leylandii	Leyland Cypress	-	-	Tree planting

Legend:

LF - Locally Frequent

VLC - Very Locally Common

LC - Locally Common

TABLE 13.1 - REVIEW OF NATURE CONSERVATION SITES WITHIN EASTBOURNE BOROUGH

SITES	CURRENT STATUS	QUALIFYING REASONS	RECOMMENDED REVISED STATUS
Statutory Designated Sites			
Willingdon Down SSSI	Designated 1986	Exception example of Unimproved Chalk Grassland.	n/a
Beachy Head to Seaford SSSI	Designated 1986	Exception example of Unimproved Chalk Grassland. NCR & GCR Site.	n/a
Non-Statutory Designated Sites			
Langney Levels SNCI - **E1**	Designated 2003	Remnant coastal grazing marsh, with rich wetland flora including uncommon species such as Narrow-leaved Water-plantain *Alisma lanceolatum*.	SNCI
Langney Sewer SNCI - **E4**	Designated 2003	Presence of Red Data Book Sharp-leaved Pondweed *Potamogeton acutifolius*, and a rich wetland flora. Important corridor linking Eastbourne Park with Langney Leve	SNCI
Prince William Parade SNCI - **E7,** see Figure **13.2a**	Designated 2003	Last remnant of Vegetated Shingle set within original shingle ridge sequence. Of significant ecological & geomorphological interest. Uncommon species such as the lichen *Peltigera canina*, *Cladonia furcata* and *Coelocaulon aculeatum*; and Ray's Knotgrass *Polygonum oxyspermum*.	Proposed LNR
Langney Crematorium SNCI - **E14**	Designated 2003	Extensive area of Neutral Semi-Improved Grassland with uncommon plants such as Autumn Lady's-tresses *Spiranthes spiralis*, and a small pond and ditch. Tentative evidence of a declir in grassland quality since 2000	SNCI (under review)
Crumbles Sewer SNCI - **E18**	Designated 2003	Bankside habitat supporting breeding birds such as Reed Warbler, important corridor linking between Eastbourne Park and Sovereign Park.	SNCI
Langney Centre Pond SNCI - **E21**, see Figure **13.2b**	Designated 2003	Large duck pond with breeding wildfowl, surrounded by mature woodland. Nearby presence of Wet Woodland and three further waterbodies in Site E20 is not acknowledged in the SNCI designation.	SNCI area to be extended.
Horsey Sewer - **E29**	Designated 2003	Bankside habitat supporting breeding birds such as Reed Warbler, and important corridor interlinking with Eastbourne Park.	SNCI
Highfield Industrial Estate - **E38**	Designated 2003	Approximately two-thirds of the Site lost to industrial development, remaining areas consist of disturbed ground and the adjacent sewer.	Lose SNCI status
Holywell & Crow's Nest Steps - **E77**	Designated 2003	Presence of Unimproved Chalk Grassland, within encroaching invasive plants and shrubs. Control of invasive species urgently required.	SNCI
Cliff below The Helen Garden - **E78**	Designated 2003	Coastal chalk cliff with Unimproved Chalk Grassland, cliff specialists such as the Red Data Book Rock Sea Lavender *Limonium binervosum* spp. *binervosum*.	SNCI
Ocklynge Cemetery - **E86**	Designated 2003	Extensive area of Semi-Improved Chalk Grassland that currently appears to be under favourable management.	SNCI
Eastbourne War Memorial Field - **E89**	Designated 2003	Presence of Unimproved Chalk Grassland.	SNCI
Upper Duke's Drive - **E94**, see Figure **13.2c**	Designated 2003	Presence of Unimproved Chalk Grassland, with lichen-rich bark on elm street trees. Further Unimporved Chalk Grassland on banks of Upper Duke's Drive near to junction with Beach Head Road.	SNCI area to be extended.
The Coppice - **E96**	Designated 2003	Mature woodland and stream containing Ancient Woodland Vascular Plants.	SNCI
Willingdon Roundabout - **E98**, see Figure **13.2d**	Designated 2003	Unimproved Chalk Grassland with abundant orchids, well known to Eastbourne residents.	Proposed LNR
Ocklynge Pit - **E101**	Designated 2003	Chalk grassland surrounded by mature secondary woodland. Appears to have been extensive dumping on quarry floor that may have destroyed the chalk grassland interest.	SNCI (under review)
Leeds Avenue Reed Bed - **E116**, see Figure **13.2e**	Designated 2003	Large intact area of reedbed in urban area, supporting rich wetland flora and breeding Reed Warbler and Reed Bunting.	Proposed LNR
Hampden Park & Ham Shaw - **E117**, see Figure **13.2f**	Designated 2003	Extensive area of mature woodland with a rich lichen and bryophyte interest, of high value for woodland breeding birds, invertebrates and fungi.	Proposed LNR (plus extension to original SNCI)
Sovereign Harbour Beaches - **E118**	Designated 2003	Disturbed remnant of Vegetated Shingle which could retain some of the uncommon species previously known from the Crumbles, an shingle ridge system that was lost to resdiential housing in the 1990s.	SNCI
Currently Un-Designated Sites			
Eastbourne Park, see Figure **13.3a**	None	Extensive wetland area with Coastal Floodplain Grassland, floristically species-rich ditches, reedbed and open water habitats. At least 6 open water communities, 13 marginal and emergent communities and 4 inundated ground communities. Supports a number of Red Data Book species such as Great Silver Diving Beetle *Hydrophilus piceus*, Shining Ram's-horn *Segmentina nitida and* Wide-mouthed Valve Snail *Valvata macrostoma*; significant numbers of breeding Reed Bunting, Reed Warbler & Sedge Warbler; significant numbers of passage migrants such as Snipe; and over 35 uncommon higher plants including the only Sussex site for Fen Pondweed *Potamogeton coloratus* and many other County rarities such as Blunt-flowered Rush *Juncus subnodulosus*.	Proposed LNR
Eastbourne Downland Estate (including Sites E115), see Figure **13.3b**	Part SSSI	Extensive downalnd area with fragments of Unimproved Chalk Grassland and mature scarp woodland, with numerous attendant uncommon species. Extensive land reversion to chalk downland under arable/pasture rotation system or managed as ESA grassland. Provides an extensive area to link within Green Network.	Proposed LNR
Lakelands Conservation Pond, see Figure **13.3b**	None	Originally proposed as an SNCI, this area now forms part of Eastbourne Park.	Proposed LNR (as part of Eastbourne Park)
Upland Road (No. E109), see **Figure 13.3c**	None	Originally proposed as an SNCI in 2000. Floristically-rich area of Unimproved Chalk Grassland.	Proposed LNR (+/- part of Eastbourne Downland Estate)
Priory Heights Horse Paddock (Site E115), see **Figure 13.3d**	None	Originally proposed as an SNCI in 2000. Floristically-rich area of Unimproved Chalk Grassland.	Proposed LNR (as part of Eastbourne Downland Estate)
Southern Verge along Beachy Head Road & adjacent Meads Reservoir, see Figure **13.3e**	None	Northern bank along Beachy Head Road falls within Compartment 11 of the Eastbourne Dow Estate, however the southern verge is not acknowledged in either the 1990 or 2000 surveys and contains good quality Unimporved Chalk Grassland. Restricted access to Meads Reservoir (again not acknowledged in either the 1990 or 2000 surveys) but appears to contain extensive Unimproved Chalk Grassland (observed through locked gate).	Proposed SNCI (status within Reservoir requires surveying)
Willingdon Golf Course (No. E113), see Figure **13.3f**	None	Originally proposed as an SNCI in 2000. Approximately three areas of Unimproved Chalk Grassland concentrated in the north and west of the Golf Course. Contains significant floral interest and butterflies including Chalkhill Blue *Lysandra coridon.*	Proposed SNCI (requires re-surveying)
Royal Eastbourne Golf Course (Nos. E90 & E108), see Figure **13.3g**	None	Site E108 was originally proposed as an SNCI in 2000. Approximately five areas of rough Chalk Grassland surveyed in 2000 - comprising the western half, sunken path, fairway, chalk and bank. All containing significant floristic interest.	Proposed SNCI (requires re-surveying)
Land adjacent to Seaside Roundabout (No. E15), see Figure **13.3h**	None	Formally contained an area of fen habitat in 1990, but has dried out since and becoming increasingly overgrown due to lack of any management. Presence of Dittander *Lepidium latifolium* is on considerable interest. Site could potentially contribute towards the Green Network through its strategic position beside Crumbles Sewer SNCI, near Leeds Avenue Reed Bed SNCI.	Proposed SNCI (subject to to management agreement)
Land beside Crumbles Retail Park, along Harbour Quay, see Figure **13.3i**	None	Landfill area with regenerating Vegetated Shingle, Scrub and Semi-Improved Grassland. High potential to contain remnants of the former Crumbles shingle invertebrate fauna. Plants inclu Bee Orchid *Ophrys apifera* and a large extensive colony of Yellow-horned Poppy *Glaucum flavum*.	Proposed SNCI (requires surveying)
Compton Court (No. E72), see Figure **13.3j**	None	Parkland trees of potential value for roosting bats, lichens and bryophytes. Important strategic location within Green Network, abutting Royal Eastbourne Golf Course and scarp woodland.	Candidate SNCI (requires surveying)
Highfield County Junior School Environmental Pond Area (Site S8A) and adjacent Site S8B, see Figure **13.3k**	Informal Designation within School Grounds	Complex of Willow woodland and scrub, surrounding a large pond with swamp vegetation. No access during the Audit. Previous survey in 1990 did not record presence of the pond, subsequently noted in 2000. Origin and/or purpose of pond not known.	Candidate SNCI (requires surveying)
Cavendish School (No. S17), see Figure **13.3l**	None	Grassy bank along southern frontage of School noted as being of interest in 1990 and 2000. Northern and eastern banks in 2007 also noted to be of interest with a range of chalk grassla indicators such as Blue Fleabane *Erigeron acer* and Strawberry Clover *Trifolium fragiferum*.	Candidate SNCI (requires surveying)

Appendix 1 - List of Contacts

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553308 803456

563308 803456

109307 003622

99307 003622

EASTBOURNE

SEAFORD

BEACHY HEAD

Pevensey Bay

Legend

- Eastbourne Borough
- 2km radius
- 5km radius

N

0 1.25 2.5 5 Kilometers

FIGURE 2.1 - SEARCH AREA

DAVCAD
CAD DRAUGHTING SERVICES
16 Bodmin Close
Eastbourne, East Sussex, BN20 8HZ
Tel No. (01323) 730829
Website : http://www.davcad.co.uk
Email : david.j.saunders@davcad.co.uk

THE ASH PARTNERSHIP Ltd
ECOLOGY • EIA • SURVEY

LEGEND

21	21

SHEET NUMBERS USED FOR HABITAT PLAN

FIGURE 2.2 SHEET NUMBERS

N

0 1 2
kilometers

105000
104000
103000
102000
101000
100000
99000
98000
97000
96000

555000 556000 557000 558000 559000 560000 561000 562000 563000 564000 565000 566000

Key

Biodiversity 07 - Natural Areas

- South Downs
- Low Weald
- Folkstone to Selsey Bill
- Eastbourne Borough Council

EASTBOURNE Borough Council

www.eastbourne.gov.uk

Figure 3.1 - Natural Areas

11 June 2008

Eastbourne Biodiversity Assessment 2007

Ash Partnership / DAVCAD

Scale 0 500 1000 1500 metres

Scale: 1:40000

X: 560155 Y: 99619

N

The ASH Partnership
ECOLOGY • EIA • SURVEY

DAVCAD
CAD DRAUGHTING SERVICES
16 Bodmin Close
Eastbourne, East Sussex, BN20 8HZ
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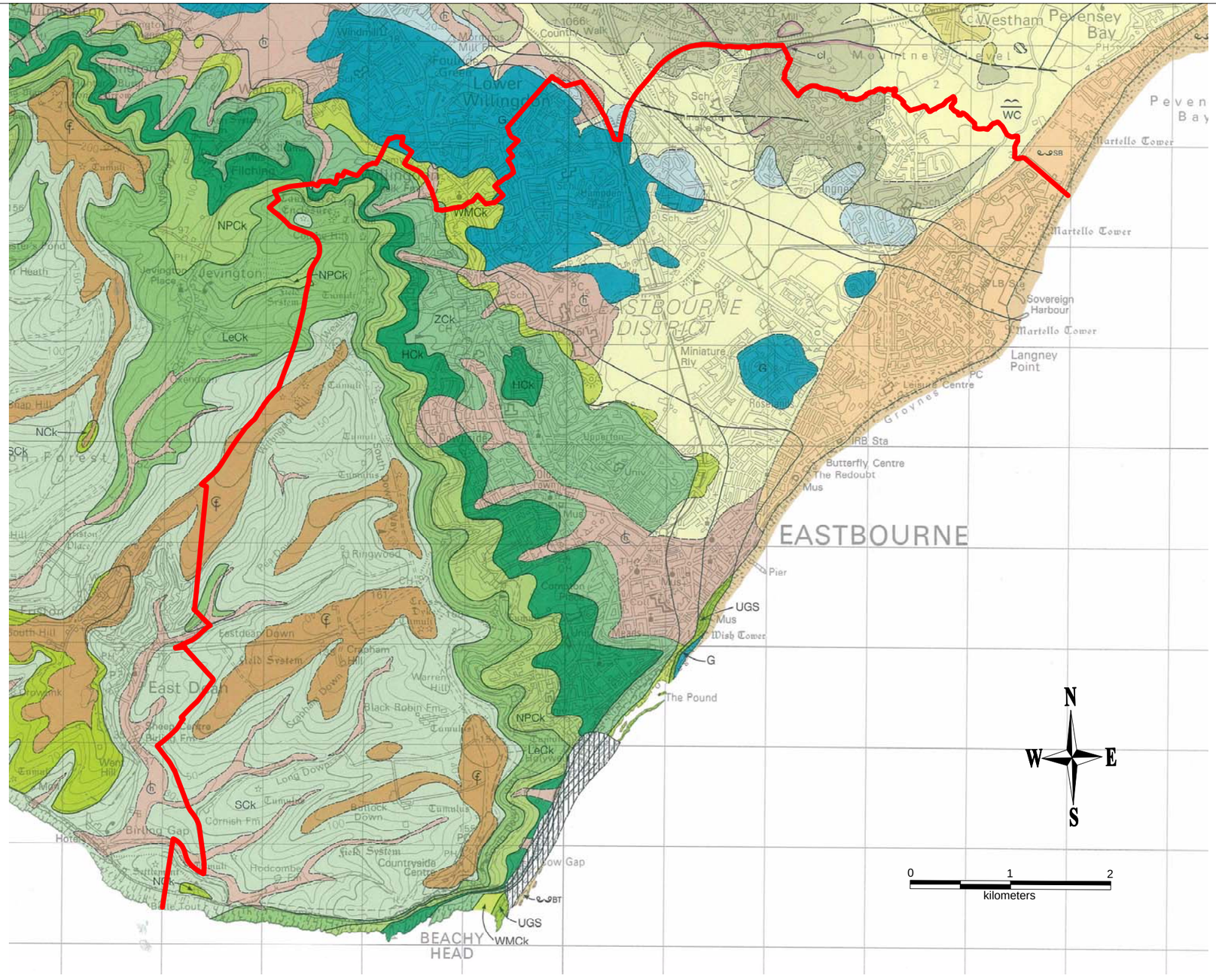
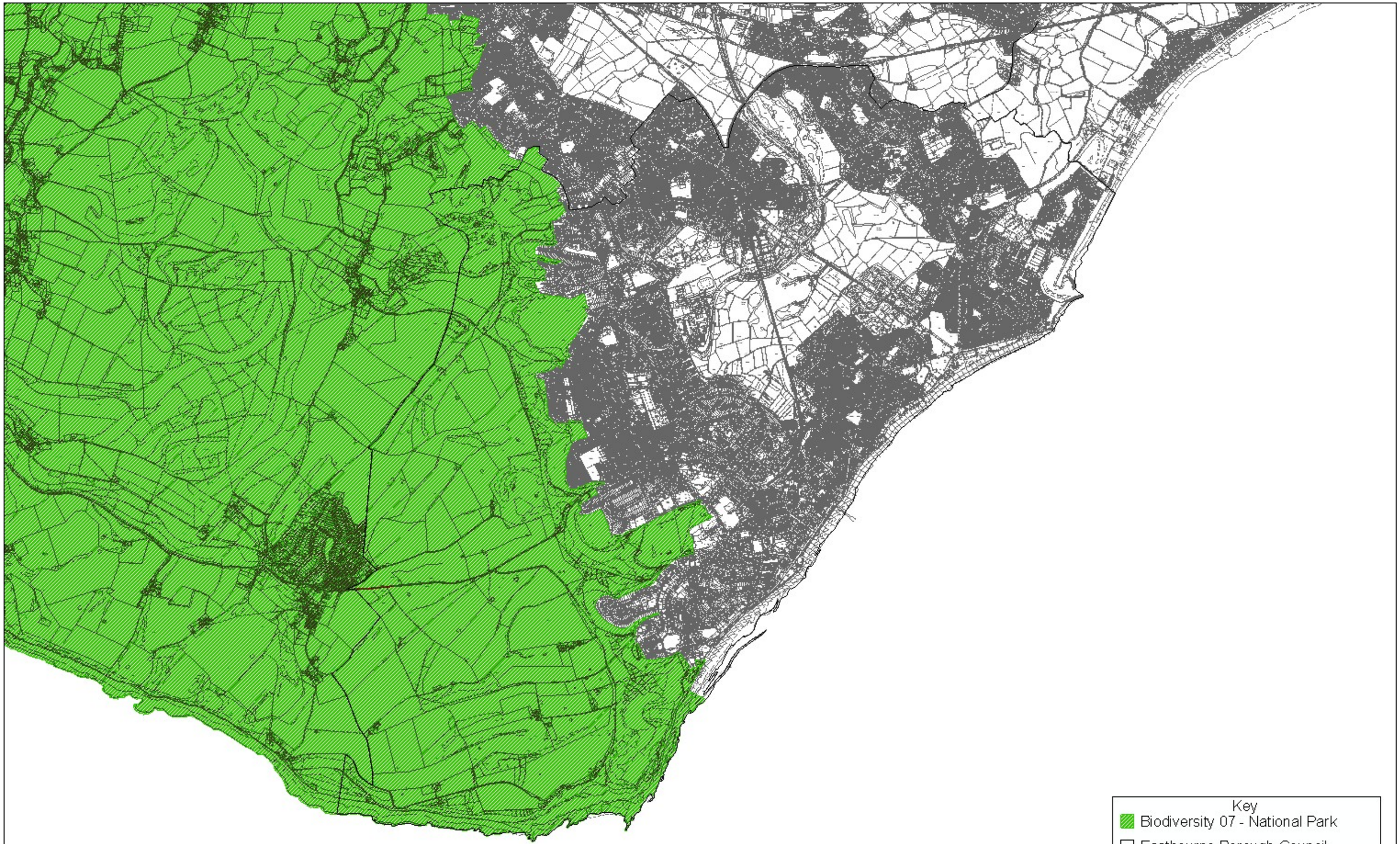
Email : david.j.saunders@davcad.co.uk

Eastbourne Borough
Boundary

FIGURE 5.1 - GEOLOGY





EASTBOURNE
Borough Council
www.eastbourne.gov.uk

Figure 6.1 - National Park

09 June 2008

Eastbourne Biodiversity Assessment 2007
Ash Partnership / DAVCAD

Scale
0 500 1000 1500 metres

Scale: 1:40000
X: 560203 Y: 99606

N

Key

- Biodiversity 07 - Marine SNCIs
- Biodiversity 07 - SNCIs
- Biodiversity 07 - SSSIs
- Eastbourne Borough Council

EASTBOURNE Borough Council
www.eastbourne.gov.uk

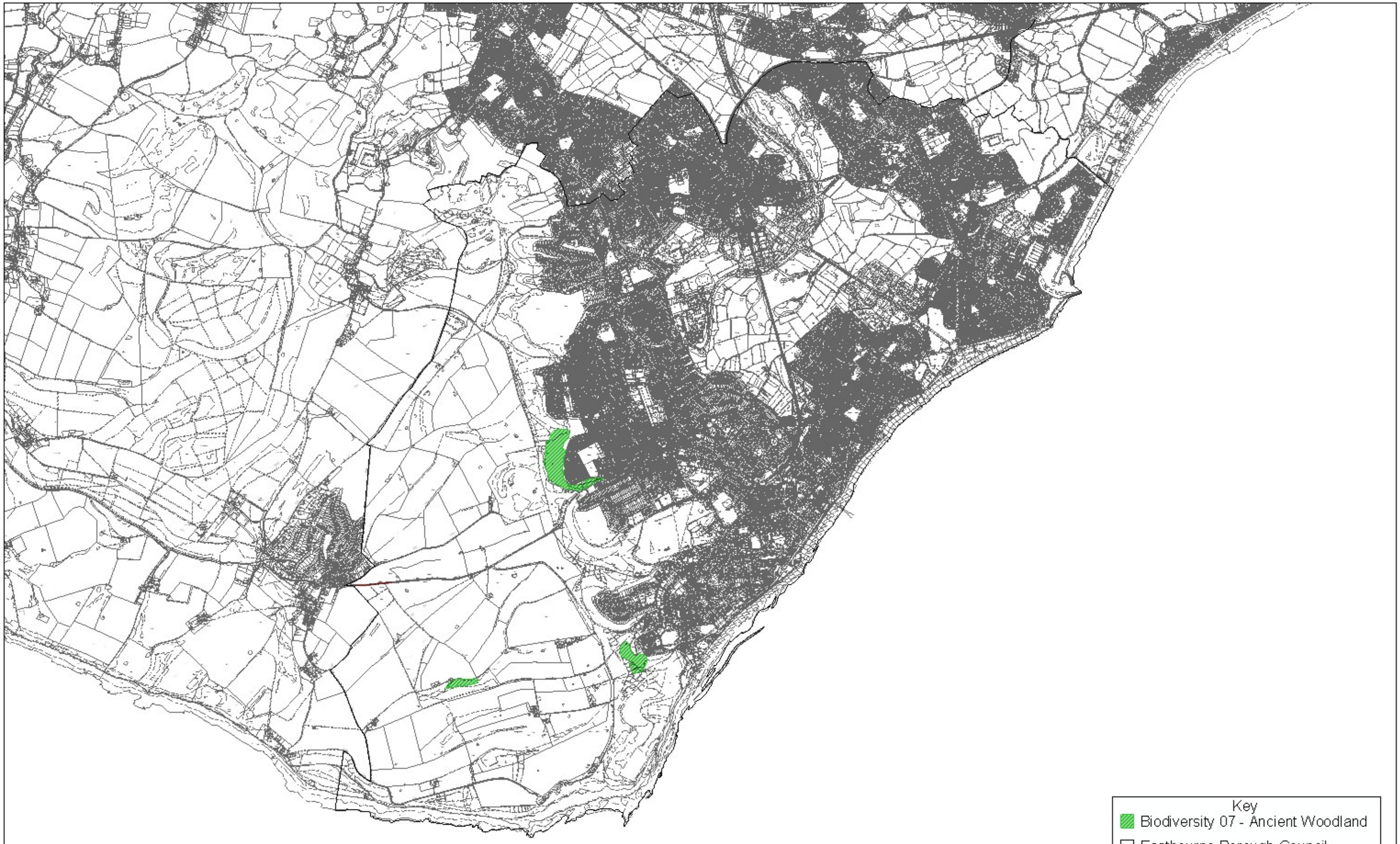
Figure 6.2 - Statutory and Non-statutory designated sites 11 June 2008

Eastbourne Biodiversity Assessment 2007
Ash Partnership / DAVCAD

Scale
0 500 1000 1500 metres

Scale: 1:40000
X: 559553 Y: 99206

N



EASTBOURNE Borough Council
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Figure 6.3 - Ancient Woodlands

09 June 2008

Eastbourne Biodiversity Assessment 2007
Ash Partnership / DAVCAD

Scale
0 500 1000 1500 metres

Scale: 1:40000
X: 560225 Y: 99563

N

Key

- Biodiversity 07 - Allotments
- Biodiversity 07 - Amenity Grassland
- Biodiversity 07 - Arable
- Biodiversity 07 - Chalk Grassland
- Biodiversity 07 - Coastal Cliff
- Biodiversity 07 - Footpaths
- Biodiversity 07 - Grass Leys
- Biodiversity 07 - Open Water (Freshwater)
- Biodiversity 07 - Open Water (Saline)
- Biodiversity 07 - Pastures
- Biodiversity 07 - Reedbeds
- Biodiversity 07 - Shingle
- Biodiversity 07 - Woodland
- Eastbourne Borough Council

EASTBOURNE Borough Council
www.eastbourne.gov.uk

Figure 7.1 - Habitat Plan

09 June 2008

Eastbourne Biodiversity Assessment 2007
Ash Partnership / DAVCAD

Scale
0 500 1000 1500 metres

Scale: 1:40000
X: 561199 Y: 99585

N

Key

Biodiversity 07 - Great Crested Newt

Eastbourne Borough Council

EASTBOURNE Borough Council

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Figure 7.10 - Great Crested Newt

11 June 2008

Eastbourne Biodiversity Assessment 2007

Ash Partnership / DAVCAD

Scale

0 500 1000 1500 metres

Scale: 1:40000

X: 559708 Y: 99581

N

Key

- Biodiversity 07 - Stag Beetle
- Eastbourne Borough Council

EASTBOURNE Borough Council

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Figure 7.11 - Stag Beetle

11 June 2008

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Ash Partnership / DAVCAD

Scale
0 500 1000 1500 metres

Scale: 1:40000

X: 559825 Y: 99600

Key

Biodiversity 07 - Water Vole

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Figure 7.12 - Water Vole

11 June 2008

Eastbourne Biodiversity Assessment 2007

Ash Partnership / DAVCAD

Scale 0 500 1000 1500 metres

Scale: 1:40000

X: 559398 Y: 99736

N

Key

Biodiversity 07 - Chalk Grassland

Biodiversity 07 - Chalk Grassland Species

Chalk Grassland species

Eastbourne Borough Council

EASTBOURNE Borough Council

www.eastbourne.gov.uk

Figure 7.2 - Chalk Grassland

11 June 2008

Eastbourne Biodiversity Assessment 2007

Ash Partnership / DAVCAD

Scale 0 500 1000 1500 metres

Scale: 1:40000

X: 559728 Y: 99833

Key

- Biodiversity 07 - Pastures
- Biodiversity 07 - Neutral Grassland Species
- Eastbourne Borough Council

EASTBOURNE Borough Council
www.eastbourne.gov.uk

Figure 7.3 - Neutral Grassland

11 June 2008

Eastbourne Biodiversity Assessment 2007
Ash Partnership / DAVCAD

Scale
0 500 1000 1500 metres

Scale: 1:40000
X: 559689 Y: 99484

N

Key

- Biodiversity 07 - Woodland
- Biodiversity 07 - Woodland Species
- Eastbourne Borough Council

EASTBOURNE Borough Council
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Figure 7.4 - Woodland

11 June 2008

Eastbourne Biodiversity Assessment 2007
Ash Partnership / DAVCAD

Scale
0 500 1000 1500 metres

Scale: 1:40000
X: 559398 Y: 99658

N

Key

Biodiversity 07 - Waterbodies

- Ponds and Dew Ponds
- Eastbourne Borough Council

EASTBOURNE Borough Council

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Figure 7.5 - Waterbodies

11 June 2008

Eastbourne Biodiversity Assessment 2007

Ash Partnership / DAVCAD

Scale

0 500 1000 1500 metres

Scale: 1:40000

X: 559864 Y: 99652

Key

- Biodiversity 07 - Shingle
- Biodiversity 07 - Coastal Cliff
- Biodiversity 07 - Maritime Cliffs and Shingle
- Eastbourne Borough Council

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Figure 7.6 - Maritime Cliff, Vegetated and Bare Shingle

11 June 2008

Eastbourne Biodiversity Assessment 2007
Ash Partnership / DAVCAD

Scale
0 500 1000 1500 metres

Scale: 1:40000
X: 559767 Y: 99619

Key

Biodiversity 07 - Pheasants Eye

Eastbourne Borough Council

EASTBOURNE Borough Council

www.eastbourne.gov.uk

Figure 7.7 - Pheasants Eye

11 June 2008

Eastbourne Biodiversity Assessment 2007

Ash Partnership / DAVCAD

Scale 0 500 1000 1500 metres

Scale: 1:40000

X: 559611 Y: 99755

N

Key

Biodiversity 07 - Common Pipistrelle

Eastbourne Borough Council

EASTBOURNE Borough Council

www.eastbourne.gov.uk

Figure 7.8 - Common Pipistrelle

11 June 2008

Eastbourne Biodiversity Assessment 2007

Ash Partnership / DAVCAD

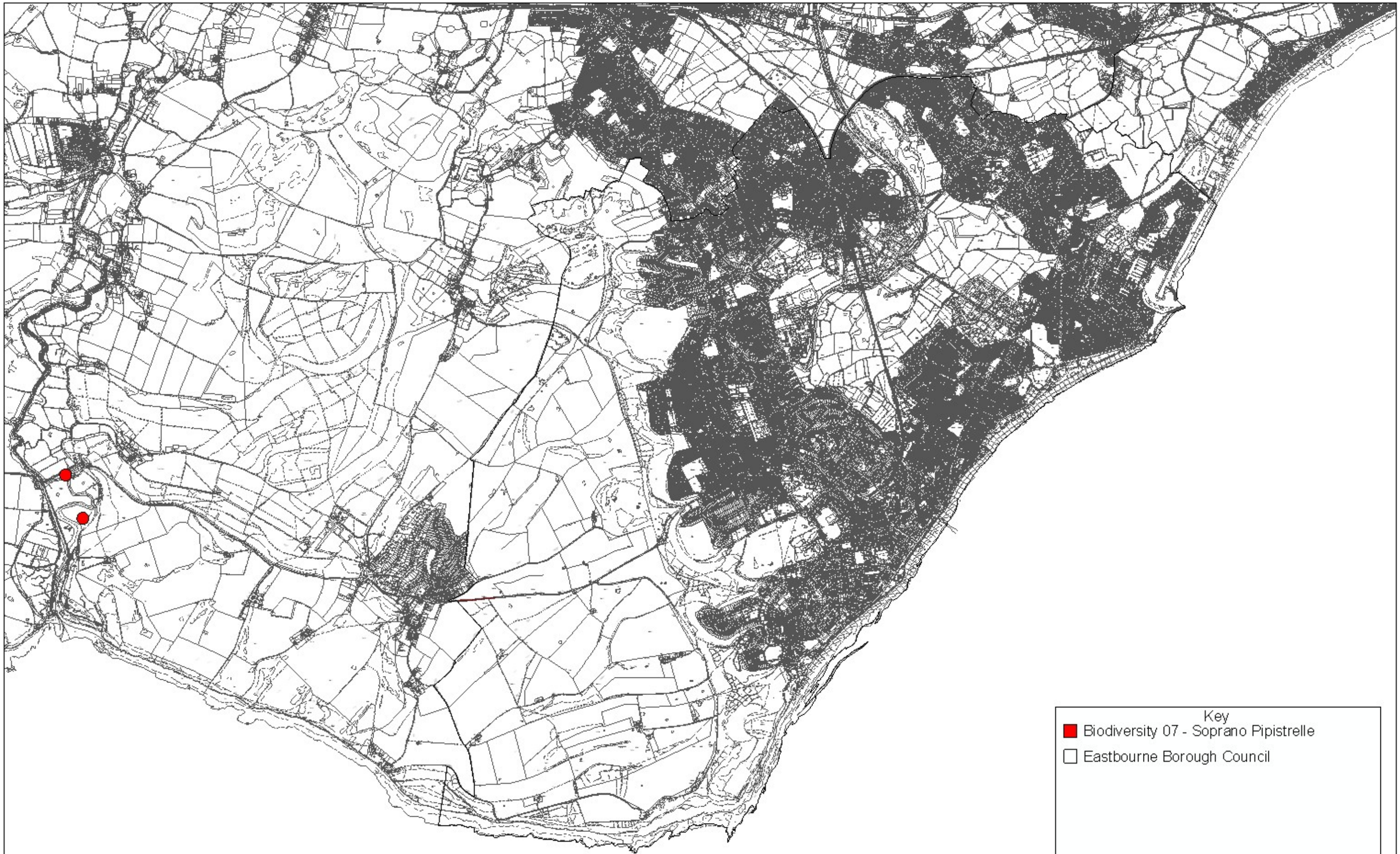
Scale

0 500 1000 1500 metres

Scale: 1:40000

X: 559223 Y: 99949

N



EASTBOURNE
Borough Council
www.eastbourne.gov.uk

Figure 7.9 - Soprano Pipistrelle

11 June 2008

Eastbourne Biodiversity Assessment 2007
Ash Partnership / DAVCAD

Scale
0 500 1000 1500 metres

Scale: 1:40000
X: 559029 Y: 99736

Key

Biodiversity 07 - Bats

- Whiskered
- Whiskered/Brandts
- Natterers
- Noctule
- Brown Long-Eared
- Daubentons
- Parti-Coloured
- Serotine
- Undetermined
- Common Pipistrelle
- Soprano Pipistrelle

Eastbourne Borough Council

EASTBOURNE Borough Council

www.eastbourne.gov.uk

Figure 8.1 - Bats

12 June 2008

Eastbourne Biodiversity Assessment 2007

Ash Partnership / DAVCAD

Scale 0 500 1000 1500 metres

Scale: 1:40000

X: 559224 Y: 99710

N

Key

Biodiversity 07 - Reptiles

- Adder
- Grass Snake
- Slow Worm
- Common Lizard

Eastbourne Borough Council

EASTBOURNE Borough Council

www.eastbourne.gov.uk

Figure 8.2 - Reptiles

12 June 2008

Eastbourne Biodiversity Assessment 2007

Ash Partnership / DAVCAD

Scale 0 500 1000 1500 metres

Scale: 1:40000

X: 559573 Y: 99807

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LEGEND

21	21

SHEET NUMBERS USED FOR HABITAT PLAN

FIGURE 2.2 SHEET NUMBERS

N

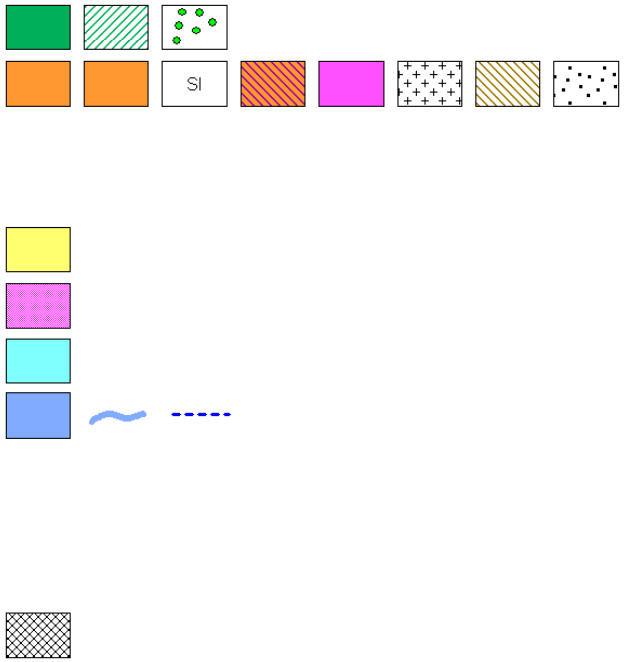
0 1 2
kilometers

105000
104000
103000
102000
101000
100000
99000
98000
97000
96000

555000 556000 557000 558000 559000 560000 561000 562000 563000 564000 565000 566000

Key

EASTBOURNE PARK



EASTBOURNE BOROUGH

- Woodland, Scrub (Native & Ornamental), Tree Lines & Hedgerows
- Pasture, Rank Grassland & Tall Herb Communities
- Chalk Grassland
- A | I — Arable & Grass Leys
- Amenity Grassland
- Allotments
- Reedbed
- Open Water (Freshwater)
- Open Water (Saline)
- Vegetated & Bare Shingle
- Coastal Cliff
- Built up areas
- Borough Boundary
- Eastbourne Park Boundary

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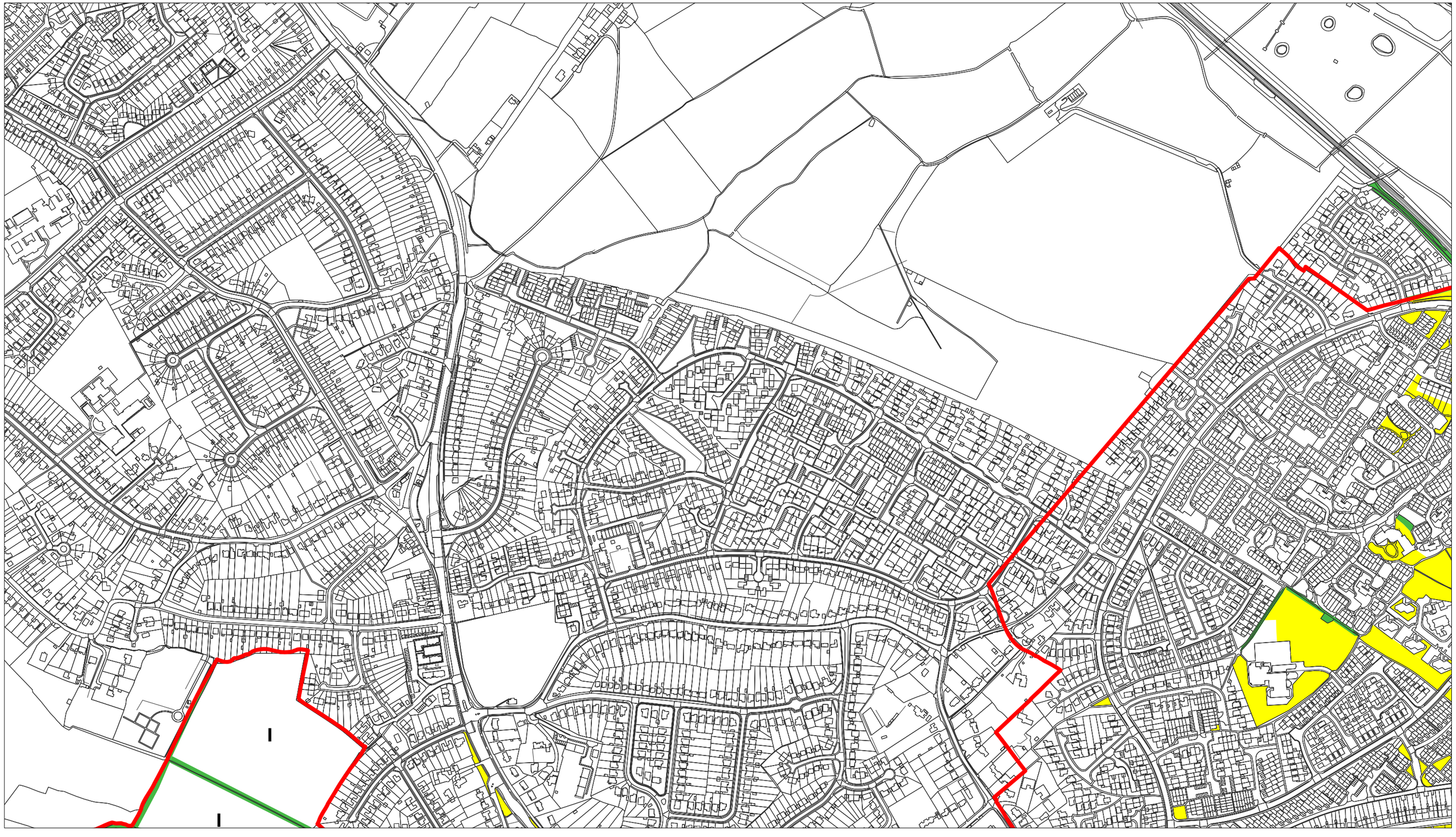

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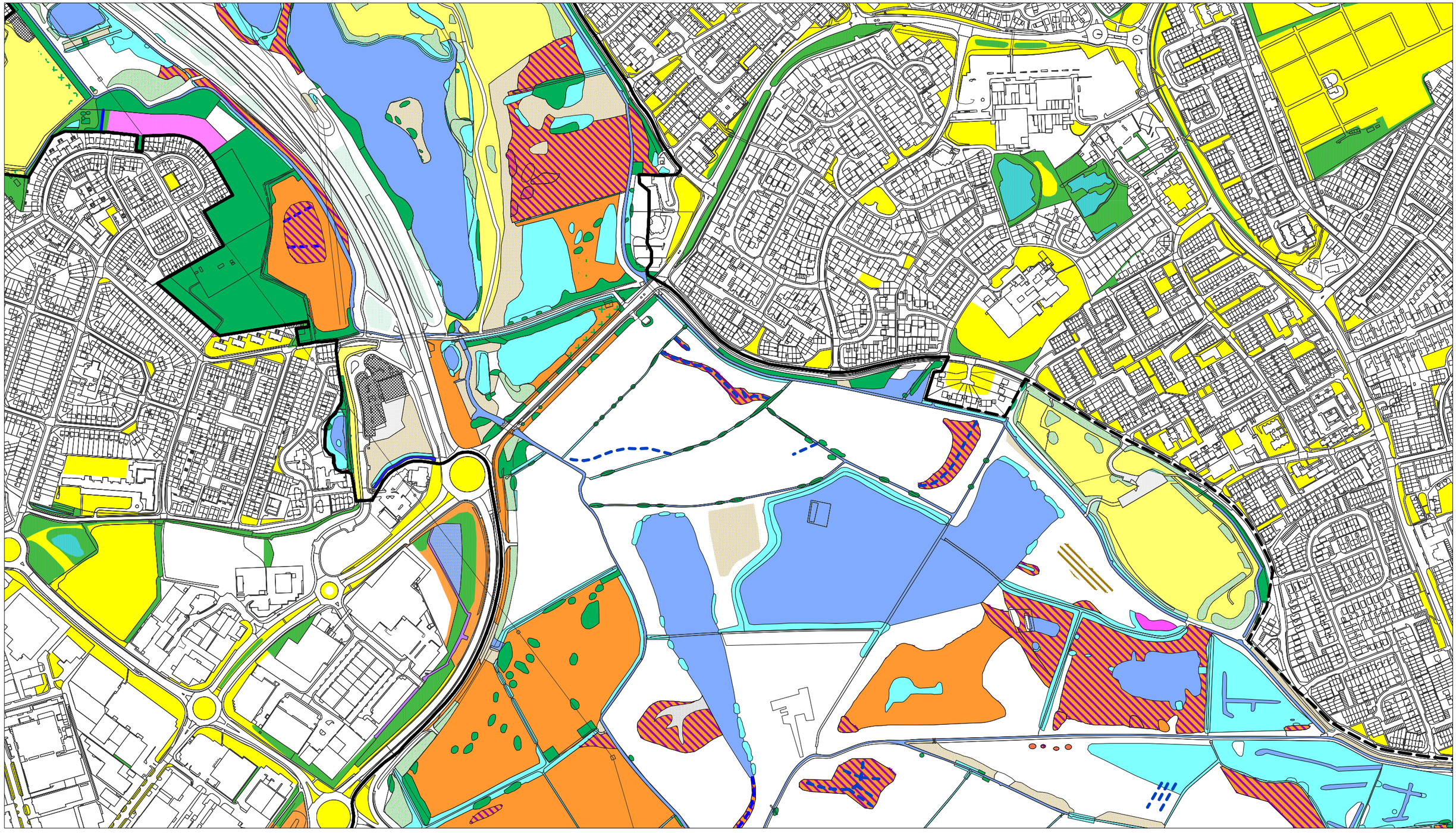

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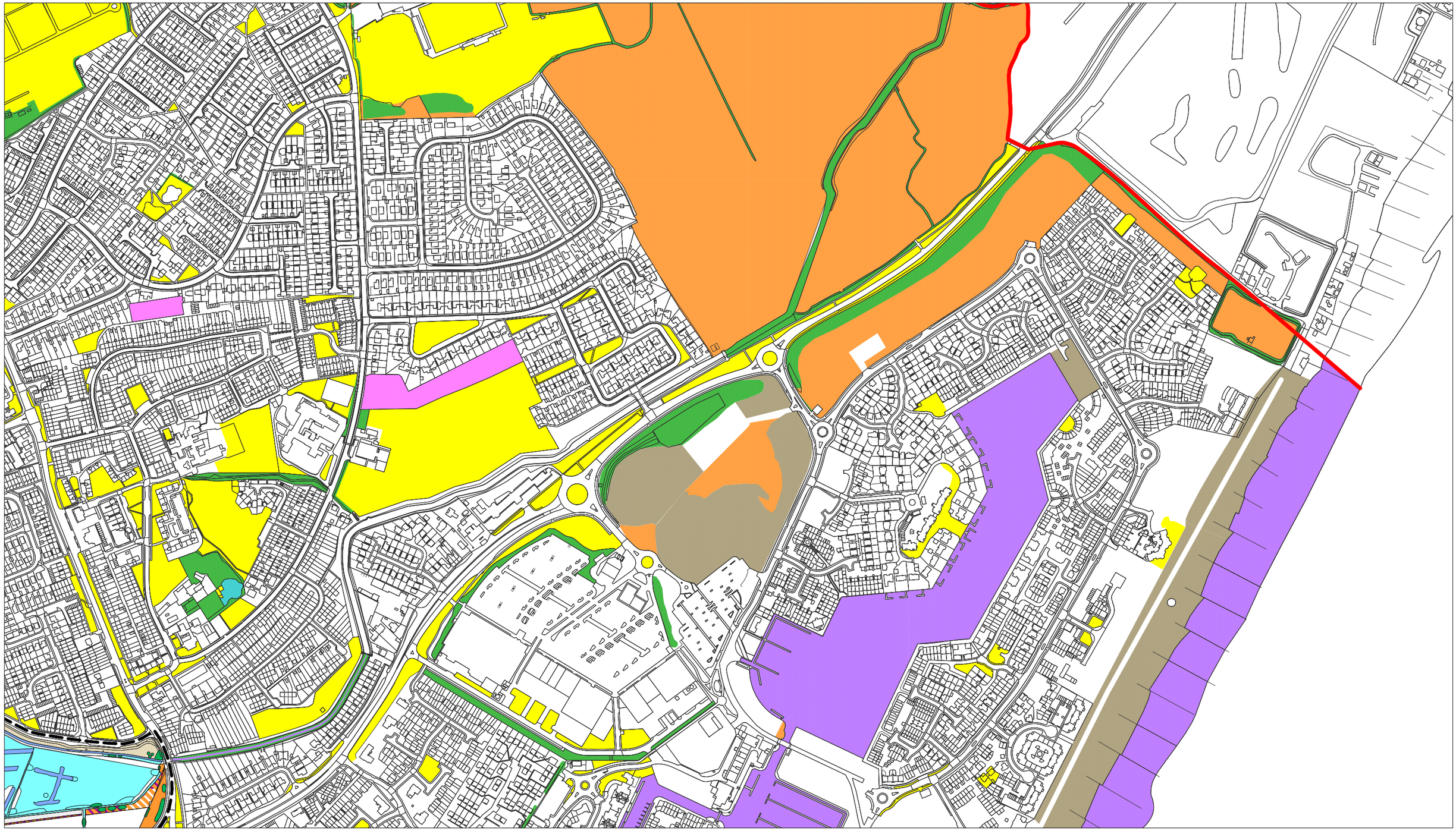

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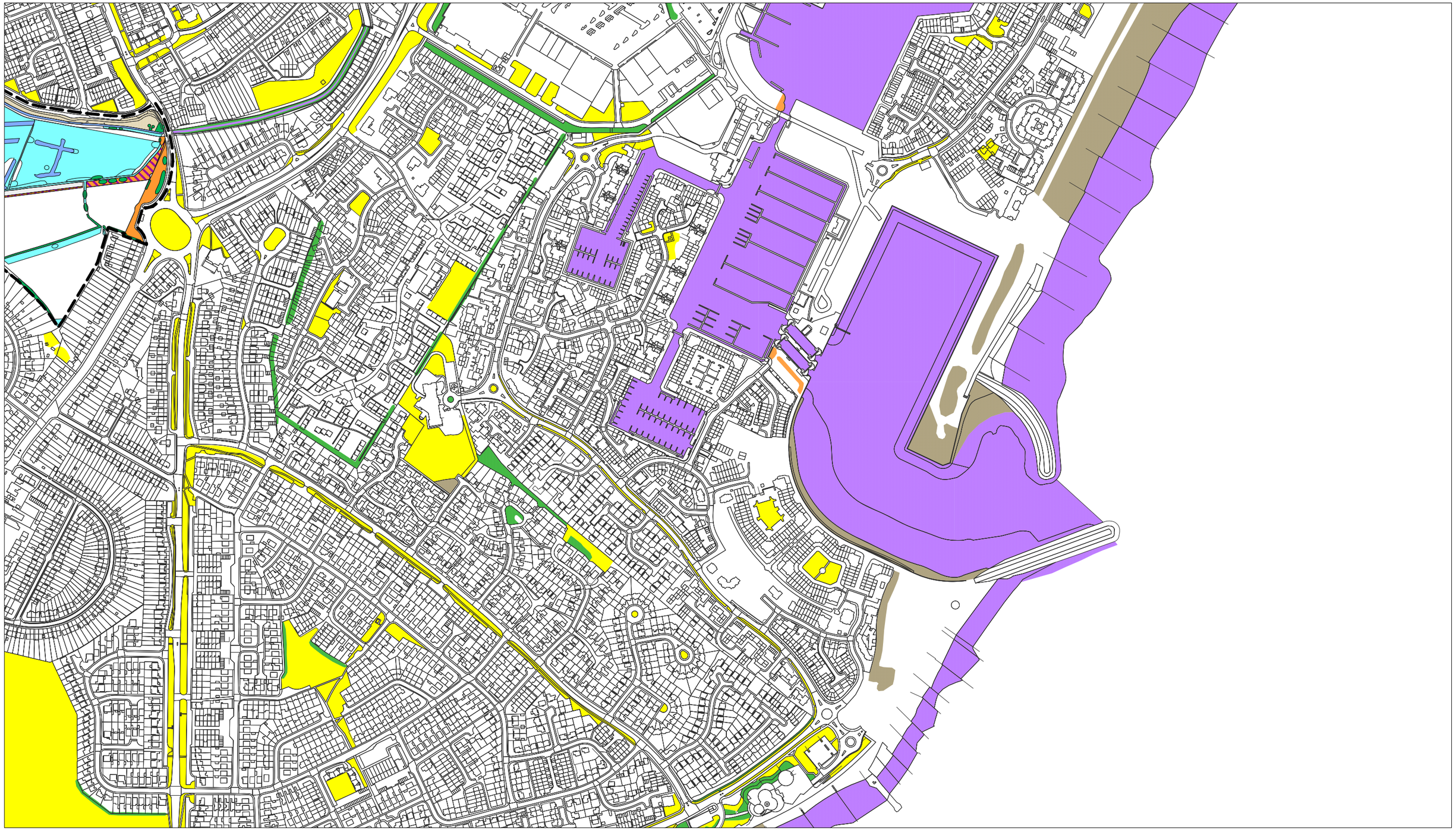

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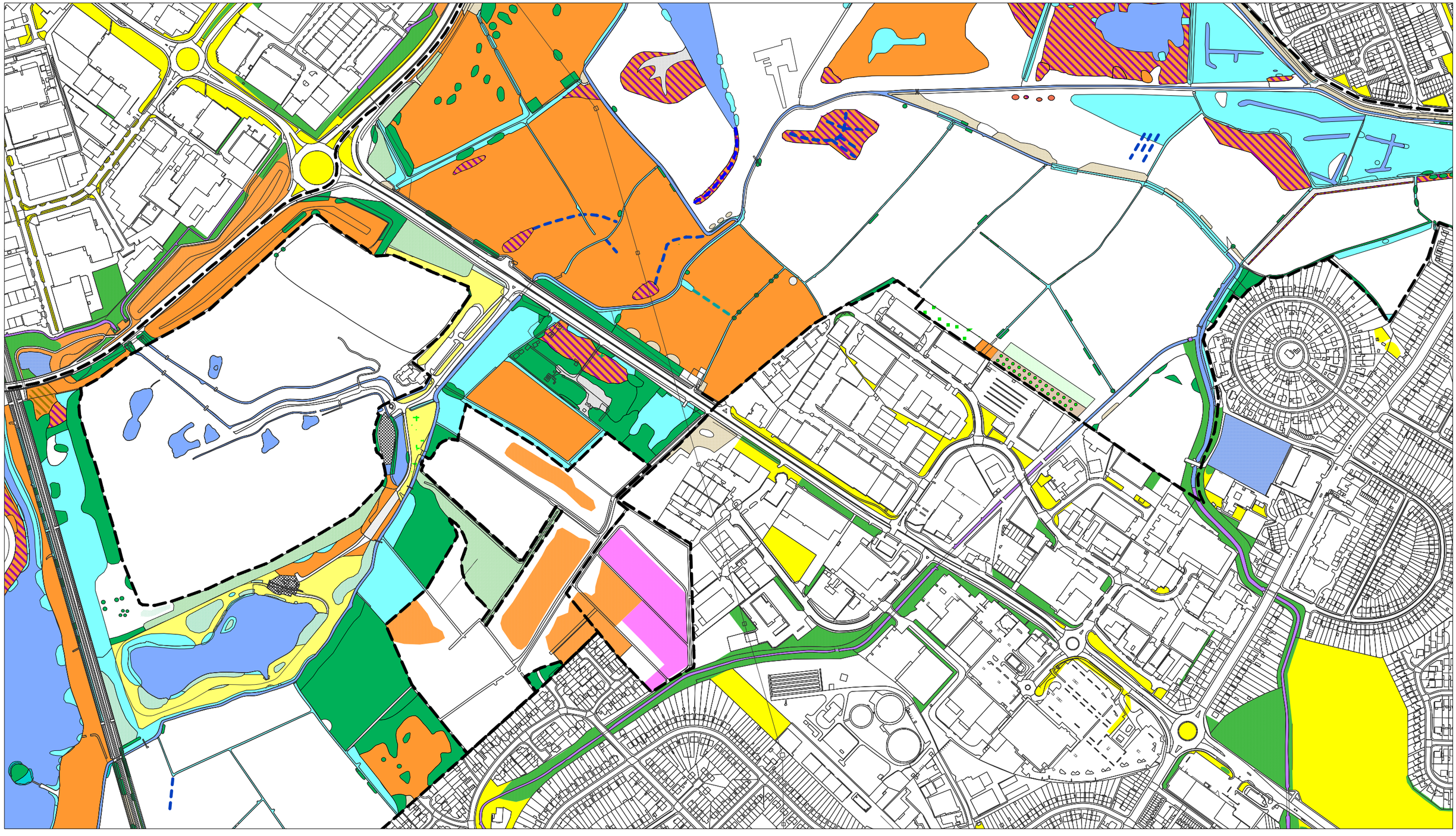

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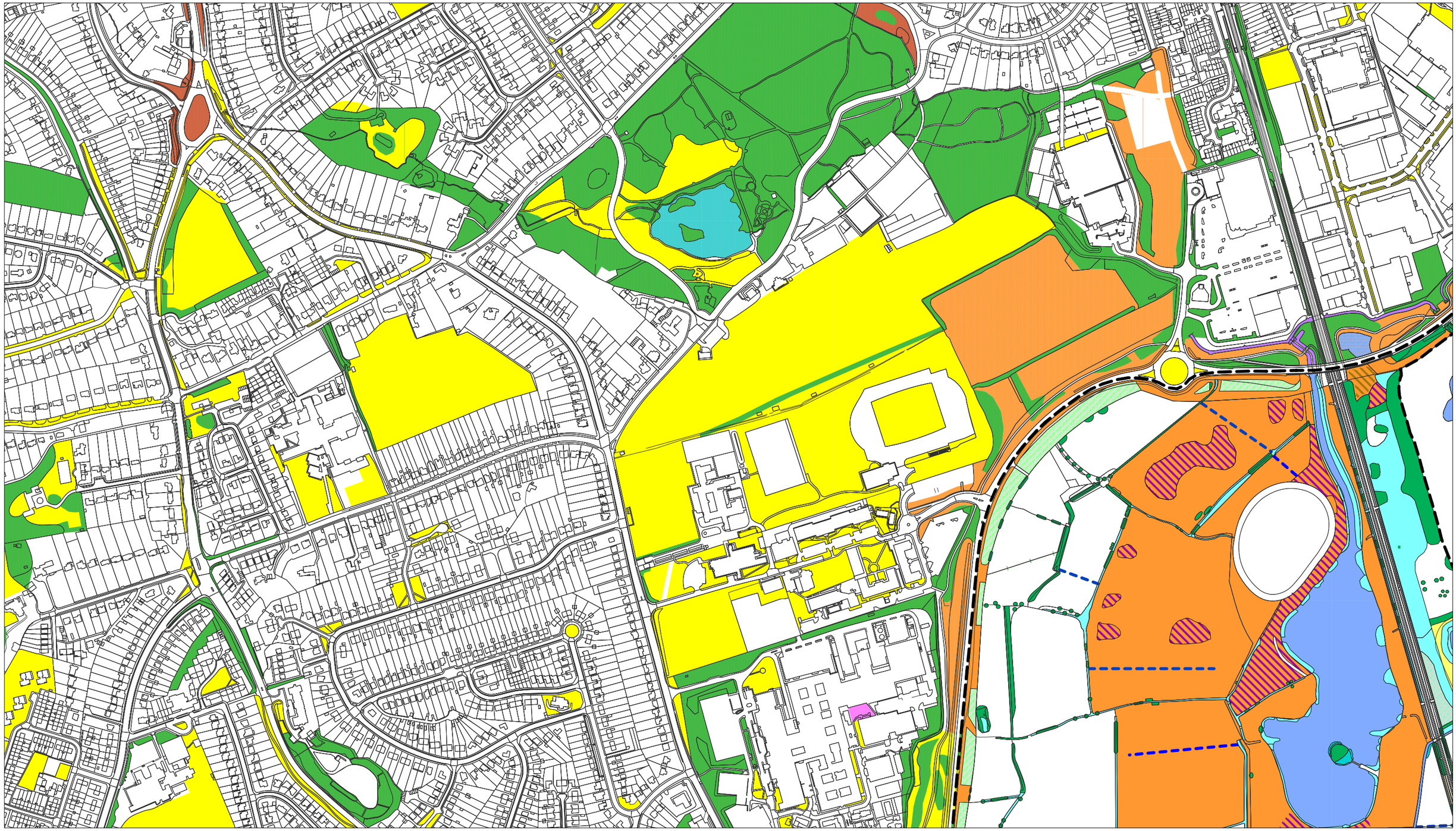

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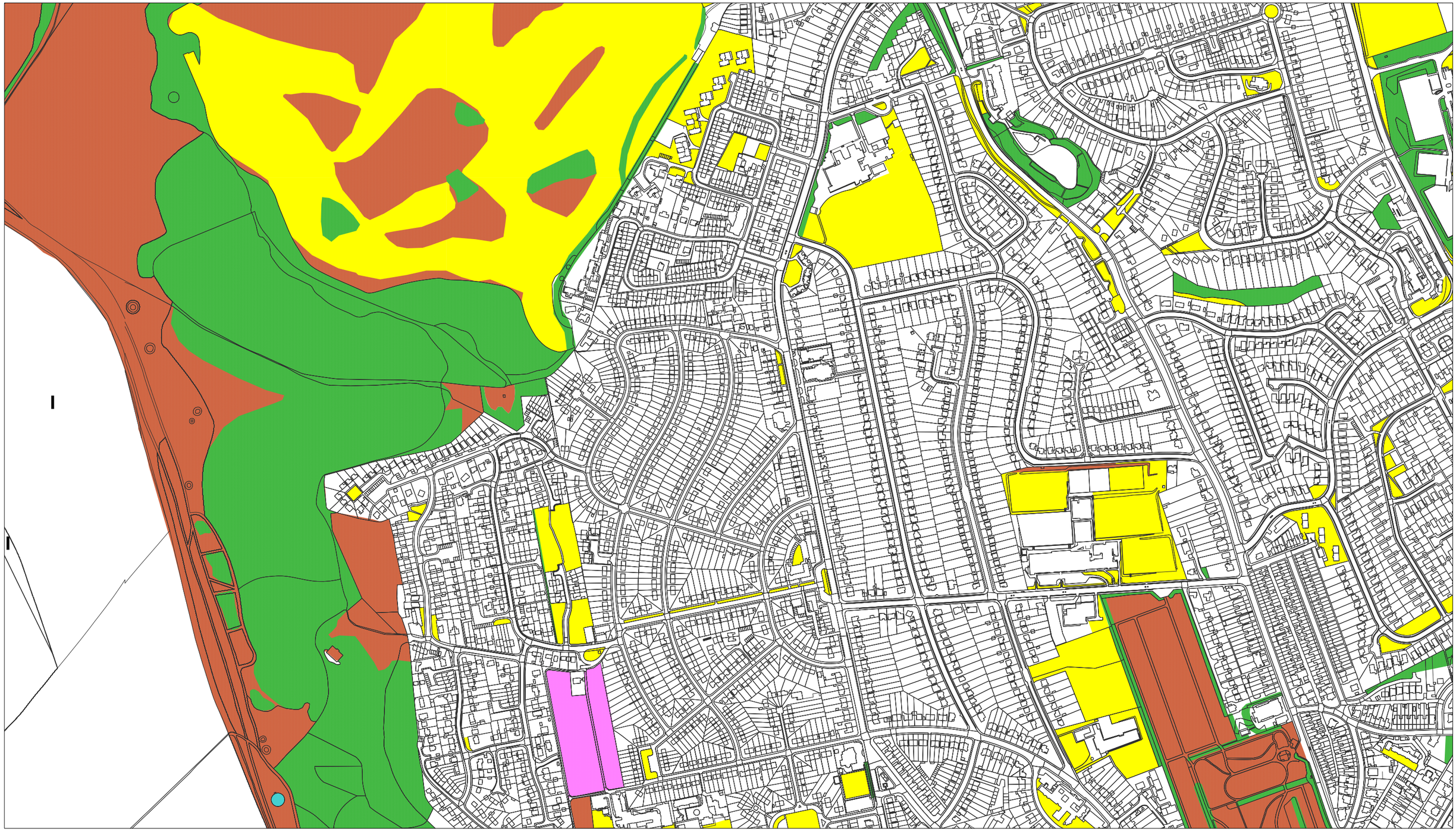

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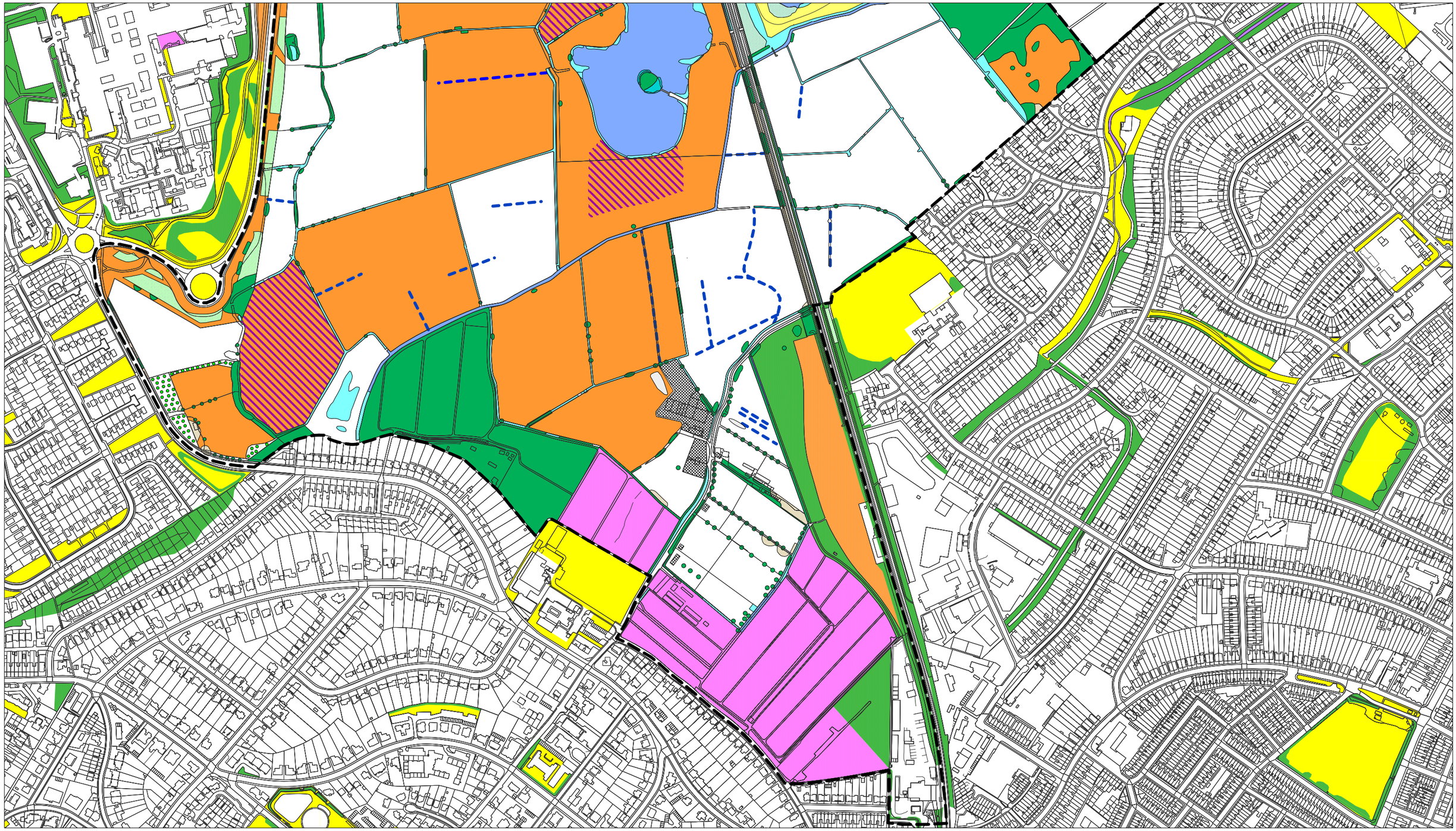

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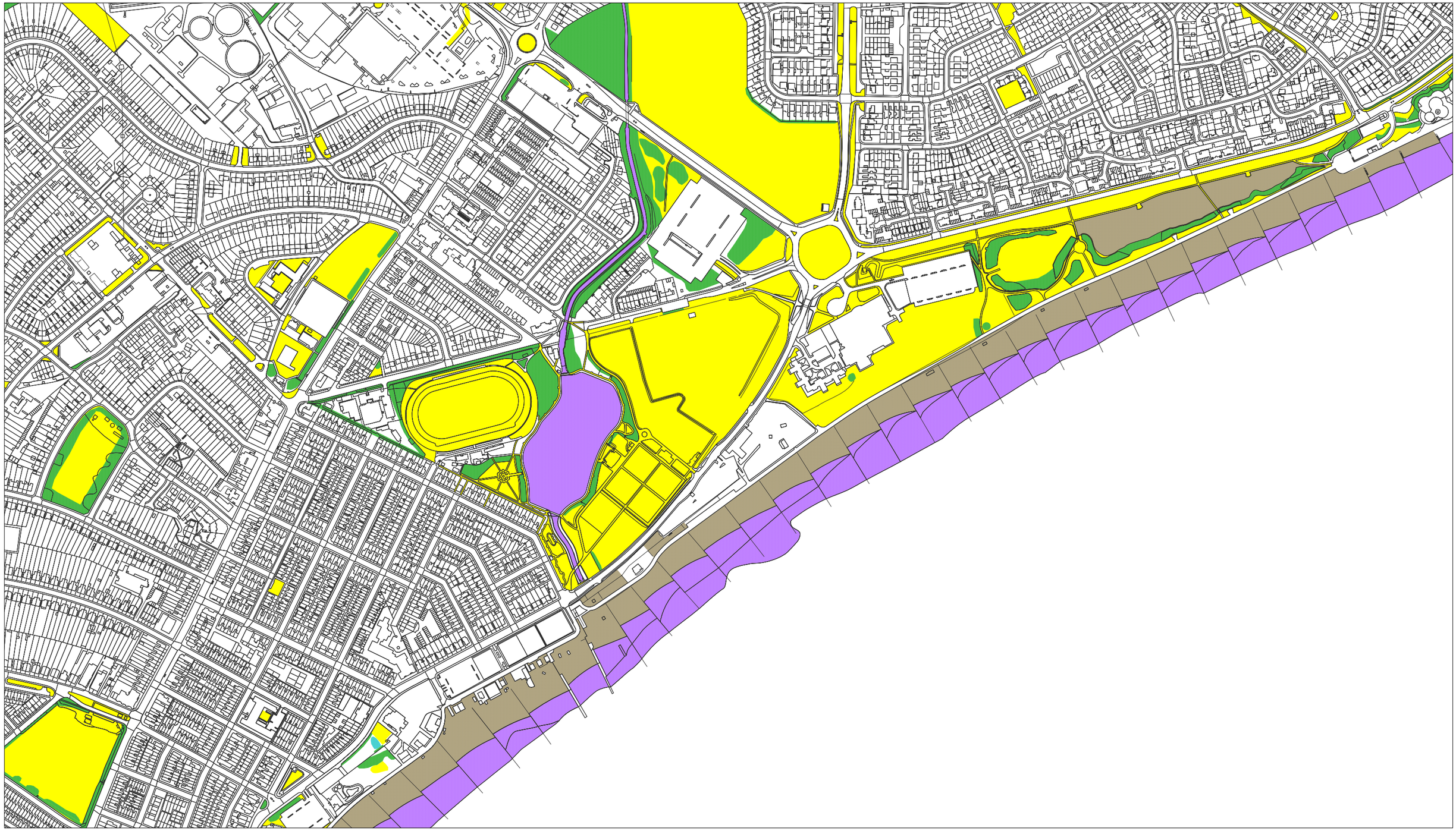

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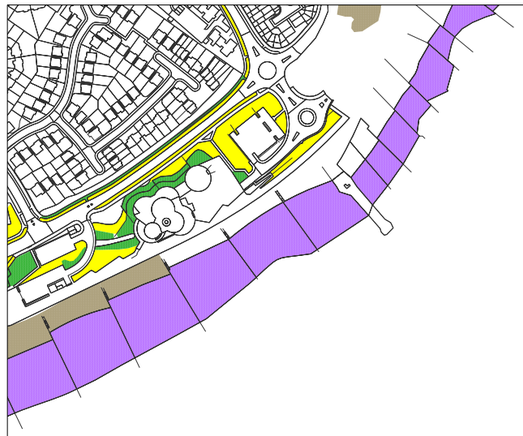

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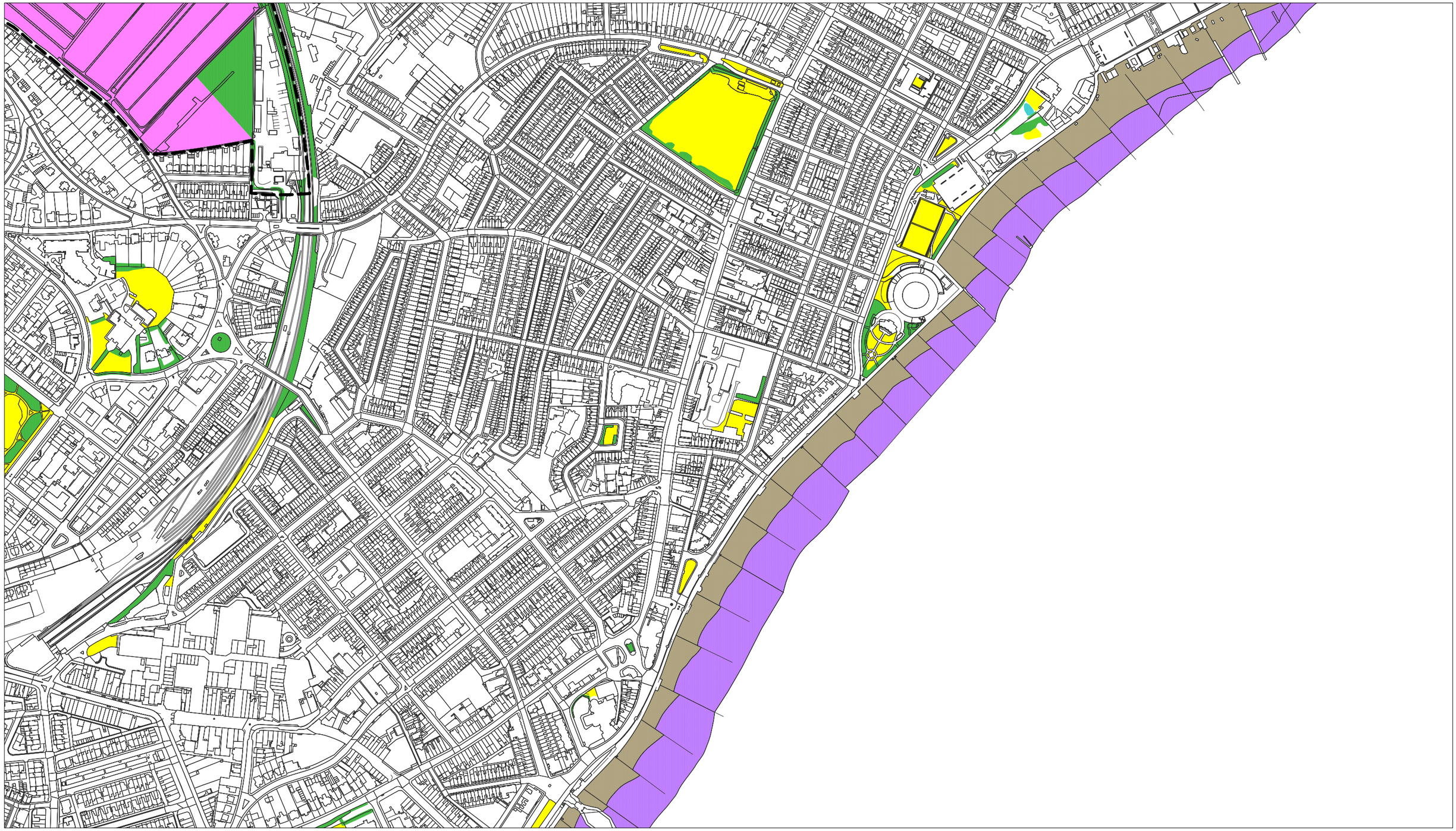

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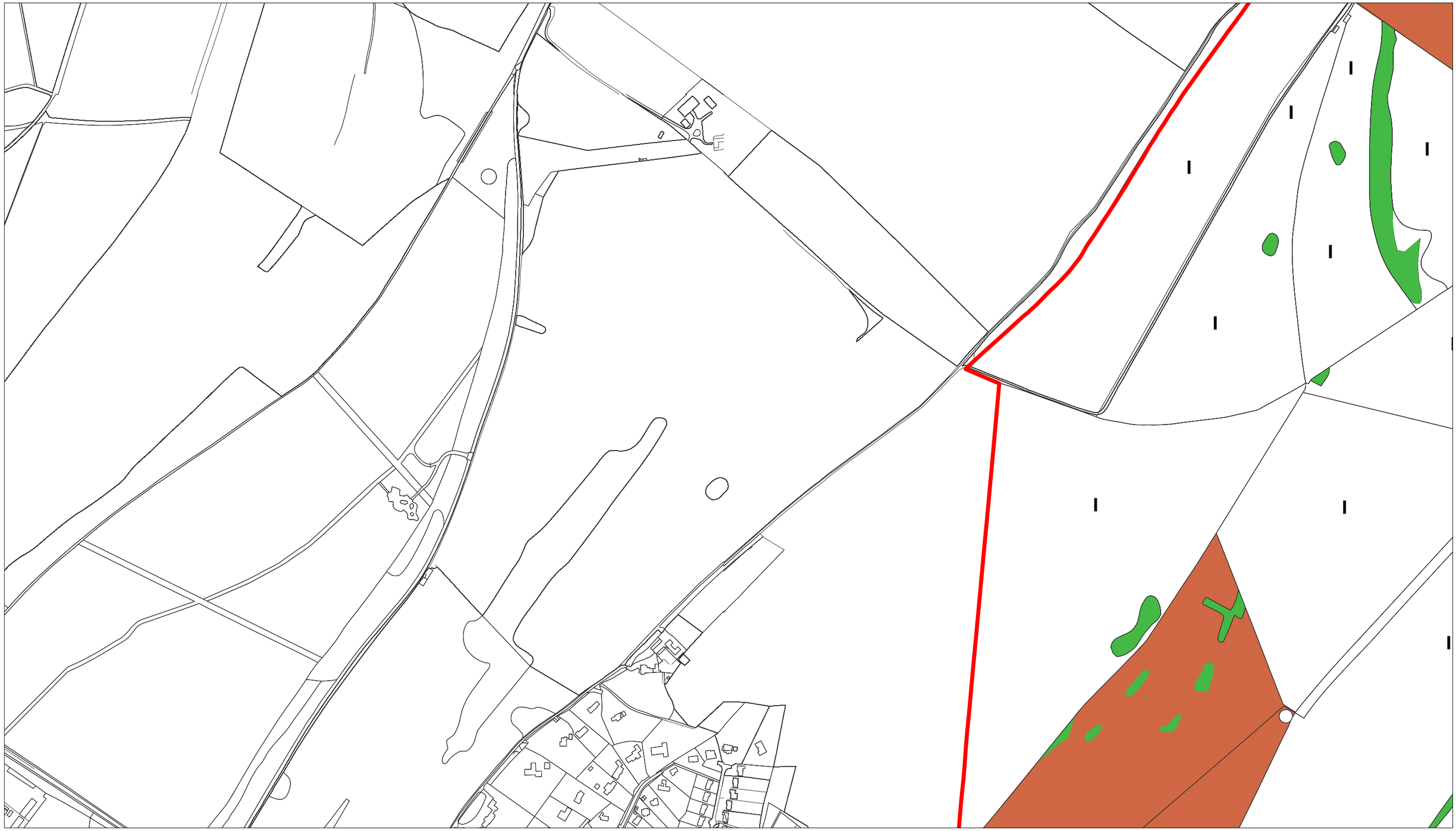

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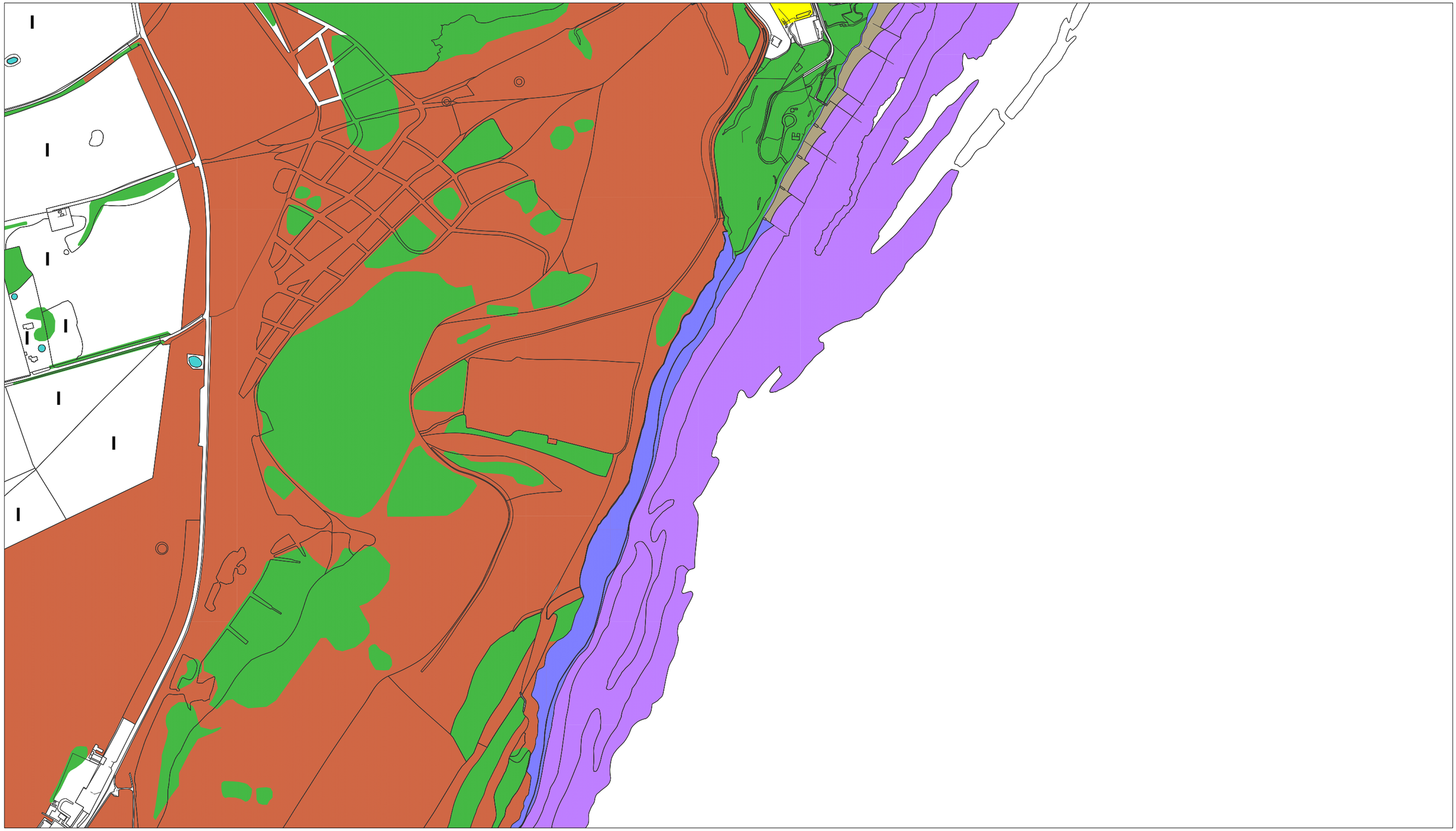

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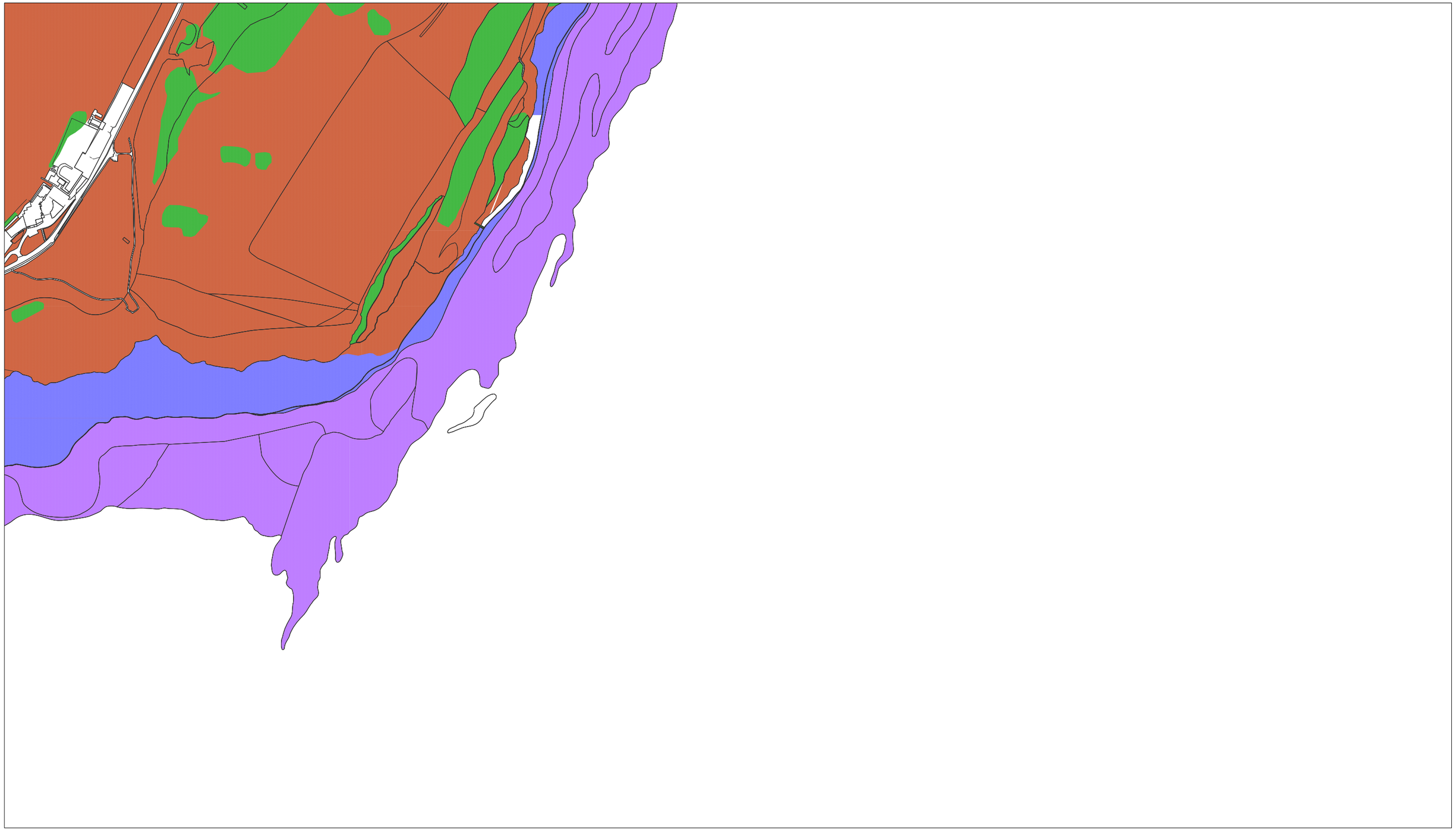

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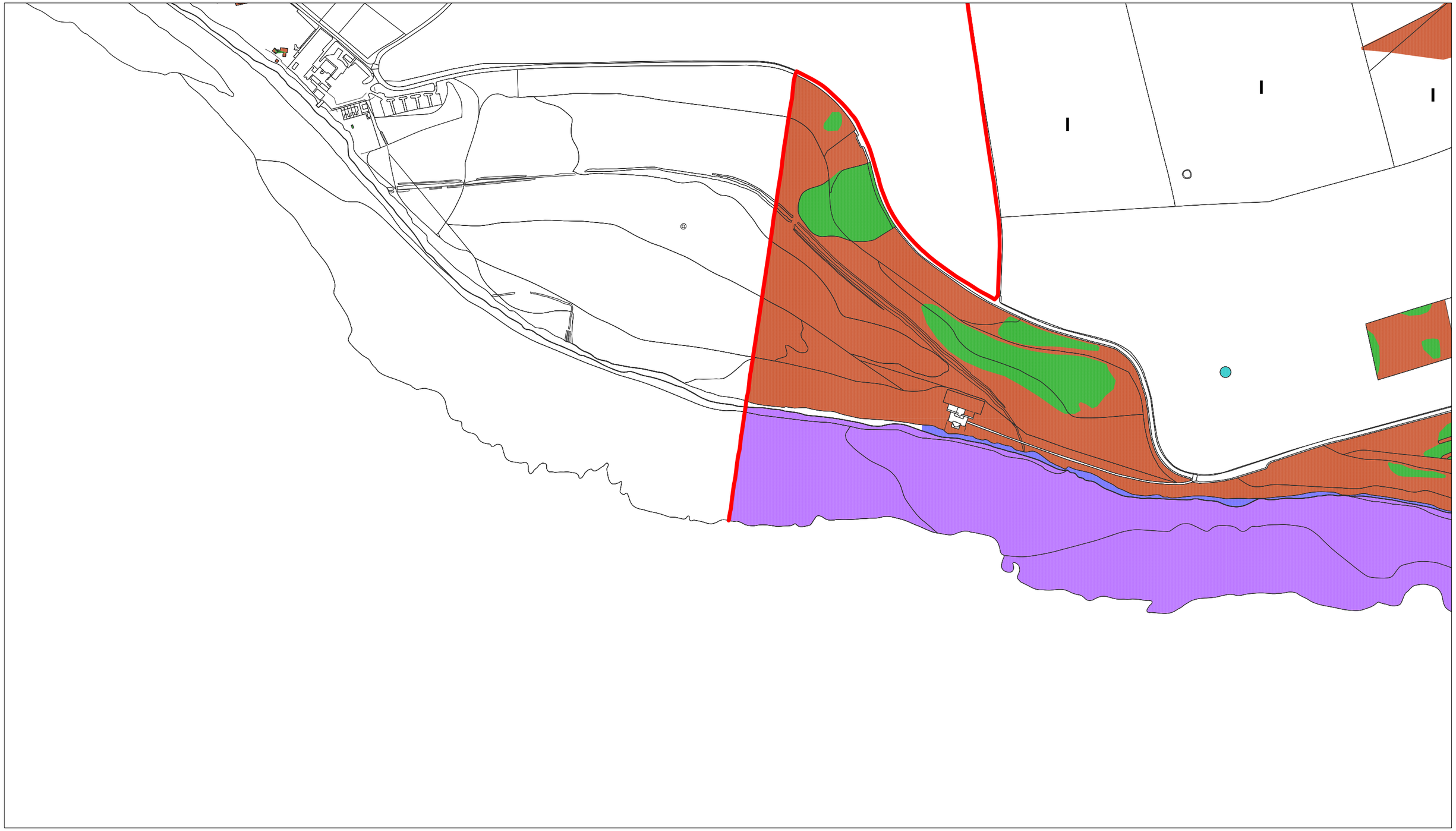

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