



Sea Holly (*Eryngium maritimum*)

AN ANNOTATED CHECKLIST OF THE FLORA OF THE SANDWICH BAY AREA

FIRST PUBLISHED IN 2014 WITH UPDATES TO SUMMER
2026.

Ken Chapman

AN ANNOTATED CHECKLIST OF THE FLORA OF THE SANDWICH BAY AREA.

**FIRST PUBLISHED SPRING 2014 WITH SUBSEQUENT UPDATES
TO SPRING 2026.**

Background:

The richness of the flora of the Sandwich Bay area is well-known, both locally and nationally. Over **800 plant species** have so far been found within the Recording Area of the Observatory and Field Centre, (see below for a definition and description of the Observatory's Recording Area), and new species continue to be discovered. There are nearly **90 species of grass**, nearly **60 species of clovers, vetches and their allies** and about **15 species of orchid**. Many of the plant species found here are officially recognised as being of **very scarce, local or nationally-rare status**. A number of them are listed in the national '**Red List of Endangered Species**'. Certain sites are of outstanding importance – for example, the small area of the White House paddock on Sandwich Bay Estate supports between 170 and 200 different plant species in an area of about one hectare, including many which are only found in this type of habitat.

This rich and diverse flora depends on a variety of factors. The more significant of these are:

- the **location of the area** in the extreme south-east of the country.
- the **mixture of habitats**, including various gradations of calcareous sand-dune; salt-marsh; brackish and freshwater areas, (especially the important Worth Marshes-Lyddon Valley wetland complex); old meadows and arable land
- the **protection from development** provided by the three links golf courses and the private nature of Sandwich Bay Estate.

However, much of the area is subject to **relentless and on-going pressure for change**, which is having an impact on the plant communities and species. Amongst the more important changes are:

- a **decline in farm-based species** as agricultural practices have changed, for example, the intensification in land-use in the market-garden areas on New Downs Farm; the extension of more efficient land-drainage in many parts of the Recording Area and the conversion of formerly unimproved meadow to arable monoculture or grass leys
- the **growth of built-up areas**, especially at Stonar and Richborough Port, (Discovery Park, etc.).
- increasing **pressure from a wide range of users of the countryside**, including dog-walkers, cyclists, motorists and joggers

- **changes in large parts of Pegwell Bay**, from its original condition as a natural salt-marsh, through a period as a landfill site, to its present status as a Country Park.
- **changes due to ‘aliens’, garden-escapes and deliberate plantings**. The latter might include, for example, the extensive lines of wind-break White Poplar, (*Populus alba*), trees planted on New Downs Farm; amenity planting of Corsican Pine, (*Pinus nigra*), on Princes Golf Course or the range of species planted for ‘habitat creation’ on Sandwich Bay Estate. In places, for example along the course of the Haven Stream on the Estate, these trees have grown so densely that they are both helping to dry the area out and are also shading-out more interesting species from the herb and water-surface layers.
- **establishment of nature reserves and other new wildlife-friendly habitats**, for example, the Kent Wildlife Trust, (KWT), Reserve at Pegwell- Stonelees; Backsand Scrape on the New Downs area; Restharrow Dunes on Sandwich Bay Estate and developments at the RSPB Worth Marshes Reserve, with its planned wetland creation and some re-introduction of wetland and other species.
- **changes due to major Environment Agency projects** in the management of waterways and coastal defences, especially the alterations to beach profiles and content from Deal northwards towards Pegwell Bay, plus land drainage and more recent flood protection activity along the lower River Stour in 2013-2015.

Origins of this Check-list:

After living away from the Observatory for many years, on my return to the area in 2013, I undertook the task of tidying-up what was then the Observatory Archives and Records Room. While sorting through the mass of paperwork in the room, I confidently expected that at any moment I would find, securely filed away somewhere amongst all the past data, a summary check-list of the flora of the Recording Area. After all, the local plant-life had been studied for generations, long before the establishment of the Ringing Station in 1952, and certainly since then. I was also aware of the interest in specific plant groups, (particularly the *Orchidaceae*), that had always been expressed by Observatory members over the years, as witnessed by the regular summaries which were printed in past Observatory Annual Reports. I also knew of countless casual daily records contained in the Observatory’s ‘Non-Avian Logs’, compiled by members for many decades.

Eventually, I discovered in the archives that thousands of records *had* been collected since 1952 by a number of people at the Observatory, and especially by the late Dennis Batchelor. In his typical manner, Dennis had meticulously written these records on about a thousand A5-sized cards, one card per species, many of them based on his personal observations and typically containing multiple entries per card. These record-cards mostly cover the period from the mid-1960’s to the late-1990’s and

proved to be invaluable in the writing of the present check-list. (As, no doubt, will all of the other data-cards he completed for many other animal and plant groups, when attention is eventually turned to them).

At this early stage in the work, I also made extensive use of two other indispensable books, *The Atlas of the Kent Flora*, (1982), and *The New Atlas of the Kent Flora*, (2010), both compiled by the late Eric Philp and published by the Kent Field Club. These books document the distribution of the Kent flora, in the late 1970's and the early part of the present century respectively, by the use of maps based on tetrads, (areas of land 2 kms. by 2 kms.) It was possible to extract much useful information from these two books about the distribution of plants within the Recording Area and these two volumes are a fitting reminder of what all Kent naturalists owe to Eric Philp for the extraordinary amount of work involved in compiling them.

However, although the SBBO record-cards and the Kent Atlases were available as major sources of data, what still appeared to be missing was my hoped-for summary check-list of the Sandwich Bay flora. I began to wonder if Dennis Batchelor, or possibly the late Dennis Harle, *had* ever drawn up such a check-list, and, if so, where was it? I asked people at the Observatory who I thought might know about this missing list, but the generally-agreed answer was that nobody had ever seen such a thing.

So, as a project starting early in 2014, I took it upon myself to compile one. I have some basic knowledge about plants but I am not an expert botanist, by any means. However, I thought that the aims of this particular project could be accomplished by a search of the available literature and by consultation with contacts at the Observatory, and from further afield, who *did* have the expert botanical knowledge. The initial phase of the project took about six weeks of intensive work in the collation and cross-referencing of records; revision of names and taxonomic ordering; consultation with others and the writing-up of the first draft of the check-list.

Just at the point when I was about to send out the first draft of this check-list for initial consultation, a document 'surfaced' at the Observatory which proved to be the 'Holy Grail' This, in fact, was the hoped-for missing check-list which Dennis Batchelor actually *had* written, even though, when I had first asked, nobody at the Observatory had claimed to know of its existence. It transpired that it had been 'stored off-site'...

The copy of Dennis Batchelor's list which came to light is not actually dated, but it was clearly written, (hand-typed, of course, in those days), at some time in the mid-1980's, and with many subsequent hand-written comments in the margins through to the mid-1990's. Many of these additional comments consist of un-dated tetrad or sometimes full 6-figure map-references alongside each species-entry. The purpose of these references is not clear, but it appears that they may be later amendments and comments on the distribution of the plants. Overall, the check-list is in much the same format as the present version, but with some added detail. For example, the code

letters for all of the tetrads in which a plant species had been found are carefully listed, and the months in which the plant is normally in flower are also shown.

The re-appearance of this 1980's check-list required me to work back through my draft document and start several further weeks of cross-checking; correlation; addition and subtraction of records and generally merging the two lists into what I hope is now a coherent and thorough survey. In a very real sense, the final work is a collaboration between myself and, (posthumously), my very good friend Dennis Batchelor. Knowing his sense of humour, I think the idea would have amused him!

Purposes of the project and this document:

- To **summarise known vascular plant records for the Observatory's Recording Area**, initially by means of a literature search, focussing especially on the last 60 years and including more recent changes
- To produce a **baseline of current knowledge** about the flora of the area, to inform work in the future
- To **stimulate further interest and enquiry** amongst Observatory members and visitors.
- To **inform conservation management practices** within the Recording Area.

Description of the extent of the Recording Area and names of localities used:

Reference is made to '**the Recording Area**' or sometimes just '**the area**' throughout the Systematic List. This document is primarily written for Observatory members and visitors. I have therefore used the **Bird Observatory Recording Area**, (see maps below), as the basis for the systematic species list of plants of the area.

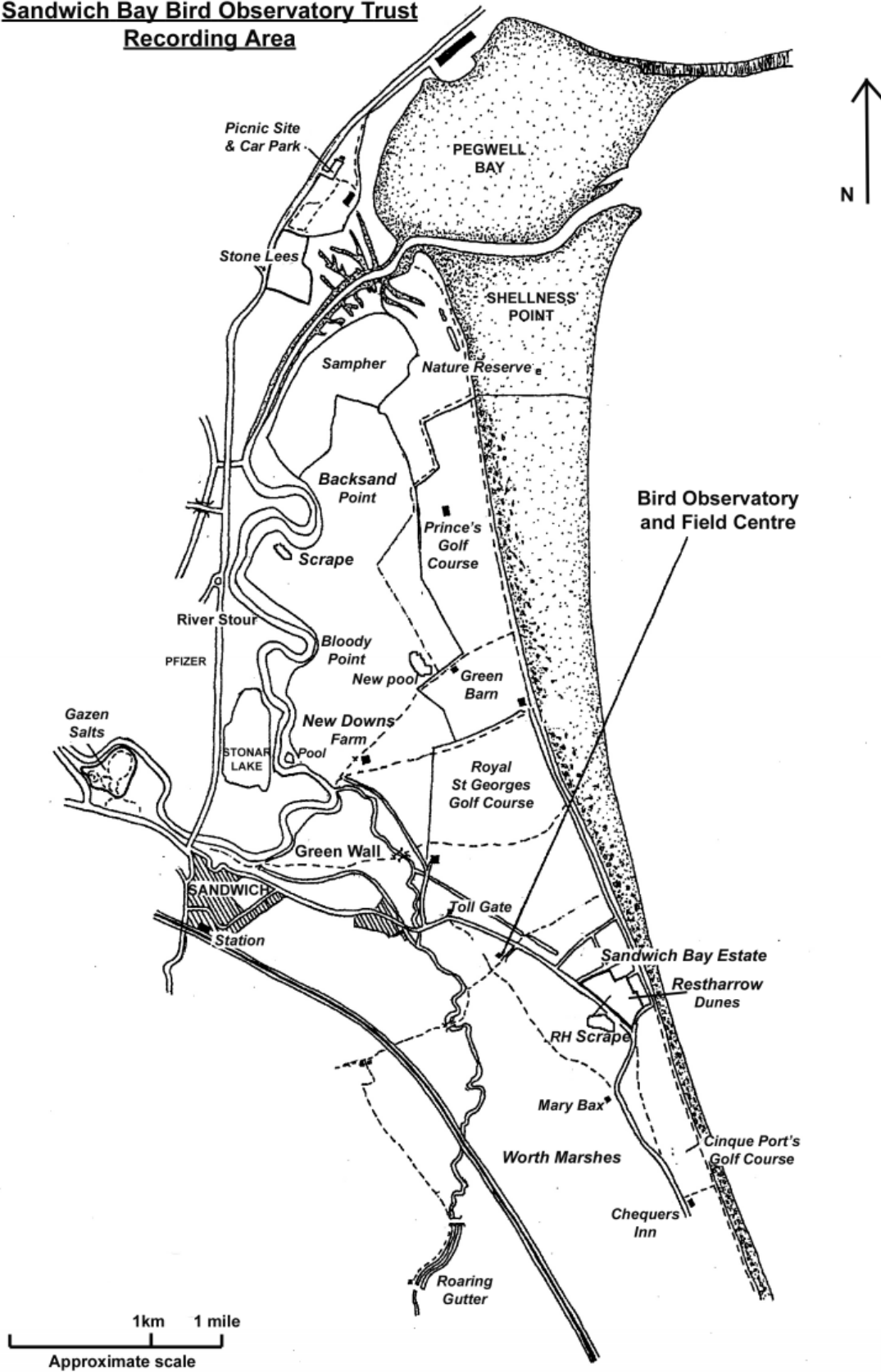
The northern edge of the Observatory Recording Area traditionally lies east to west about half-way across Pegwell Bay. In the west, the Area is bordered by the A256, (the Ramsgate-Sandwich Road), so that sites such as Stonelees and, further south, Stonar Lake, are included. The town of Sandwich is *not* part of the Recording Area but the boundary follows the railway line to the south-east of the town until it crosses the North Stream, just north of Roaring Gutter. To the south of Roaring Gutter lies the main part of the Lydden Valley, which is bordered in the south by the Betteshanger Country Park, (previously Cottington Tip), and which forms the rather diffuse southern boundary of the Recording Area. The area to the south of the Chequers Inn, on the Ancient Highway on the way to Deal, is outside of the Area.

Having outlined the boundaries of the Recording Area above, I have, in practice, employed some degree of flexibility, (or even arbitrariness), regarding the recording of plant species. At times I have included species which have been recorded from just

outside the Area when I have thought these to be of special interest. (For example, in Pegwell Bay, I have included some records from the site of the former Hoverport and the beach which lies just to the north of it). I have, however, excluded any records from Ham Fen in TR35H, (though botanically it is one of the more interesting sites in Kent), and, with one or two exceptions, I have not included records from Betteshanger Country Park.

I have also used a combination of **tetrad numbers** and **actual place names** to identify locations where plants have been recorded. Almost all the places mentioned in the text can be identified from a study of the three maps below. Where the term, '**the Estate**' is used, this refers to **Sandwich Bay Estate**.

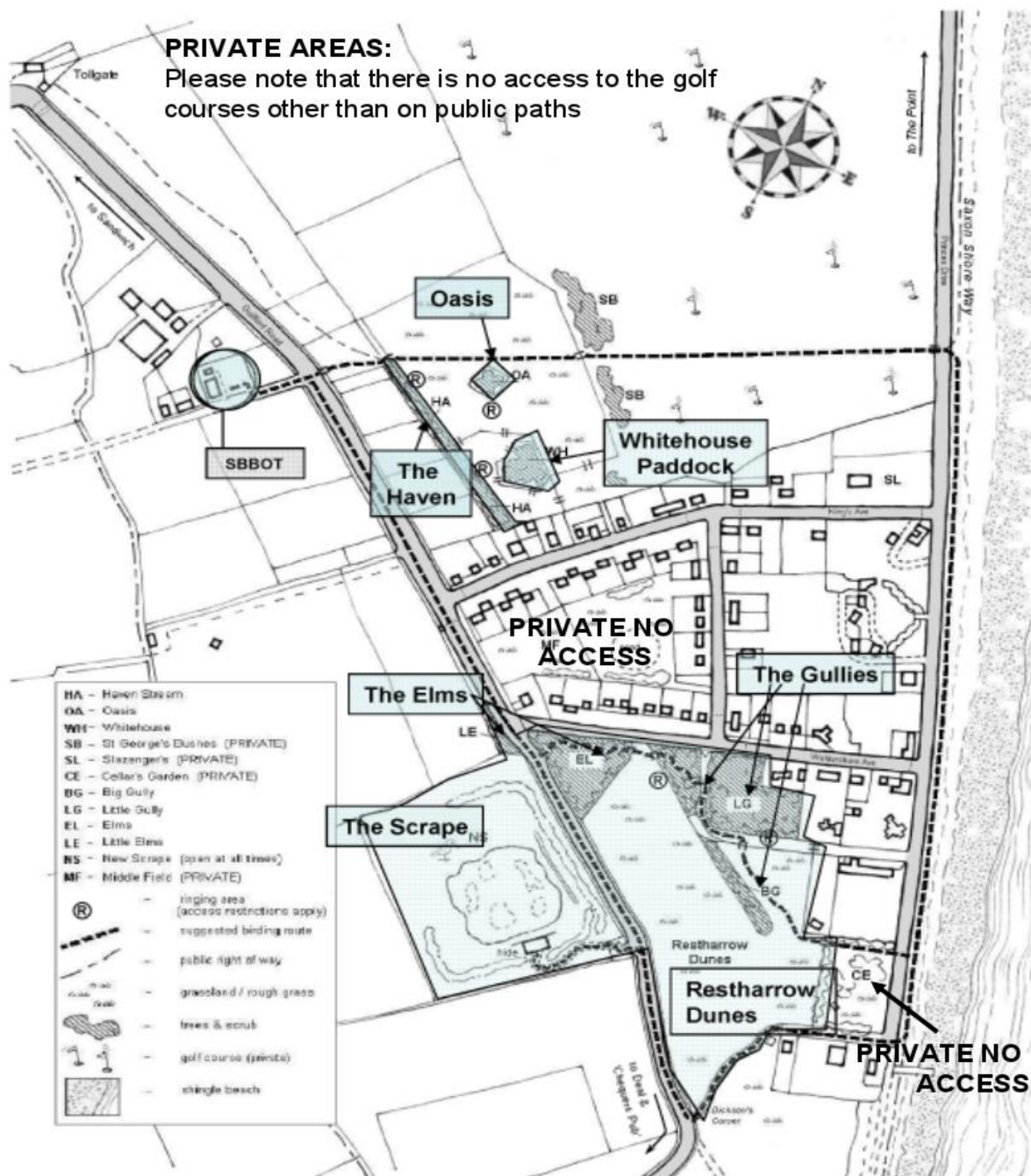
Sandwich Bay Bird Observatory Trust
Recording Area





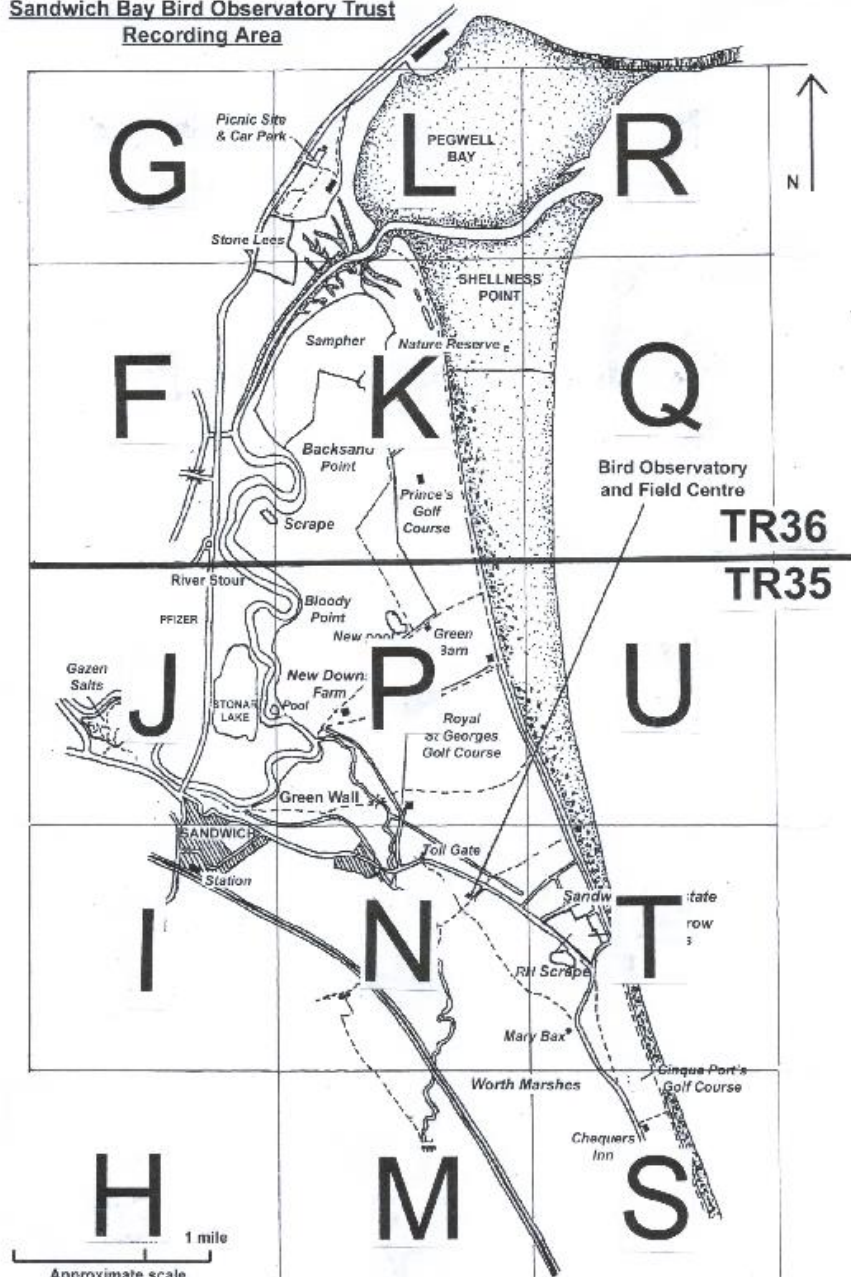
Sandwich Bay Bird Observatory Trust

Guilford Road, Sandwich Bay, Sandwich, Kent CT13 9DE Tel: (01304) 617341



Sandwich Bay Estate, showing main areas and localities mentioned in the text.

**Sandwich Bay Bird Observatory Trust
Recording Area**



Sandwich Bay Bird Observatory and Field Station Recording Area, showing tetrads used for recording purposes.

A tetrad is composed of 4 kilometre squares, so each side of a tetrad measures 2 kilometres. Tetrads G, L, R, F, K and Q in the north of the map all lie within TR36. All others are within TR35, so, for example, the Sandwich Bay Estate lies within TR35T, while the Picnic Site at Pegwell Bay lies within TR36L.

Criteria for inclusion of species:

In common with accepted practice, I have included:

- **native** wild plants
- **native plants which have been introduced into the area**, for example, in planting schemes, and which now appear to be **naturalised**.
- apparently **naturalised non-native** plants - species which have been introduced by human activity but which are now **self-sustaining in the wild**
- **casual plants**, i.e. species which are obviously **very short-lived escapes from cultivation** and which are not self-sustaining in the wild.

Plant order and nomenclature:

I have followed Stace, *New Flora of the British Isles*, Cambridge, Third Edition, 2010, in the areas of taxonomy, family names, species order and nomenclature.

In this most recent edition of his book, Stace used current understanding of plant taxonomy based on **DNA analysis**. For a casual botanist, this produced some interesting and surprising new plant linkages. For example, **Red** and **Yellow Bartsia**, (*Odontites vernus* and *Parentucella viscosa*) and **Yellow Rattle**, (*Rhinanthus minor*), were all included in the **Broomrape** family, (*Orobanchaceae*). There were many more such examples of family changes and this involved a considerable amount of work in drawing-up the present check-list, since most of the original sources which were used followed older taxonomic ordering.

In recent years, names of whole plant families have also been changed. For example, the group formerly known as the *Compositae* are now designated as *Asteraceae*. Where such changes have taken place, I have indicated them in *italics* just after each family name throughout the Systematic List. For some of the changed areas, I have also stated the English names of some of the plants that are now located there.

Explanation of terms:

Some technical terms may need clarification|:

Native: A species *which has always occurred naturally in the U.K.* (Note that this does not necessarily mean that the species is *native to Kent* - an example of this is the Scots Pine, (*Pinus sylvestris*).

Archaeophyte: An originally non-native species to the U.K. which has been introduced by human agency but which has been living successfully in the wild, (or 'naturalised'), *from before the year 1500 A.D.*

Neophyte: An originally non-native species to the U.K. which has been introduced by human agency but which has been naturalised *since the year 1500 A.D.*

Casual: any plant introduced by human agency to the U.K. *which has not established itself and thus has a short life-span in the wild.*

Conservation Status of plants from the Recording Area

The Recording Area contains a large number of plants which are of local, county-wide, national or, in some cases, international, interest because of their scarcity or conservation status. The species' descriptions indicate the status of these plants by use of one or more of the following codes. (Note that some of these categories appear to duplicate and / or overlap each other):

- **CITES**: Protected under the Convention on International Trade in Endangered Species
- **CR: rare** in the county. Recorded from three or fewer sites in the county since 1990 (Reference: KBRG / KRPR, 2012).
- **CS: scarce** in the county. Recorded from between four and ten sites in the county since 1990 (Reference KBRG / KRPR, 2012)
- **KRDB 1: Endangered** in Kent. (Reference: *Kent Red Data Book*, 2000): found in only 1-2 tetrads only in the county.
- **KRDB 2: Vulnerable** in Kent. Found in only 3-5 tetrads or a species which is in serious decline.
- **KRDB 3: Rare** in Kent. Found in only 6-10 tetrads.
- **NR: Nationally Rare**. Found in up to 15 hectads (10 km. squares) nationally.
- **NS: Nationally Scarce**. Found in between 16 to 100 hectads nationally.
- **RDB 1**: listed as '**Endangered**' in the National Red Data Book, (NRDB).
- **RDB 2**: listed as '**Vulnerable**' in the NRDB
- **RDB 3**: listed as '**Rare**' in the NRDB
- **RDBLRns**: listed as '**Nationally Scarce**' in the NRDB
- **RDBLRnt**: listed as '**Nationally near-threatened**' in the NRDB.
- **UKBAP**: listed in the **United Kingdom Biodiversity Action Plan**
- **WCA 8**: listed on **Schedule 8** of the Wildlife and Countryside Act 1981 (plants and fungi).

I have also *italicised* sections of most of the entries for particular species on the Systematic List, to emphasise issues **relating to their local status**. These might include such features as:

- **new records** for the Recording Area
- **last known records** for the species
- **sole records** for the species
- significant **changes in status**
- species with **very restricted distribution within the county of Kent**.

Where that status reflects the species' rarity, local distribution within the Recording Area, or length of time since the last recorded sighting, the entry is underlined

I have also used the following terms:

- **Common**: numerous and obvious in the area, or part of the area.
- **Widespread**: to be found in most parts of the Recording Area, though not necessarily in any numbers
- **Local**: restricted in range in the area, but may be found in several tetrads overall
- **Very local**: confined to just a small site, or collection of sites, within the area.
- **Infrequent** or **Intermittent**: suggesting that the species concerned may not be necessarily found from one year to the next.

Sources used and / or referred to in the text, (those sources actually quoted are shown in parentheses):

- **(MB)**: Mike Briggs (*pers. comm.*) Observatory member.
- **(SB)**: Sue Buckingham in her capacity as Botanical Recorder for the East Kent vice-county.
- **(KC)**: Ken Chapman, *An Ecological Study of a Dune and Salt-marsh Area at Sandwich Bay in East Kent* (unpublished undergraduate project) 1967 plus other more recent observations.
- **BD**: Bob Dean, Observatory member.
- **(PD)**: Peter Dean (*pers. comm.*) Written comments on the status and distribution of the *Orchidaceae* at Sandwich Bay.
- **(JvdD)**, van der Dol, John (*pers. comm.*) Written comments on the status and distribution of the *Orchidaceae* at Sandwich Bay.
- **Douthwaite, R.J. and Sanders, J.**, *The Stour Estuary – a study into the land-use patterns and its scientific importance*, 1967.
- **(RD)** Rebecca Downey, Assistant Warden, SBBOT, 2020-2021.
- **Dudman and Richards 1997**: Dudman, A. A. and Richards, A. J., *Dandelions of Great Britain and Ireland*, BSBI, London, 1997.

- **(EC)** Ecology Cooperative: botanical survey of the Lydden Valley RSPB land holdings, 2022
- **(PF)**, Pete Forrest, (*pers.comm.*) Written and verbal comments on draft of the current document.
- **(AFH)**, Alex Harrison, voluntary intern, SBBOT, 2026.
- **(IH)**, the late Ian Hodgson, Warden, SBBOT (2008-2017); (*pers.comm.*)
- **(ACBH)** the late Andrew Henderson, A.C.B., (Excerpt from) *A botanical and invertebrate survey of the Lydden Valley – Sandwich Bay areas*, 1976
- **(ACBH)** the late Andrew Henderson. *A survey of the invertebrate fauna and the flora of the Lower Stour Valley*, 1978.
- **(ACBH)** the late Andrew Henderson, *Biological Study of the Worth and Lydden Marshes*, (Privately published), 1982.
- **(ACBH)** the late Andrew Henderson, *Biological Survey of the Pastures and Dykes of the Sandwich-Deal area*, 1982.
- **(KBRG)**: Reports of field-meetings published on-line by the **Kent Botanical Recording Group**.
- **(KBRG / KRPR)**: On-line publications of the *Kent Rare Plant Register*.
- **(KRDB)**: Waite, A. (ed.) *The Kent Red Data Book*, Kent County Council, 2000
- **(KFC)**: Occasional records from proceedings of the **Kent Field Club** (taken from the KFC web-site).
- **(KWT, PF)**: Pete Forrest, *The Royal St. George's Golf Club Orchid Report 2006; Lizard Orchid, (Himantoglossum hircinum)*, Kent Wildlife Trust, 2006.
- **(Philp, 1982)**: Philp, E.G., *Atlas of the Kent Flora*, Kent Field Club, 1982.
- **(Philp, 2010)**: Philp, E.G., *New Atlas of the Kent Flora*, Kent Field Club, 2010.
- **(Preston, 1995)**: Preston, C.D., *Pondweeds of Great Britain and Ireland*, BSBI, London, 1995
- **(PSL, 2023)** Pan-species Listing Group, UK.
- **(FR / KWT)**: Francis Rose, Ph.D., M.B.E.,
- **(SBBO)**: Records accredited to SBBO derive from several sources:
 - a) the Observatory's archive of more than a **1000 A5 plant record cards** kept for the period between the late 1960's and mid-1990's.
 - b) *Systematic List of the Vascular Flora of the Sandwich Bay Area* by Dennis M. Batchelor, (undated, but from the mid-1980's, with numerous later hand-written amendments). A copy is kept in the Observatory archives.
 - c) summary records from SBBO **Annual Reports** and other casual records listed in the Observatory's '**Non-Avian Logs**'. These sources can prove of value but they are haphazard and unsystematic – in some years not appearing at all and when they do appear they often concentrate on purely phenological issues, (first and last dates), and / or the *Orchidaceae*.

- d) more recent, (2012 and 2013), **plant check-lists** drawn up by two Observatory members (Peter Dean and the late Eddie Turner) and mainly focussing on the area of Sandwich Bay Estate.
- e) Smithies, Alison, *Botanical survey of the Whitehouse Paddock*, SBBOT Annual Report 1995, pages 78-85.
- f) **(DCHW)**: Worsfold, D.C.H.W, *Notes on Orchids at Sandwich Bay in 2011*, SBBO Annual Report 2011, p114.-117.
- **Stace, C.**, *New Flora of the British Isles*, Third Edition, Cambridge University Press, 2010.
 - **(ET)** Turner, Eddie, (the late); (*pers.comm.*) Written and verbal comments on a draft copy of the current document, plus field observations.
 - **(Streeter, D., et al.)** *Collins Flower Guide*, Harper Collins, London, 2009.
 - **(CW)** Claire Ward (*pers. comm.*) Observatory member
 - **(HW)** Heather Willis (*pers.comm.*) Observatory member.
 - **(MW)** Mike Watts, Observatory member
 - **(SZW)** Steffan Walton, Observatory Warden.

Dedications:

I would like to dedicate this work, small though it is in comparison to *their* achievements, to the memory of three great Kentish naturalists, all of whom I had the privilege of knowing, the late Dennis Harle, the late Batchelor and the late Eric Philp. Anyone who has any interest in, or concern for, the county's wildlife and diminishing wild places is indebted to all of them.

Thanks:

My thanks go to all those people at Sandwich Bay Bird Observatory, and beyond, who offered general advice, support and guidance while I was putting this list together and who also commented either on the whole text or selected aspects of it when it was at draft stage. Needless to say, any errors and omissions in this current work are mine, not theirs!

In particular, I would like to thank: Sue Buckingham; Peter Dean; John van der Dol; John Hollyer; Patrick Old and the late Eddie Turner. My thanks, also, to the late Andrew Henderson for lending me a copy of his detailed paper on the Worth Marshes-Lyddon Valley flora from the 1980's and to personnel at the Kent and Medway Biological Records Centre in Faversham for sending plant lists related to the Sandwich Bay area.

Ken Chapman, April 2014

Comments on up-dates in 2020, 2024 and 2026.

The publication of this Flora in the Spring of 2014 stimulated a pleasing response. Interest was generated amongst many members of the Observatory and in some cases this encouraged the keeping of a special watch for unusual plants and also in the submission of past records, even if, in some cases, these were of an anecdotal kind.

A considerable amount of field-work by various people has resulted in the finding of some new species for the Recording Area and the re-discovery of others after long intervals in some cases. In addition, much new information has been revealed about the distribution and frequency of a range of plant species in the area and this work has continued to the present day, with new observers becoming involved in submitting their records. The present version of the Flora was updated in Autumn 2020, again in the winter of 2023-2024 and most recently in the summer of 2026. A decision was also taken in 2026 to put the whole document on-line with a link from the up-graded Bird Observatory website.

Several improvements were made to the format of the document in 2020, including the addition of page numbering, indexes and contents pages. My thanks are due to Becky Downey, then Assistant Warden at the Bird Observatory, for her work on this. Since then, work has continued in the recording of the flora. New habitats are being created by semi-natural coastal processes and conservation and other ground works going on in the area. These include conservation management work done by the Observatory Trust at Restharrow Scrape and other land which it owns and which have had some impact on the flora and by the RSPB on their land on the Worth Marshes.

Complementing the written Flora, a photographic database of the plants of the Sandwich Bay Recording Area was largely completed by January 2016, with later additions. It comprises photographs of virtually all the plant species that have ever been recorded at the Bay. Most of these images were collected from the Spring and Summer of 2014 onwards by myself, while other photos have been donated by members, or were culled from existing images on the Observatory's computers. I decided, wherever they were available, to use plant photographs taken from within the Recording Area but in some cases have had to supplement the collection from other sources as well.

There continues to be work needed in visiting areas that do not get visited very often; in 'chasing-up' species that have not been reported for many years to see whether they still survive, and in further extending the photographic record.

Ken Chapman, Summer 2026

SYSTEMATIC LIST

Note:

- The numbering system for the major plant families follows that given in Stace, (2010). Obviously, not all the U.K. plant families are found within the Sandwich Bay area, hence the gaps in the sequence.
- The decimal numbers given for each plant species are entirely my addition, to make referencing more straightforward.
- For the sake of simplicity, I have not divided the families into any of their sub-families.
- Each entry gives (in italics) some indication of the past and current status of the species. Where that status reflects the species' rarity, local distribution within the Recording Area, or length of time since the last recorded sighting, the entry is underlined.

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4. OPHIOGLOSSACEAE (Adder's Tongues)

4.1 Adder's Tongue (*Ophioglossum vulgatum* L.) Native. CS. Locally-distributed in the county. In the Recording Area, although it can be very inconspicuous, it is well-known from several sites on the Estate; in dune slacks on Royal St. Georges Golf Course: in the Lydden Valley and at Stonelees (SBBO; Philp 2010). About 50 plants appeared in the White House paddock on the Estate in 2017 following scrub clearance the previous winter (SB).

5. EUISETACEAE (Horsetails)

5.1 Water Horsetail (*Equisetum fluvatile* L.) Native. *Locally common in the area.* Found in freshwater ponds and ditches. Recorded as common on some streams on the Worth Marshes in 1969 and noted in the Haven Stream on Sandwich Bay Estate in 1985, (SBBO). Only recorded by Philp (2010) from two squares in our area, TR36F, near Richborough Cut and at TR35M in the Lydden Valley area.

5.2 Field Horsetail (*Equisetum arvense* L.) Native. *A widespread and common species found throughout the Recording Area* on dune grassland, hedge banks and roadsides (SBBO).

5.3 Marsh Horsetail (*Equisetum palustre* L.) Native. *Widespread in the Recording Area* in marshland, damp grassland and dune slacks, for example, on the Golf Courses (SBBO).

5.4 Great Horsetail (*Equisetum telmateia* L.) Native. *Very local in the Recording Area* and only found in the Lydden Valley, but it is also known from the Sandwich Town area (Philp 2010).

9. SALVINACEAE (Water Ferns)

9.1 Water Fern (*Azolla filiculoides* Lam.) Neophyte. This is an introduced species originating from tropical America. It *occurs widely but often intermittently* in fresh water ponds and ditches across the Recording Area where it can out-compete other fresh-water species (Philp 2010; SBBO).

11. DENNSTAEDTIACEAE (Brackens)

11.1 Bracken (*Pteridium aquilinum* L.) Native. Rather surprisingly, it appears that this species is known from relatively few sites in the Recording Area. It occurs on Sandwich Bay Estate, where it grows in several fields and paddocks on old dune areas and where it has to be controlled in order to maintain habitat for other, more desirable, species (SBBO). It has also been found, in the past at least, at the St. George's Golf Course Plantation, by the Green Barn and at Mary Bax's. It does not like alkaline soils and it is possible that these limited areas of old dune have been sufficiently leached to become acidic enough for the plant to become established (SB, 2014).

13. ASPLENIACEAE (Spleenworts)

13.1 Hart's Tongue (*Asplenium scolopendrium* L.) Native. Apparently only recorded from one general locality in the Recording Area in TR35P, centred on New Downs Farm. In the 1980's it was found growing at the adjacent Vigo Sluice-Archer's Low area (SBBO) and in the Sandwich Town tetrad (TR35J) in 2006 (SB 2014).

18. DRYOPTERIDACEAE (Buckler Ferns)

18.1 Male Fern (*Dryopteris felix-mas* L.) Schott. Native. Very local in the Recording Area. Mainly an inland species in Kent but it has been recorded in TR35P in our area, in the New Downs Farm tetrad; in the margins of the Lydden Valley and in the Sandwich Town area (Philp 2010). More recently, it was found in the Middle Field on the Estate (PSL 2023).

20. PINACEAE (Pines)

20.1 Norway Spruce (*Picea abies* L.) Neophyte. Found at only one site. Reported in 2012 in the Elms area of the Sandwich Bay Estate (SBBO) as a result of deliberate planting of mixed species for habitat creation.

20.2 European Larch (*Larix decidua* Mill) Neophyte. Very local (and probably extinct) in the Recording Area. Recorded from one or two planted in gardens along Kings Avenue on the Estate in 1970 (SBBO) but it appears not to have spread and the *original trees have since died out*.

20.3 Scots Pine (*Pinus sylvestris* L.) Native. An introduced species in Kent, which has been *planted at various sites within the Recording Area*, (e.g. on Princes' Golf Club and around Sandwich Bay Estate), for amenity and wind-break purposes. As these trees have matured, they have made a major impact on the landscape of the area (SBBO).

20.4 Corsican Pine (*Pinus nigra* var. *maritima* Ait). Neophyte. Local in the Recording Area. Introduced as a wind-break species on Princes Golf Course in 1957 and now *well-established and self-seeding* (SBBO).

22. TAXACEAE (Yews)

22.1 Yew (*Taxus baccata* L.) Two apparently bird-sown seedlings were found in the Middle Field on the Estate in January 2022. A new record for the area of 'wild' plants although planted specimens are found in the nearby Elms plantation.

23. CUPRESSACEAE (Junipers)

Formerly Taxodiaceae.

23.1 Lawson's Cypress (*Chaemaecyparis lawsoniana* A. Murray bis) Neophyte. Planted in several gardens on the Estate in 1970 (SBBO) but no seedlings have apparently been noted, so it is not naturalising itself in the area. The same applies to **Leyland Cypress** (*X Cupressocyparis leylandii*) around the Estate.

25. NYMPHAEACEAE (Water Lilies)

25.1 White Water Lily (*Nymphaea alba* L.) Native. Recorded on several deep water ditches on the Worth Marshes (Philp 1982; SBBO), but it was not found anywhere in the Recording Area until three plants were recorded from the pond in the Middle Field on the Estate, 20.06.2026. (AFH) As always with this species, but , especially bearing in mind the particular location of the Middle Field, human agency in introducing the plant is very likely.

25.2 Yellow Water Lily (*Nuphar lutea* L.):Native. Local in the Recording Area. This distinctive species needs clean fresh water and it is confined in the Recording Area to parts of the Lydden Valley and the North Stream (SBBO; SB 2014).

28. LAURACEAE (Bays)

28.1 Bay (*Laurus nobilis* L.) Neophyte. An introduced species which was *recorded in the area for the first time in 2012*. This is a specimen growing in the Middle Field on Sandwich Bay Estate which is probably a self-sown seedling, (SBBO).

29. CERATOPHYLLACEAE (Hornworts)

29.1 Rigid Hornwort (*Cerastophyllum demersum* L.) Native. This species is *common in most areas of the marshes within the Recording Area*, growing submerged under slow-flowing water in ditches and pools (Philp 2010; SBBO).

30. PAPAVERACEAE (Poppies)

Formerly Fumariaceae. Includes poppies; fumitories and corydalis.

30.1 Oriental Poppy (*Papaver pseudoorientale* Fedde) Neophyte. Very infrequent. This species was recorded as a self-sown garden escape on Sandwich Bay Estate in Philp (2010).

30.2 Opium Poppy (*Papaver somniferum* L.) Archaeophyte. A species which *commonly occurs* on disturbed ground, possibly as a garden escape, for example on Sandwich Bay Estate and in the Lydden Valley-Worth areas. It is also frequent on shingle on the upper beach (Philp 2010; SBBO).

30.3 Common Poppy (*Papaver rhoeas* L.) Archaeophyte. Recorded as, '*widespread and erratically common*' throughout the area, especially on disturbed ground, field-margins etc. (SBBO).

30.4 Long-headed Poppy (*Papaver dubium* L.) Archaeophyte. **CS.** *Widespread.* Recorded on disturbed ground in the Observatory, Sandwich Bay Estate and the northern Cinque Ports Golf Course areas (SBBO; Philp 2010)

30.5 Yellow-juiced Poppy (*Papaver lecoqii* Lamotte). Archaeophyte. *Uncommon and local in the area.* A species which has been recorded around the Estate at least as far back as 1944; around the Gullies area in 1987 and in rough grassland at New Downs-Princes Golf Course in the same year. It does not appear in Philp (2010) for the Estate area, however.

30.6 Rough Poppy (*Papaver hybridum* L.) Archaeophyte. *Scarce and infrequent in the Recording Area.* This species has been recorded from disturbed ground along the Ancient Highway in the 1980's, on New Downs near the KWT Nature Reserve in the 1990's and 'along the foreshore' in 2000 (SBBO). More recently it has appeared in the Lydden Valley. It appears to be *in general decline in the county* (Philp 2010).

30.7 Prickly Poppy (*Papaver argemone* L.) Archaeophyte. **CS; RDB 2.** This introduced species was once described as 'regular on roadside verges at Sandwich Bay' (SBBO), at least up until the mid-1990's. It *does not appear anywhere in the Recording Area* in Philp (2010) where it is described as *in serious decline in the county.*

30.8 Yellow-horned Poppy (*Glaucium flavum* Crantz). Native. **CS.** *A familiar plant in summer along the foreshore, especially from the Estate northwards, favouring the more shingly areas. An orange or red-flowered variant appeared as naturalised on a very restricted section of the upper beach in front of the Estate in 1998 and became locally dominant there by 2001 (SBBO; SB 2014)).* It seems likely that this variant resulted from specimens planted in an adjacent garden (PD 2014).

30.9 Yellow Corydalis (*Pseudofumaria lutea* L.) Neophyte. *Very local in the area.* A garden escape which was recorded as naturalised in several sites on the Estate between 1978 and 1987 (SBBO) *but apparently not since then.*

30.10 Common Ramping-fumitory (*Fumaria muralis* Sond). Native. *Very scarce and local in the Recording Area.* Recorded from the Estate and the Worth Marshes- Lydden Valley areas. It is a plant of the edges of arable fields, hedgerows and gardens (SBBO).

30.11 Common Fumitory (*Fumaria officinalis* L.). Native. *A common plant of arable fields, gardens and other disturbed ground. It has been recorded from Sandwich Bay Estate and the Worth Marshes-Lydden Valley and from elsewhere within the Recording Area (SBBO).*

30.12 Dense-flowered Fumitory (*Fumaria densiflora* DC). Native. *Scarce and infrequent in the Recording Area.* This species of arable fields is shown in the

first edition of Philp (1982) as occurring in tetrad TR35T, on the Estate, but it does not appear in the 2010 edition.

31. BERBERIDACEAE (Barberries)

31.1 Oregon Grape (*Mahonia aquifolium* Pursh). Neophyte. Probably present at only one site in the area. An introduced species which is commonly grown in, and escapes from, gardens. Clumps of this persistent and invasive alien species have established themselves within the high-value botanical area of the Little Gully on Sandwich Bay Estate since at least 1969 but are being removed by conservation management teams. It was previously found at other derelict sites on the Estate and may well still be present there. It was recorded from the White House area in 2020 (SBBO / SZW).

32. RANUNCULACEAE (Buttercups)

Includes hellebores; clematis; Lesser Celandine etc.

32.1 Marsh Marigold (*Caltha palustris* L.) Native. Very local in the Recording Area. Recorded regularly from sites on the Worth Marshes, especially the North Stream, up until the mid-1990's but declining and being threatened by dredging and bank clearance (SBBO). Not recorded from anywhere in the area by Philp (2010), but *still present in the Worth area from 2014 onwards*, close to the Worth Track (SBBO) and in the Middle Field on the Estate in April 2026 (SBBO).

32.2 Stinking Hellebore (*Helleborus foetida* L.) Probably native. **CS.** Very local, with a recent record from only one site in the Recording Area. Present in the Elms on the Estate from at least 2012 and in flower in 2014 (PD) but this plant is 'frequently grown in gardens where it readily sets seed and 'escapes' (Philp, 2010).

32.3 Monk's Hood (*Aconitum napellus* L.) Native in parts of the U.K. Very scarce, local and intermittent in appearance within the Recording Area. A plant was found growing on the Cinque Ports Golf Club dump at Dickson's Corner in June 2022, close to specimens of Thorn Apple (*Datura stramonium*) and assorted Oriental / Opium Poppies (*Papaver spp.*). All doubtless garden escapes and a result of the recently disturbed soil conditions.

32.4 Larkspur (*Consolida ajacis* L) Neophyte. An introduced species, usually as a garden escape. The only record for the Recording Area relates to five flowering spikes in the Slazenger's and nearby upper beach area in July 1997 (SBBO).

32.5 Balkan Anemone (*Anemone blanda* Schott and Kotschy). Introduced / naturalised. At least ten flowering specimens of this familiar Spring garden flower were found growing in short turf at the top of the seawall on the seaward side of 'Sandilands' on the Estate on 3rd April 2016. It grows from corms which had presumably been discarded from the garden of that house but in subsequent years

there has been no sign that the plants have becomes established and naturalised there, in what must be a very harsh environment for the species.

32.6 Traveller's Joy (*Clematis vitalba* L.) Native. Local in the Recording Area. Reported from scattered sites including Mary Bax's and near the Estate Toll-gate at least until the 1980's. Only reliably now found at Richborough and Pegwell Bay where it grows on old or derelict buildings and scrambles up the cliffs; in hedgerows on the inland sides of the marshes, such as on the Worth Track, (Philp 2010; SBBO.) and also in 2014 found growing on the upper beach at the Estate (KC).

32.7 Virgin's-bower (*Clematis flammula* L.) Neophyte. **CR.** Only found at one site in the Recording Area. Originally from the Mediterranean, this species has been naturalised on the St. George's Golf Club fixed dune grassland since at least 1927 (Philp 2010; SBBO). This is the only known site for this species in the county.

32.8 Meadow Buttercup (*Ranunculus acris* L.). Native. *Widespread and common throughout the Recording Area* on pastures and damp meadow land, roadside verges and similar areas (SBBO; Philp 2010).

32.9 Creeping Buttercup (*Ranunculus repens* L.) Native. *Common all through the Recording Area* on damper meadows and pasture land with heavier soils (SBBO; Philp 2010)

32.10 Bulbous Buttercup (*Ranunculus bulbosus* L.) Native. Found *throughout the Recording Area*, preferring rather better-drained grassland and pasture areas (SBBO; Philp 2010).

32.11 Hairy Buttercup (*Ranunculus sardous* Crantz) Native. *Local in the area*. Mainly recorded from the southern end of the Royal St George's Golf Course where it grows in damp, grazed pasture areas. Past records have included sites at Mary Bax's, along the Ancient Highway and on Worth Marshes (SBBO).

32.12 Small-flowered Buttercup (*Ranunculus parviflorus* L.) Native. **CR.** A plant of dry areas where there has been soil disturbance, such as comes from rabbit grazing. Philp (2010), describes it as being rare in the county, with only four scattered sites listed, but in 2012 it '*appeared in profusion at Fowlmead on the colliery shale ... and I can't help thinking it might find its way to the Sandwich area*' (SB 2014).

32.13 Celery-leaved Buttercup (*Ranunculus sceleratus* L.) Native. *Widespread throughout the marshland areas*, especially where cattle are grazed and have disturbed the margins of ditches and pools (Philp, 2010; SBBO).

32.14 Greater Spearwort (*Ranunculus lingua* L.) Native. *Very local in the area*. This species has only been recorded from the edges of pools and ditches in the Lydden Valley and also, in the past, from the Haven Stream on the Estate

(Philp, 2010; SBBO). It was recorded from just one ditch on Worth Minnis in 2022 (EC 2022)

32.15 Lesser Spearwort (*Ranunculus flammula* L.) Native. *A local and uncommon species.* Reported in 2012 from Restharrow Scrape (SB; SBBO). This is apparently *a new site for this species in the Recording Area*, where it was only previously reported from the Ham Fen, Cottington and Roaring Gutter areas in Philp (2010).

32.16 Ivy-leaved Crowfoot (*Ranunculus hederaceus* L.) Native. **CR.** Described as 'quite common' in the Haven Stream (TR35N) in 1982, and again there and near St. George's Golf Clubhouse in 1985 (SBBO) but it *does not appear in Philp, (2010) anywhere in East Kent to the east of Canterbury.* There are *no other records for this species in the area*, so it is possible that the records from the 1980's were as a result of misidentification (SB 2014).

32.17 Brackish Water-crowfoot (*Ranunculus baudotii* Godr.) Native. A species of coastal pools and ditches which has been *recorded in a range of localities in the Recording Area*, from Worth Marshes to the KWT Nature Reserve area of Shellness Point. In 2012 it was also identified in the Restharrow Scrape on Sandwich Bay Estate (SBBO).

32.18 Thread-leaved Water-crowfoot (*Ranunculus trichophyllus* L.) Native. *Recorded sporadically* from 1969 to 1994 in our area from scattered sites including ditches on New Downs, a pond in the Sampher and in the Middle Field of the Estate, (SBBO), but Philp (2010) also shows it from the northern end of the Lydden Valley.

32.19 Common Water-crowfoot (*Ranunculus aquatilis* L.). Native. Very local in the Area. This species is, in fact, 'far from being common in Kent' (Philp 2010) and, like the previous species, in our area has only been recorded from the northern end of the Lydden Valley (Philp 2010).

32.20 Stream Water-crowfoot (*Ranunculus penicillatus* ssp. *pseudofluitans* Dumort). Native. Very local in the Area with just one old record. Recorded for TR35T near Mary Bax's by Philp (1982) but it was *not shown as present* by Philp (2010). Tetrad TR35T has just a couple of drainage ditches near to Mary Bax's and it is assumed that the plant was found there. Needs confirmation.

32.21 Fan-leaved Water-crowfoot (*Ranunculus circinatus* Sibth.) Native. Local in the Recording Area. Found in the North Stream and Lydden Valley area, preferring deeper water in the ditches and drainage channels (SBBO).

32.22 Lesser Celandine (*Ficaria verna* L.) Native. Local in the area. This well-known and familiar species is found in several places on Sandwich Bay Estate and along the sides of the North Stream but otherwise it is confined to hedgerows and

wooded areas towards the inland fringes of the Recording Area (SBBO; Philp 2010). Also, a single clump by the roadside at The Chequers, March 2021 (KC)

32.23 Columbine (*Aquilegia vulgaris* L.) Native. Recorded as a casual garden escape in the Recording Area at two sites on the Estate in 1970 and between Stonar Lake and the River Stour in 1985. Not reported for the Recording Area in either of the two surveys by Philp (1982 and 2010) but a few plants were found growing in a hedgerow at the edge of Worth village in 2014 (KC).

34. BUXACEAE (Boxes)

34.1 Box (*Buxus sempervirens* L.) Neophyte. Planted in gardens on the Estate prior to the 1980's, and persisting there in derelict gardens and near the Prince's Golf Course plantation (SBBO) but *not known to have spread from those sites in subsequent years*.

37. GROSSULARIACEAE (Gooseberries)

37.1 Flowering Currant (*Ribes sanguineum* Pursh). Neophyte. A single plant found in a hedgerow at New Downs New Pool in April 2021 (SZW). A familiar garden shrub which had doubtless been deliberately planted.

38. SAXIFRAGACEAE (Saxifrages)

38.1 Rue-leaved Saxifrage (*Saxifraga tridactylites* L.) Native. Reported as *common* on fixed dunes and shingle of the Estate and golf-courses (SBBO) and recorded in Philp (2010), from sand-dunes in TR35P, 35U, 35T and from TR36K.

39. CRASSULACEAE (Stonecrops)

39.1 Mossy Stonecrop (*Crassula tillaea* Lest.-Gart.) Native. **CR.** Probably extinct in the Recording Area. 'Recorded from Sandwich Bay, circa.1900, but there are no subsequent records for the county' (Philp 2010) but SBBO recorded it as present in 1984 - 'erratic on bare sand patches along the Ancient Highway' (SBBO). Needs confirmation.

39.2 New Zealand Pygmyweed (*Crassula helmsii* Kirk.Cockayne) Neophyte. Very local in the Recording Area but abundant where it does occur. This highly-invasive species was first recorded in Kent in 1960 and recorded *from one tetrad in the area*, by the North Stream to the south of the Observatory by 2010 (Philp 2010). It has also been found since then in the Haven Stream on the Estate, in the 'dipping pond' at the Observatory, the Dragonfly Pond, abundantly at the Restharrow Scrape (SBBO) and also on the RSPB Worth Marshes Reserve, (KBRG, August 2023).

39.3 Reflexed Stonecrop (*Sedum rupestre* L.) Neophyte. *Fairly widespread in the area*. An inhabitant of waste ground and similar sites, this species was first

recorded in the U.K. in the 17th Century. It has been *found in several areas* from Princes Golf Club, in the White House paddock, in the Observatory area and towards the Cinque Ports Golf Course (SBBO; Philp 2010).

39.4 Biting Stonecrop (*Sedum acre* L.) Native. A *common and familiar* species all through the short grass areas of the dunes and nearby areas (SBBO).

39.5 White Stonecrop (*Sedum album* L.) Archaeophyte. An introduction which has been recorded from *sand-dune and shingle habitats* in the Sandwich Bay Estate (SBBO; Philp, 2010) and at the former Hoverport site at Pegwell Bay in 2014 (KC).

39.6 English Stonecrop (*Sedum anglicum* Huds.) Native. **CS.** Described as 'common' in such sites as the Cellars, Little Gully and beach road areas of the Estate *from at least the 1970's until the present day* and also on the 100-acre section of the KWT Reserve in the mid-1980's (SBBO). Not recorded by Philp, (2010) for anywhere in the area and where its distribution in the county is shown as being confined to the Dungeness area. *Needs confirmation.*

39.7 Thick-leaved Stonecrop (*Sedum dasyphyllum* L.) Neophyte. *Probably no longer occurs in the area.* A casual introduction which was found growing as a garden discard in the alley-way between the White House paddock and Kings Road in 1987 (SBBO) although Philp (2010) records it as last being seen in the county in 1860. *It is unlikely to be still present* due to mowing activities but should be looked for.

40. HALORAGACEAE (Water-milfoils)

40.1 Whorled Water-milfoil (*Myriophyllum verticillatum* L.) Native. **RDB 2; KRDB 3. CR.** Very local in the Area. Recorded from the Lydden Valley (TR35M) in Philp (1982) and recorded as still present in Philp (2010) at one of its two Kent sites. Confirmation of its continued presence in that area came from findings in two ditches on RSPB land in 2022 (EC 2022)

40.2 Spiked Water- milfoil (*Myriophyllum spicatum* L.) Native. A plant of streams and ponds, this species was described as *fairly common* in ditches on Worth Marshes in 1980 (SBBO) and was still present there at the time of Philp (2010). More recently, it was also found in the pond in the Middle Field on the Estate, (SBBO 2023).

41. VITACEAE (Grape-vines)

41.1 Boston Ivy (*Parthenocissus tricuspidata* Siebold and Zuch.) Neophyte. **CR.** Found at just one site in the Recording Area. The species was recorded in Philp (2010) as growing over a demolished building on the Estate (TR35T) apparently the only site noted in Kent.

42. FABACEAE (Peas)

Formerly Leguminosae. Includes vetches; trefoils; restharrow; melilot; medick; clovers; lupins; broom; gorse.

42.1 Goat's Rue (*Galega officinalis* L.) Neophyte. Scarce and infrequent in the Recording Area. Recorded in the Pegwell Bay area in Philp (1982); between the old St. George's Golf Club House and New Downs Farm in 1990, near The Chequers in 1999 (SBBO); in the Stonelees area in Philp (2010) and in some abundance along roadside verges of the A256 at Stonar Cut in 2014 (KC).

42.2 Sainfoin (*Onobrychis viciifolia* Scop.) Native. Neither of the Philp surveys in 1982 or 2010 list this species for the Recording Area. A record of one plant growing on a shingle bank near the Chequers Inn in 1979 (SBBO), remained the only record for the area until 'many' were found growing in a field on New Downs on 29.05.2026, (AFH).

42.3 Kidney Vetch (*Anthyllis vulneraria* L.) Native. **UKBAP 3.** A rare plant in the Recording Area, with reports from TR36L (Pegwell Bay), in Philp (1982); from the sea-wall near the Chequers Inn in the 1980's and from tetrad TR35S in Philp (2010). However, it was found *growing in some abundance* on the former Hoverport site at Pegwell Bay in 2014 (KC). A chalk-grassland species which is *in decline across the county*.

42.4 Narrow-leaved Bird's-foot Trefoil (*Lotus tenuis* Walds. & Kit.) Native. A local species of sea-walls, dry grassland and meadows, which occurs in *suitable habitats within the Recording Area* (SBBO; Philp 2010).

42.5 Common Bird's-foot Trefoil (*Lotus corniculatus* L.) Native. *Common throughout the area* in all types of grassland (SBBO).

42.6 Greater Bird's-foot Trefoil (*Lotus pedunculatus* Cav.) Native. *Widespread throughout the area*, preferring slightly damper grassland areas and wet meadows (Philp 2010).

42.7 Dragon's Teeth (*Tetragonolobus maritimus* L. Neophyte. **CS.** Only one record. Naturalised on parts of Sheppey but apparently *nowhere else in Kent except for a record* in Philp (2010) for Sandwich Bay, in TR35P.

42.8 Bird's Foot (*Ornithopus perpusillus* L.) Native. Only five records. A report of this plant from the Mary Bax's-Dickson's Corner area in 1972 (KC / SBBO) and again from the same area in Philp (2010) were the only records of this *scarce and infrequent species* until the species was confirmed from disturbed ground on exactly the same site in May 2020 (SB) and from two further sites on the Royal Cinque Ports Golf Course near The Chequers in April 2022 (SB).

42.9 Horseshoe Vetch (*Hippocrepis comosa* L.) Native. Scarce and infrequent in the area. A plant of short grassland, such as on the chalk, but it has been recorded

from the Sandwich Bay Recording Area, with a record from the Estate in Philp (1982), and from the edge of the Sampher in 1995 (SBBO).

42.10 Tufted Vetch (*Vicia cracca* L.) Native. A *common plant throughout the Recording Area* in rough grassy areas, for example on the KWT Reserve and along the banks of the River Stour (Philp 1982 and 2010; SBBO). White-flowered variants occur from time to time.

42.11 Hairy Tare (*Vicia hirsuta* L.) Native. Found *throughout the area* in locations such as the golf course roughs, the 100-acre field of the KWT Reserve and on the Estate (SBBO).

42.12 Smooth Tare (*Vicia tetrasperma* L.) Native. *Locally common* in such areas as the rough grassland areas of the golf courses, in the KWT Reserve and around the Estate (SBBO).

42.13 Bush Vetch (*Vicia sepium* L.) Native. A plant of woods and hedgerows. Philp (1982 and 2010) records it only from the Estate tetrad, (TR35N and adjacent areas), but there were no definite records in the SBBO files apart from a statement that it is a species of 'rough grassland and waste corners of the Estate, farms and golf courses' until two plants were found on the Worth Track at TR 350569 on 12.04.2026 (AFH).

42.14 Common Vetch (*Vicia sativa* L. ssp. *segetalis*). Neophyte. Occurs *throughout the Recording Area* in rough grazing areas, banks by roadsides and golf course roughs (SBBO).

42.15 Narrow-leaved Vetch (*Vicia sativa* L. ssp. *nigra*) Native. Philp (2010) records this subspecies growing on *coastal sand-dunes in the Recording Area* in tetrads TR35P, U, N and S. It also occurs in suitable areas around the Estate (SBBO).

42.16 Common Fodder Vetch (*Vicia sativa* ssp. *sativa*). Neophyte. Only scattered records from the area, 'usually as an escape from cultivation' (Philp 2010).

42.17 Spring Vetch (*Vicia lathyroides* L.) Native. **CS**. This species of dry, short grassland on coastal sand-dunes and stabilised shingle-beaches only occurs at two Kentish sites, in the Dungeness area and at Sandwich Bay (Philp 1982 and 2010; SBBO).

42.18 Sea Pea (*Lathyrus japonicus* ssp. *maritimus* Willd.) Native. **NS; KRDB 3. CR**. Scarce and infrequent in the area. Recorded from the upper shoreline from the Estate southwards towards Deal and also occasionally northwards along the Princes Golf Club upper beach (Philp 1982 and 2010; SBBO).

42.19 Bitter Vetch (*Lathyrus linifolius* Reichard.) Native. A sole record of this species, described as *L. montanus*, appears in the SBBO records from a flowering plant found in the Sampher area in June 1986 (SBBO).

42.20 Meadow Vetchling (*Lathyrus pratensis* L.) Native. *Recorded as common and widespread* in rough grassy areas within the Recording Area in both Philp (1982) and Philp (2010) and also in SBBO record files.

42.21 Broad-leaved Everlasting Pea (*Lathyrus latifolia* L.) Neophyte. Recorded occasionally at sites on the Estate in the 1970's and 1980's (SBBO) and is shown from TR36L in Philp (2010). It was also found in the Pegwell Country Park on 24.06.21 (KC)

42.22 Grass Vetchling (*Lathyrus nissolia* L.) Native. Occurs *throughout the Recording Area* especially on rough grassland of the fixed dunes (SBBO).

42.23 Yellow Vetchling (*Lathyrus aphaca* L.) Native. **NS. CS.** Possibly no longer occurs. Recorded as 'common' in Stonelees in 1970 and in various localities around the Estate in the 1980's (SBBO) but it was not recorded anywhere in the area by Philp (2010) and may well have vanished from the Recording Area.

42.24 Spiny Restharrow (*Ononis spinosa* L.) Native. Local in the Recording Area. Recorded especially from the sea-walls of the River Stour downstream from Sandwich, though occasionally elsewhere (SBBO). Much less common than the following species.

42.25 Common Restharrow (*Ononis repens* L.) Native. A *widespread species* on the coastal sand-dunes and adjacent areas throughout the Recording Area, and also on the banks of the River Stour and in the Sampher (Philp 1982 and Philp 2010; SBBO).

42.26 Tall Melilot (*Melilotus altissimus* Thuill.) Archaeophyte. *Widespread in the area*. Recorded from the dunes of Princes Golf Club, northwards to the KWT Reserve and on the Estate, the Cinque Ports Golf Club foreshore and in Stonelees. (Philp 1982 and 2010; SBBO).

42.27 White Melilot (*Melilotus alba* Medik.) Neophyte. Recorded from rough ground around the mouth of the Stour, where it *sometimes grows in abundance*, and also from other sites on the upper beach as far south as the Estate and also on Worth Marshes. (Philp 1982 and 2010; SBBO).

42.28 Ribbed or Common Melilot (*Melilotus officinalis* L.) Neophyte. Grows, *sometimes abundantly*, along the St. George's dunes and north towards the river-mouth. It has also been recorded on the Estate. (Philp 1982 and 2010; SBBO).

42.29 Small Melilot (*Melilotus indicus* L.) Neophyte. **CS.** Local in the Recording Area. A plant which has been recorded from the Estate and the beach to the north, but also along the Worth track and near Mary Bax's. (Philp 1982 and 2010; SBBO).

42.30 Fenugreek (*Trigonella foenum-graecum* L.) Neophyte. **CR.** *Very scarce in the area*. Not recorded for the area in either Philp (1982) or Philp (2010), but SBBO reported it from short, dry turf on roadsides from several sites around the Estate in 1983. Needs confirmation.

42.31 Black Medick (*Medicago lupulina* L.) Native. *A common plant* of dry grassland areas throughout the Recording Area, including several sites on the Estate (Philp 1982 and 2010; SBBO).

42.32 Sickie Medick (*Medicago sativa* L. ssp. *falcata*). Neophyte. **CR.** *A rare plant* recorded from the KWT Reserve in 1972 (SBBO) and from TR36L (Pegwell) in Philp (1982).

42.33 Sand Lucerne (*Medicago sativa* L. Northssp. *varia*) Neophyte. **CS.** A solitary record of this casual introduced plant relates to a specimen found at the edge of the salt-marsh in Pegwell Bay in 2000 (KFC).

42.34 Lucerne (*Medicago sativa* ssp. *varia*) Neophyte. Apparently naturalised plants from cultivation were recorded infrequently at least until the mid-1990's from roadside verges and rough grassland around the Estate and also from the upper beach of the KWT Reserve (SBBO). It was found growing quite commonly on the former Hoverport site at Pegwell Bay in 2014 (KC) and a single plant was on a track at New Downs in September 2019 (SZW).

42.35 Bur Medick (*Medicago minima* L.) Native. **NS., RDB 2., CS.** Local in the Recording Area. A species recorded from sandy coastal grassland sites from the Estate northwards (Philp 1982 and 2010; SBBO).

42.36 Toothed Medick (*Medicago polymorpha* L.) Native. **NS and CS.** Local in the Recording Area. Recorded from drier, sandy, coastal sites from the Cinque Ports Golf Club, north through the Estate as far as the KWT Reserve (Philp 1982 and 2010; SBBO).

42.37 Spotted Medick (*Medicago arabica* L.) Native. A plant of field and roadside verges, waste places and rough grassland. Recorded from *throughout the Recording Area* by Philp (1982 and 2010) and by SBBO.

42.38 Bird's-foot Clover (*Trifolium ornithopodioides* L.) Native. Local within the Recording Area. Recorded by Philp, (2010), from TR35T. It is a plant which grows 'on sand, gravel or compacted shingle' (Philp 2010).

42.39 White Clover (*Trifolium repens* L.) Native. A species which is found *abundantly throughout the Recording Area*. (Philp 1982 and 2010; SBBO).

42.40 Alsike Clover (*Trifolium hybridum* L.) Neophyte. Local and infrequent in the Recording Area. An introduction, formerly grown as a fodder crop, and which was recorded in the 1970's and 1980's as growing at sites along the Old Highway towards Mary Bax's and The Chequers (SBBO). Philp (2010) also recorded it from TR35P.

42.41 Clustered Clover (*Trifolium glomeratum* L.) Native. **NS. CR.** Very local in the Area. This plant was recorded at least until the late-1990's on compacted sandy areas by the footpath across Princes Golf Course in TR35P (SBBO; Philp 2010; FR) and confirmed as still present in that area in 2021 (SB 2021).

42.42 Suffocated Clover (*Trifolium suffocatum* L.) Native. **NS.** Local in the Area. A sand-dune plant recorded from sparse turf on the seaward margins of sites from Princes Golf Club southwards towards Sandown Castle. (Philp 1982 and 2010; SBBO).

42.43 Strawberry Clover (*Trifolium fragiferum* L.) Native. Local in the Recording Area. Recorded from several sites in the 1980's, including Princes' Golf Course slacks and the river bank at Black Sluice, but was *only reported from two adjacent tetrads* (TR35 T and N) by Philp (2010).

42.44 Hop Trefoil (*Trifolium campestre* Schreb.) Native. *Common* in rough grassland on the Estate, Golf Courses, the KWT Reserve and elsewhere. (Philp 2010; SBBO).

42.45 Lesser Trefoil (*Trifolium dubium* Sibth.) Native. *Widespread* in dune slacks and grassy areas throughout the Recording Area. (Philp 2010; SBBO).

42.46 Slender Trefoil (*Trifolium micranthum* Viv.) Native. Found *throughout the coastal dune area* from the KWT Reserve southwards to the Estate, especially in open dry grassland and the sides of banks (SBBO).

42.47 Red Clover (*Trifolium pratense* L.) Native. Found in *all the Recording Area* in rough meadow land and other grassy places (SBBO).

42.48 Zigzag Clover (*Trifolium medium* L.) Native. A rather local plant of roadside banks. Recorded from the Stonelees area in the late 1970's-early 1980's (Philp 1982) and from the sides of the Ancient Highway on the Estate and towards The Chequers in the early 1980's (SBBO) but it does not appear for the Recording Area in Philp (2010).

42.49 Crimson Clover (*Trifolium incarnatum* ssp. *icanrnatum* L.) A clump found growing in a former arable field at Worth Minnis on 22.05.2014 was a new record of this species for the Recording Area. It is a nationally scarce and infrequent casual species and is only known from one other site in Kent. It is often found as a component of sown grass / clover mixes and this is probably the origin of this record. (IPH / KC)

42.50 Knotted Clover (*Trifolium striatum* L.) Native. Described as 'growing in short grassland and open spaces on sandy soils, especially near the coast', in Philp (2010), and *this is exactly where it occurs within the Recording Area*, with records from the KWT Reserve, St. George's Golf Club, Restharrow Dunes and elsewhere.

42.51 Rough Clover (*Trifolium scabrum* L.) Native. *Widespread in the area.* A species of dry, grassy areas and verges, such as around the Estate, and rough grassland on the golf courses (SBBO).

42.52 Hare's-foot Clover (*Trifolium arvense* L.) Native. *Recorded commonly* from golf course roughs; the KWT Reserve; Restharrow Dunes and elsewhere (SBBO).

42.53 Subterranean Clover (*Trifolium subterraneum* L.) Native. Recorded *sporadically in well-separated sites*, (Restharrow Dunes; White House paddock; New Downs 'set-aside' next to Princes Golf Club), in the late-1980's to the mid - 1990's (SBBO). Recorded from all coastal tetrads from the Cinque Ports northwards, in Philp (2010).

42.54 Tree Lupin (*Lupinus arboreus* Sims) Neophyte. **CS.** Local within the Area. Recorded regularly from such areas as the Cinque Ports Golf Club up until the mid-1990's (SBBO), still present in the Estate area in the Philp (2010) survey and a number of plants around the Mary Bax's area in 2014 and subsequently (KC / SBBO).

42.55 Laburnum (*Laburnum anagyroides* Medik.) Neophyte. Local within the Recording Area. A species which was planted at St. George's Golf Club and on the Estate. Self-seeded trees were reported from Archer's Low and the St. George's plantation in the mid-1980's, but the species does not appear in Philp (2010).

42.56 Broom (*Cytisus scoparius* L.) Native. Very local in the Recording Area. This species was known from a some gardens on the Estate in the 1980's (SBBO) but there were no further records until 2014 when it was recorded as growing commonly on the former Hoverport site at Pegwell Bay (KC). The plants here appear to be large-flowered, however, and may relate to some form of horticultural cultivar.

42.57 Common Gorse or European Gorse (*Ulex europaeus* L.) Native. At scattered sites within the Recording Area. Well-established at Mary Bax's in TR35T and at one or two other localities (SBBO).

42.58 Hairy Canary Clover (*Dorycnium hirsutum*) Neophyte. Found at only one site at the edge of the Recording Area and a new record for the area in 2014. A plant of this species was found on 24.06.2014, growing on the roadside verge on the Monk's Way by-pass on the south side of the Discovery Park complex (KC). It was subsequently identified by SB. It is a plant from Southern Europe and has been recorded from only one other site in Kent. (The current standard British textbook (Stace 2010) does not list it at all). The plant is apparently available from

specialist garden nurseries, but the species appears to naturalising itself and spreading at this site (KC 2024).

43. POLYGALACEAE (Milkworts)

43.1 Common Milkwort (*Polygala vulgaris* L.) Native. *Fairly local within the area.* Although not shown for the area in Philp, (1982), this species has been recorded on the Estate from the 1970's to the present day, the main area being the White House rough, but also in the Middle Field and along the Ancient Highway towards Mary Bax's, (SBBO).

44. ROSACEAE (Roses)

(Includes plums, pears, apples, brambles, cinquefoils)

44.1 Bridewort (*Spiraea* sp.) A naturalised archaeophyte elsewhere in the country and widely grown as a garden shrub. A single but well-established clump of this plant in the Middle Field on the Estate is clearly of garden origin (KC 2021).

44.1. Cherry Plum (*Prunus cerasifera* Ehrh) Neophyte. Very local along mature hedgerows such as that lining the Observatory track, where it is a result of deliberate planting in the 1970's-1980's (SBBO).

44.2 Blackthorn (*Prunus spinosa* L.) Native. *Widespread and locally common in the area.* Grows in almost all suitable locations throughout the Recording Area, apart from in the most exposed sites next to the beach (SBBO).

44.3 Wild Plum (*Prunus domestica* L.) Archaeophyte. Local in the Recording Area. Naturalised plants were found along the Worth railway embankment in the 1970's and deliberate mixed tree-planting along the Guilford Road on the Estate in the 1970's and 1980's has also led to some naturalisation there too (SBBO). Possible hybrids between this and the previous species have been reported from the Middle Field on the Estate and along the Worth Track (TR35T and TR35N), (PD 2014).

44.4 Wild Cherry (*Prunus avium* L.) Very local in the Recording Area. A native species which is often planted for amenity purposes. Apparently non-cultivated specimens were recorded from TR35N in the Bird Observatory area (Philp 2010).

44.5 Pear (*Pyrus communis* L.) Archaeophyte. Local in the Recording Area. Known from several trees in rough ground at Pegwell Country Park, (TR36L) where they are presumably the result of human agency through discarded pear cores and also from deliberate plantings in the Elms on the Estate in 2013 (SBBO; PD 2014).

44.6 Apple (*Malus domestica* or *M. x domestica* Mill.) Archaeophyte. *Locally fairly common* in the Pegwell Country Park and Stonelees areas as a result of discarded fruit and also at sites at New Downs, near the Observatory and on the Estate in TR35P, N and T. (Philp 2010; SBBO).

44.7 Rowan (*Sorbus aucuparia* L.) Native. Very local in the Recording Area. Planted in gardens on the Estate from the 1980's and in the Prince's Golf Course plantation. Some may well have propagated by seed-dispersal by birds, (SBBO). Present also in the Middle Field on the Estate in 2012 (SBBO).

44.8 Swedish Whitebeam (*Sorbus intermedia* Ehrh.) Neophyte. Very local in the Recording Area. A few were planted in gardens along Waldershare Avenue on the Estate in the 1980's (SBBO) and a seedling was found on the old practice green site on Prince's Golf Course in September 2021 (SB 2021).

44.9 Common Whitebeam (*Sorbus aria* agg. L.) Native. Very local in the Recording Area. A few were planted in gardens along Waldershare Avenue in the 1980's, (SBBO) and also found in a small copse near the entrance to Royal St. Georges' Golf Club in 2020 (SZW).

44.10 Wall Cotoneaster (*Cotoneaster horizontalis* Decne.) Neophyte. Very local in the Recording Area. Growing in two places on the Estate from the 1980's in former garden areas (SBBO).

44.11 Cotoneaster sp. Neophyte. Recorded from Royal St. George's Golf Course and from several sites around the Estate, (Gullies area; Middle Field; White House paddock etc.) in the 1980's but there is some doubt over identification. The plants could have been **Entire-leaved Cotoneaster** (*Cotoneaster integrifolia*) or one of the 100 other neophyte species of this genus (SBBO). Conservation management on at least some of these sites is currently designed to remove the plants (PD, 2014).

44.12 Hawthorn (*Crataegus monogyna* Jacq.) Native. Found in *all parts of the Recording Area*. A prominent feature of the landscape in such areas as the Sampher, around the Estate and on parts of the Lydden Valley and Worth marshes (SBBO).

44.13 Meadowsweet (*Filipendula ulmaria* L.) Native. Occurs *throughout most of the Recording Area* in marshy sites, ditches and wet dune slacks (SBBO).

44.14 Raspberry (*Rubus idaeus* L.) Native. One record only. Reported from the Middle Field on the Estate (SBBO 2012) as a garden escape.

44. 15 Bramble (*Rubus fruticosus* L. agg.) Native. Bramble occurs in *all of the Recording Area tetrads*. Philp (2010) refers to about 130 Bramble micro-species that had been identified from Kent up until that time and there are between 300-400 micro-species in the country as a whole. Of these, only *Rubus armeniacus* Focke and *Rubus ulmifolius* Schott and the **Dewberry** *Rubus caesius* L. are definitely mapped for the SBBO Recording Area.

44.16 Silverweed (*Potentilla anserina* L.) Native. A *widespread* plant of open grassland and damper areas throughout much of the Recording Area, (SBBO),

44.17 Hoary Cinquefoil (*Potentilla argentea* L.) Native. **RDBLRnt. CR.** An uncommon and declining species which is probably extinct in the Recording Area with the sole sighting relating to an old record from rough grassland near the White House on the Estate (TR35N) on 18.06.78, (SBBO).

44.18 Sulphur Cinquefoil (*Potentilla recta* L.) Neophyte. Very local and infrequently recorded. An escaped garden plant which was recorded growing beside the Old Highway near the Chequers Public House in 1984 and at the former Downsbridge Reserve in 1986 (SBBO)

44.19 Creeping Cinquefoil (*Potentilla reptans* L.) Native. *Common throughout the Recording Area* on waste and cultivated ground and areas of rough grassland.

44.20 Barren Strawberry (*Potentilla sterilis* L.) Native. *Local and uncommon in the area.* Recorded in 1978 along the railway track across the Worth Marshes-Lydden Valley and in 1985 on the then Cottington Tip, (now Betteshanger Country Park), and at the former Downsbridge Reserve in TR35N. (SBBO).

44.21 Water Avens (*Geum rivale* L.) *Very local in the area.* Recorded from the Estate in 2013 (ET) and found at the margins of the Observatory Pond in 2014 (KC). A new species for the Recording Area.

44.22 Wood Avens (Herb Bennett) (*Geum urbanum* L.) Native. Very local and uncommon in the Recording Area. Recorded in 1978 in flower along the Worth Track; at Worth Minnis (TR35M and TR35H) and at Cottington (now Betteshanger Country Park) (TR35L) in 1980 (SBBO). Philp (2010) only shows the species for the western margins of the Recording Area but it was also found in the Observatory Garden in 2014 (KC).

44.23 Fragrant Agrimony (*Agrimonia procera* Wallr.) Native. A plant of this species was reported from a survey done on the RSPB Reserve on Worth Minnis in 2022. This constitutes a new species for the Observatory Recording Area. (EC 2022)

44.24 Agrimony (*Agrimonia eupatoria* L.) Native. A *widespread species* found across the whole Recording Area in rough grassland, field borders, roadside verges and similar habitats (SBBO; Philp 1982 and 2010).

44.25 Salad Burnet (*Poterium sanguisorba* ssp. *sanguisorba* Scop.). Native. Fairly local in the Recording Area. Found in St. George's bushes on the Estate, (TR35N), in 1978 and recorded from the southern edge of the Recording Area in Philp (2010).

44.26 Parsley Piert (*Aphanes arvensis* L.) Native. Infrequently recorded in the Recording Area. Reported from the Worth Marshes in 1972 and New Downs in 1981 (SBBO) and also by Philp (1982 and 2010) in grassy areas on the dunes in TR35P and TR35T and TR36P.

44.27 Slender Parsley Piert (*Aphanes australis* L.) Native. Infrequently recorded in the Recording Area. Found in similar habitat and tetrads to the above species and in both of the same survey periods (Philp 1982 and 2010).

44.28 Field Rose (*Rosa arvensis* Huds.) Native. The only record of this species involves several bushes which were recorded flowering along the Green Wall in TR35J in 1996 (SBBO).

44.29 Burnet Rose (*Rosa spinosissima* L.) Native. A rare plant in the Recording Area with the sole record relating to one or two plants on the dunes at Restharrow and the Cinque Ports Golf Course in July 1993 (SBBO)

44.30 Japanese Rose (*Rosa rugosa* Thunb.) Neophyte. Very local in the Recording Area. Known from at least 1969 as a patch growing on the Upper Beach near the entrance to Princes Golf Club (SBBO) and recorded from there by Philp (2010). Also reported from the Middle Field on the Estate in 2012 presumably a more recent garden-escape (SBBO). It has also been widely planted along the Guilford Road on the Estate.

44.31 Dog Rose (*Rosa canina* L.) Native. A *widespread rose throughout the Recording Area* in hedges, banks and scrub areas (SBBO).

44.32 Hairy Dog Rose (*Rosa caesia* ssp. *caesia* Thuill.) Native. Found in several tetrads near the Estate and on the track from Worth to Roaring Gutter in the 1980's (SBBO; Philp 1982) but not since, apparently.

44.33 Sweet Briar (*Rosa rubiginosa* L.) Native. Local in the Recording Area. Recorded from at least the early 1980's in The Haven area on the Estate, where it was introduced (SBBO); from the Worth railway track and still appears in tetrad TR35N in Philp, (2010).

45. ELAEAGNACEAE (Sea-buckthorns)

45.1 Sea Buckthorn (*Hippophae rhamnoides* L.) Native. **CS and NS**. *Widespread and extending its range in suitable habitats*. A shrub of fixed sand-dunes in the Recording Area, especially in such areas as the Little Gully on the Estate and along the dunes which front Princes Golf Club (SBBO). In recent years the plant has been spreading northwards along the beach and colonising new dune areas.

46. RHAMNACEAE (Buckthorns)

46.1 Buckthorn (*Rhamnus cathartica* L.) Native. Known from one site only. Recorded from the Middle Field on the Estate from 2013 onwards (SBBO)

46.2 Alder Buckthorn (*Frangula alnus* Mil.) Native. Very local in the Recording Area. Plants were introduced to the Estate in the 1990's (the Middle Field and the Restharrow Dunes planting) (SBBO) and was confirmed as still present at the former site in 2020, (SZW).

47. ULMACEAE (Elms)

47.1 Wych Elm (*Ulmus glabra* Huds.) Native. This species may occur on the fringes of the Recording Area in the southern edge of Hacklinge - Fowlmead area, but *needs confirmation*. It has also been recorded from the 'Elms' plantation on the Estate (SBBO 2020).

47.2 English Elm (*Ulmus procera* Salisb.) Native. Local in the Recording Area. Mainly scrub versions of this species can be found in such areas as the long-standing plantation along Waldershare Avenue on Sandwich Bay Estate and at Stonar. The species has been badly-affected by Dutch Elm Disease since the late 1970's and survives largely by 'suckering', for example, into such areas as the Cellars and the Restharrow Dunes (SBBO). It is possible that **Small-leaved Elm** (*Ulmus minor* Mill.) also occurs but there is *need for confirmation*.

48. CANNABACEAE (Hops)

48.1 Hop (*Humulus lupulus* L.) Native. Very local in the Recording Area. Recorded growing in the Observatory garden from the late 1960's at least until the early 1980's and found in the Elms area of the Estate from 2012 onwards (SBBO).

49. MORACEAE (Mulberries)

49.1 Fig (*Ficus carica* L.) Neophyte. Very local in the Recording Area. An introduced species, examples of which were noted in derelict gardens such as the Cellars at Sandwich Bay Estate during the period 1965 to 1994 and also on Princes Golf Course (SBBO). Still present on the Estate in 2014 in the Cellars area (SB).

50. URTICACEAE (Nettles)

50.1 Common Nettle (*Urtica dioica* L.) Native. *Widespread throughout the whole Recording Area* on waste ground, farmland fringes, hedgerows and stream banks (SBBO).

50.2 Small Nettle (*Urtica urens* L.) Archaeophyte. *Widespread*. A species which is found in arable fields, farmyards and other disturbed ground in most parts of the Recording Area (SBBO).

50.3 Pellitory-of-the-wall (*Parietaria judaica* L.) Native. Local in the Recording Area and mainly found on derelict buildings, for example at the Cellars and Slazengers on the Estate but also on such sites as rabbit warrens on St. George's Golf Course. Confirmed in Philp (2010) from buildings and walls around the Estate where it was also found in 2014 (KC).

52. FAGACEAE (Beeches)

52.1 Beech (*Fagus sylvatica* L.) Native. A specimen found at the back of the Observatory Pond in 2020 appears to be a new record of this species for the Recording Area. (SZW).

52.2 Turkey Oak (*Quercus cerris* L.) Neophyte. Reported from just one or two sites in the Recording Area. Present in the Elms area on Sandwich Bay Estate as a result of deliberate planting for habitat creation in the late 1970's (SBBO), but past conservation management policy attempted to remove the species (PD 2014). A seedling was found in scrub at the old practice green site on Princes Golf Course in 2020 (SB 2020) along with seedling Evergreen Oak.

52.3 Evergreen Oak (*Quercus ilex* L.) Neophyte. Very local in the Recording Area. Seedlings originating from gardens on the Estate are regularly removed from conservation areas there. Also reported from Vigo Sluice and Stonar (SBBO). A plant was found in scrub at the old practice green site on Princes Golf Course in 2020 (SB 2020).

52.4 Sessile Oak (*Quercus petraea* Matt.) Native. Very local in the Recording Area. Introduced as part of the planting in the Elms of the area on Sandwich Bay Estate in the late 1970's and confirmed as still present there in 2020, (RD).

52.5 Pedunculate Oak (*Quercus robur*) Native. *Widespread in scattered locations*. Present in 2013 in several locations on Sandwich Bay Estate (for example, in the Elms) as a result of deliberate planting for habitat creation (SBBO). Recorded in the past from Mary Bax's; the White House area; Worth Minnis and Stonar (SBBO).

55. BETULACEAE (Birches)

Formerly Corylaceae

55.1 Silver Birch (*Betula pendula* Roth) Native. *Widespread*. Occurs on Sandwich Bay Estate and in the Worth Marshes area, also on some areas of the golf courses and in Stonelees. Some of these are self-sown but others are likely to be the result of deliberate planting (SBBO).

55.2 Downy Birch (*Betula pubescens* Ehrh.) Native. Found in TR35S, (the Chequers area and Deal Sandhills); in the Princes Golf Course plantation and well-established in at least three localities around the Estate by the mid-1990's (SB 2014; SBBO).

55.3 Alder (*Alnus glutinosa* L.) Native. *Probably native* at Worth Minnis and also *commonly found* in the Sandwich Bay Estate area, where they are largely due to planting since the 1970's for habitat creation (SBBO).

55.4 Grey Alder (*Alnus incana* L.) Neophyte. Fairly local in the Recording Area. Planted along Waldershare Avenue in 1982 and as wind breaks along field boundaries on New Downs Farm and nearby areas in 1983 (SBBO).

55.5 Italian Alder (*Alnus cordata* Loisel) Neophyte. Very local in the Recording Area. Found in 2021 (SZW) near Royal St. Georges Golf Club as part of a well-established tree planting scheme dating from the 1980's. Stace (2010) states that

it is widely planted as an ornamental tree in Britain but appears to only be naturalised in Somerset.

55.6 Hornbeam (*Carpinus betulus* L.) Native. Very local in the Recording Area. Recorded in the Elms and Middle Field areas of the Estate in 2012 (SBBO) as a result of earlier planting for habitat creation and at the back of the Observatory pond in 2020 (SZW).

55.7 Hazel (*Corylus avellana* L.) Native. *Fairly common* in hedgerows in the Sandwich Bay Estate area and along the Worth track, in both cases most likely the result of deliberate planting (SBBO).

56. CUCURBITACEAE (White Bryonies)

56.1 White Bryony (*Bryonia dioica* Jacq.) Native. Found sparsely in the Sandwich Bay Estate and more commonly along the railway track across Worth Marshes areas in hedgerows and scrub areas, (SBBO).

57. CELASTRACEAE (Spindles)

57.1 Common Spindle (*Euonymus europaeus* L.) Native. Local in the Recording Area. A plant of hedgerows and scrub which was recorded from sites on the Estate from the late 1960's and on the railway track at Worth, with further planted specimens added in later years. Recorded as naturalised in the same area in Philp (2010), and from the Middle Field and Big Gully in 2012-2013 (SBBO; PD 2014).

57.2 Evergreen Spindle (*Euonymus japonicus* Thunb.) Neophyte. Recorded from just one site, in the Cellars on the Estate (TR35T) in Philp (2010; SBBO 2012 - 2013).

59. OXALIDACEAE (Wood-sorrels)

59.1 Procumbent Yellow-sorrel (*Oxalis corniculata* L.) Neophyte. Recorded in Philp (2010) for the Sandwich Town tetrad, but a record from 2013 from the Observatory car-park constituted the first for the Recording Area (SBBO). It is described in Streeter *et.al.* (2009) as 'a cosmopolitan weed, persistent in gardens and nurseries'.

59.2 Least Yellow-sorrel (*Oxalis exilis* A. Cunn.) Neophyte. This species only first appeared in Kent in 1975. There were very few records for East Kent in Philp (2010) but it was recorded in 2013 from the Observatory car-park (SBBO). This appears to constitute a new species for the Recording Area. Elsewhere in the county Philp (2010) states that it is found in 'churchyards, old walls, gardens and roadside verges with rough grassland'. (See *O. corniculata*, above)

59.3 Pink-sorrel (*Oxalis articulata* Savigny) Neophyte. Very local in the Recording Area. Reported from at least the early 1970's from TR35T, the Estate area (SBBO)

and persisting there in The Elms, 13th May 2026 (SZW). A garden escape which has *naturalised itself on some roadsides and sea-shore areas*.

60. EUPHORBIACEAE (Spurges)

60.1 Annual Mercury (*Mercurialis annua* L.) Archaeophyte, but Philp (2010) comments that this familiar species of newly-disturbed ground may well be native in the Thanet area. *Widespread in the Recording Area*.

60.2 Sun Spurge (*Euphorbia helioscopia* L.) Archaeophyte. *Widespread*. Occurs around the Estate area and elsewhere, on disturbed ground, arable fields and similar sites (Philp 2010; SBBO).

60.3 Caper Spurge (*Euphorbia lathyris* L.) Archaeophyte. Only very infrequent records from the 1980's of this casual species, mostly from the Estate, and almost certainly the result of garden escapes (SBBO). No further records until a number of plants were found growing on the Stour river bank just south of the Sandwich marina in May 2021 (KC).

60.4 Dwarf Spurge (*Euphorbia exigua* L.) Archaeophyte. **RDBLRnt**. One record only, from the edge of the Recording Area. Recorded in flower in arable fields beside the Sandown Road (TR35N) in 1987, (SBBO) and in the Lydden Valley area in Philp (2010). A nationally-declining farmland species.

60.5 Petty Spurge (*Euphorbia peplus* L.) Archaeophyte. Occurs in disturbed ground, edges of arable fields and gardens in all *suitable parts of the Recording Area* (SBBO).

60.6 Sea Spurge (*Euphorbia paralias* L.) Native. **CS**. *Fairly common in suitable habitats within the Recording Area*. A species which is mainly found on parts of the upper beach, from opposite the Chequers Inn northwards to the KWT Reserve and, less frequently, on adjacent areas of the golf courses (SBBO; Philp 2010).

60.7 Twiggy Spurge (*Euphorbia x pseudovirgata* / *Euphorbia esula* x *Euphorbia waldsteinii* Soo) Neophyte. Very local in the Recording Area. A record of a 'well-established patch beside the A259 at Stonar' in 1953 (SBBO) and also recorded in Philp (2010) from TR36L at Pegwell. Found again at Pegwell Country Park in 2014 between the car park and the bird hide (KC) and elsewhere in the Park in 2024 (PD)

62. SALICACEAE (Willows)

62.1 White Poplar (*Populus alba* L.) Neophyte. An introduced species which accepts coastal conditions and has been widely-planted in several areas of the Estate. It is invasive, has spread both to the north and the south and can now be found in *most tetrads of the Recording Area*, (SBBO).

62.2 Grey Poplar (*Populus.alba x tremula*). Neophyte. *Has been planted on New Downs Farm*, where these tall wind-break trees form lines along the arable fields and now dominate what was formerly an open landscape (SBBO)

62.3 Aspen (*Populus tremula* L.) Native. Recorded in the past from the Sandwich Bay Estate, where it probably resulted from deliberate planting for habitat creation, and where it survives at least in the Little Gully (PD / KC; 2014). Also reported from one or two other localities, for example, on the Worth Marshes and in one clump on the southern side of Royal St. George's Golf Course (SBBO).

62.4 Black Poplar (*Populus nigra* Pursh.). Native. Reported in 1975 as growing along the Green Wall and along the footpath to Worth, (SBBO), but there is no sign that the species still persists, at that second location, at least (KC, 2014).

Populus x canadensis The large tree at the entrance to the Bird Observatory car-park is an example of ***Populus x canadensis***, a widely-planted and vigorous cultivar which is generally known as the '**Hybrid Black Poplar**'. Although at least twenty years old, it was only first recognised as this hybrid species in April 2014, (KC). It appears to be the only specimen of this tree in the Recording Area.

62.5 Lombardy Poplar (*Populus nigra 'Italica'*) Neophyte. Very local in the Recording Area. Planted as windbreaks or for amenity in at least two gardens on the Estate and at several places at the edge of the Recording Area but Philp (2010) states that '*nowhere can it be considered as truly a naturalised species*'.

62.6 Crack Willow (*Salix euxina* L.) Archaeophyte. Local in the Recording Area. A species which can be found in the Lydden Valley-Worth Marshes area and on Sandwich Bay Estate, the latter, at least, a result of deliberate planting (SBBO).

62.7 White Willow (*Salix alba* L.) Archaeophyte. Local in the Recording Area. Recorded in Philp (2010) from tetrad TR35N in the Worth Marshes area and from planted trees on Sandwich Bay Estate (SBBO, 2012)

62.8 Almond Willow (*Salix triandra* L.) Archaeophyte. Local in the Recording Area. Recorded in wet sites in the Sandwich Bay Estate-Worth marshes area (Philp 2010) and confirmed from that area in 2022 (KBRG).

62.9 Purple Willow (*Salix purpurea* L.) Native. **CR**. An introduced species to the area. Very local - only one site. Planted in the Haven area of the Estate in 1978, still recorded as present in 1994, and found also in the White House and the Waldershare Gully (TR35N and TR35T) (SBBO).

62.10 Osier (*Salix viminalis* L.) Archaeophyte. *Widespread in the area*. A long-introduced species which occurs in wet places on Sandwich Bay Estate and elsewhere on the marshes and the edge of the golf courses to the north. In many places, these trees are the result of deliberate planting for habitat creation (SBBO).

62.11 Holme Willow (*Salix viminalis* x *caprea* x *cinerea*). **CR.** Very local in the Recording Area. Recorded in Philp (2010) from damp scrub-land at Pegwell Bay-Stonelees in tetrad TR36G, when it appeared to be the only known locality in Kent for this hybrid.

62.12 Goat Willow (*Salix caprea* L.) Native. *Commonly found* around the Sandwich Bay Estate area and to the south on the Worth Marshes-Lydden Valley (SBBO).

62.12.1 *Salix caprea* x *cinerea*. One record only. There is a record in Philp (2010) of this hybrid from tetrad TR35M in the Lydden Valley area.

62.13 Grey Willow (*Salix cinerea* L.) Native. Found *throughout the area* from Stonelees to Princes Golf Course; the Sandwich Bay Estate and further south on to the Worth Marshes-Lydden Valley (SBBO).

62.14 Creeping Willow (*Salix repens* var. *arenaria* L.) Native. **CR.** Very local in the Recording Area and occurs at only four sites in Kent, two others being inland and the fourth at Dungeness. This species is well-known from the Little Gully on Sandwich Bay Estate, but it has spread more recently to the banks of the nearby Restharrow Scrape in TR35T, where it is increasing (SBBO, 2013). It has also been recorded in the tetrad to the south, towards the Cinque Ports Golf Course and also on 11.06.2026 from a completely new site on Royal St. George's Golf Course at TR 3857 5827.

63. VIOLACEAE (Violets)

63.1 Sweet Violet (*Viola odorata* L.) Native. Found on only one site in the Recording Area. Recorded from the Elms area on Sandwich Bay Estate from at least the late 1960's, when it was probably introduced (SBBO) and recorded there subsequently.

63.2 Common Dog-violet (*Viola riviniana* Rchb.) Native. Recorded in Philp, (2010), from just one tetrad in the Recording Area (TR35N) but it has also been recorded from the adjacent tetrad (TR35T) in the past (SBBO).

63.3 Early Dog-violet (*Viola reichbaniiana* Jord.) Probably extinct in the Recording Area. Three or four clumps of this early-flowering species were reported from the Elms copse on the Estate in 1996 but there have been no subsequent records (SBBO).

63.4 Heath Dog-violet (*Viola canina* ssp. *canina* L.) Native. **RDBLRnt; KRDB 1; CS;** Very local in the Recording Area. Recorded from the late 1960's (SBBO), and in Philp (2010), from fixed sand-dunes in TR35N and TR35T at one of its very few Kent sites. It was confirmed from there in 2013 (SBBO) and again in 2017 (SB). It has also been recorded in flower at Backsand Scrape, about 4 kms to the north-west, in 1995 (SBBO).

63.5 Wild Pansy (*Viola tricolor* L.) Native. **RDBLRnt. CS.** Probably no longer occurs in the Recording Area. Found growing on set-aside at New Downs Farm, next to Princes Golf Course (TR35P) in 1995 and along the north side of Backsand Scrap (TR35F in 1996 (SBBO). *No subsequent records.*

63.6 Field Pansy (*Viola arvensis* Murray) Native. Scarce in the Recording Area. Found along the Worth railway track in 979, (SBBO) and recorded in Philp (2010), from tetrad TR35T in the Sandwich Bay Estate area.

64. LINACEAE (Flaxes)

64.1 Pale Flax (*Linum bienne* Mill.) Native. **CS.** Recorded from two tetrads at Pegwell and Stonelees in Philp (1982) and in the same area in 1985 (SBBO) but in Philp (2010), it was not shown from anywhere in the Recording Area.

64.2 Common Flax (*Linum usitatissimum* L.) Neophyte. Recorded from three disjunct sites in the Recording Area from the early 1970's to the mid-1980's (SBBO) but did not appear at all in Philp (2010).

64.3 Fairy Flax (*Linum catharticum* L.) Native. Recorded from short grass areas of the coastal dunes at least up until the mid-1990's (SBBO) but does not appear at all in the Recording Area in Philp (2010).

65. HYPERICACEAE (St. John's-worts).

65.1 Tutsan (*Hypericum androsaemum* L.) Very local and rare in the Recording Area. Probable garden escape. A single plant was found in the Elms on the Estate on 07.01.21 (SZW)

65.2 Perforate St. John's-wort (*Hypericum perforatum* L.) Native. Recorded *throughout much of the area* from the Cinque Ports Golf Club to Stonelees, mostly in areas of rough grassland; it grows abundantly on the former Hoverport site (SBBO).

65.3 Square-stalked St. John's-wort (*Hypericum tetrapterum* Fr.) Native. This species of damp habitats was *quite widely recorded* in TR35N, TR35P and TR35T between the 1970's and the mid-1990's (SBBO); was listed from one tetrad within the recording area (TR35N); at one or two other localities just outside the area in Philp (2010) and was confirmed from TR35N by more recent field-work (SB 2014).

66. GERANIACEAE (Crane's-bills)

66.1 Round-leaved Crane's-bill (*Geranium rotundifolium* L.) Native. **CS.** Very scarce and infrequent in the Recording Area. This species is mostly found in the north-west of Kent. A record from the St. George's Golf Course rough in TR35P in 1984 (SBBO) was submitted with no supporting details, but the species was also

recorded by Philp (2010) a few kilometres away in TR36F and TR36G in the Ebbsfleet and Richborough Port areas.

66.2 Meadow Crane's-bill (*Geranium pratense* L.) Native. **CS.** Philp (1982) shows the species for the New Downs area and it was recorded in flower on the Estate in 1985 and 1987 (SBBO) but apparently not recorded since then until plants were found in flower at the edge of the Observatory car-park in 2014 (KC). It is possible that all of these records were the result of seed-dispersal from garden-plantings.

66.3 Long-stalked Crane's-bill (*Geranium columbinum* L.) Native. Only two old records, from the St. George's sea-front in 1978 and from the same site on 23.07.2002 (SBBO)

66.4 Cut-leaved Crane's-bill (*Geranium dissectum* L.) Archaeophyte. Long-established on both cultivated and disturbed ground. It grows *throughout the Recording Area*, especially in such areas as the golf course roughs (SBBO).

66.5 Hedgerow Crane's-bill (*Geranium pyrenaicum* Burm.) Neophyte. *Fairly widespread in suitable habitats in the area*. This species has been recorded from road verges on the Estate and in the St. George's bushes area, at Stonar and Stonelees (SBBO).

66.6 Small-flowered Crane's-bill (*Geranium pusillum* L.) Native. *Quite common* on sandy, open ground and roadside verges on the Estate and also in some of the golf course roughs (SBBO).

66.7 Dove's-foot Crane's-bill (*Geranium molle* L.) Native. *A common and widespread* species of the drier areas of the golf courses and sandy grassland areas throughout much of the Recording Area (SBBO).

66.8 Rock Crane's-bill (*Geranium macrorrhizum* L.) Neophyte. A single record, from Philp (2010) of this species from a waste sandy area in tetrad TR35T (the Estate).

66.9 Herb-Robert (*Geranium robertianum* L.) Native. *Widespread in suitable habitats*. Recorded from shaded areas on the Estate and from such areas as the river bank and the Sampher. Several past records for the species growing on shingle along the Estate sea-front in TR35T may relate to the sub-species *maritimum* (SBBO).

66.10 Little Robin (*Geranium purpureum* Vill.) Native. Identified from a roadside site at Richborough in June 2023, growing on shingle (SB). This is the first record for the Recording Area of what is a very rare plant in Kent, with only one other site known, in the extreme west of the county.

66.11 Musk Stork's-bill (*Erodium moschatum* L.) Archaeophyte. First found in 2013 and then confirmed as established and growing quite abundantly on mown

roadside verges around the Estate, from March 2019 onwards. These records constitute the first for the Recording Area (SB)

66.12 Common Stork's-bill (*Erodium cicutarium* L.) Native. *Common and widespread* on stabilised sand-dunes, field and road verges and the upper beach throughout the Recording Area (Philp 1982 and 2010; SBBO).

67. LYTHRACEAE (Purple-loosestrifes)

67.1 Purple Loosestrife (*Lythrum salicaria* L.) Native. *A fairly familiar but widely-scattered plant* of wetter dune slacks and by the banks of streams and ditches in the Recording Area (Philp 1982 and 2010); SBBO).

68. ONAGRACEAE (Willowherbs)

68.1 Great Willowherb (*Epilobium hirsutum* L.) Native. *A common plant* of the edges of overgrown ditches, streams and pools throughout the recording area. Philp (2010) comments on the fact that this, and other *Epilobium* species, readily form hybrids with other related species when they grow together, but no examples of such hybrids are included in this survey.

68.2 Hoary Willowherb (*Epilobium parviflorum* Schreb.) Native. Less widespread in the Recording Area than the previous species and sometimes occupying drier ground (Philp 1982). It was last recorded from the Waldershare Gully area on the Estate (Philp 2010; SBBO 2012).

68.3 Broad-leaved Willowherb (*Epilobium montanum* L.) Native. Very scarce and local in the Recording Area. Recorded by Philp (1982) for the Pegwell area (TR36L) but no other subsequent records.

68.4 Square-stalked Willowherb (*Epilobium tetragonum* L.) Native. Very scarce and local in the Recording Area with records from the upper beach area of the KWT Reserve in 1960 (SBBO); from the Lydden Valley area (Philp 1982 and 2010) and Restharrow Scrape in 2012 (SBBO).

68.5 Short-fruited Willowherb (*Epilobium obscurum* Schreb.) Native. Only one record from the Recording Area, from TR35T (Philp 2010).

68.6 Pale Willowherb (*Epilobium roseum* Schreb.) Native. Very scarce and local in the Recording Area. There are records from Slazengers; the White House and Restharrow Dunes on the Estate in the early 1980's and 1990's (SBBO); and from TR35M, based on the Lydden Valley, in Philp (2010) where the author refers to an apparent dramatic decline in the species in the county as a whole.

68.7 American Willowherb (*Epilobium ciliatum* Raf.) Neophyte. Described as *common and widespread* in arable fields and waste ground in the Recording Area in the late 1970's (SBBO) and reported as present in several tetrads, including the Estate area, by Philp (2010).

68.8 Marsh Willowherb (*Epilobium palustre* L.) **CR**. The only record is for the KWT Nature Reserve area in a dune slack in 2001 (FR) but no further details are available. This species is only recorded from three other Kentish locations, all of them wet, acidic sites.

68.9 Rosebay Willowherb (*Chamerion angustifolium* L.) Native. *Fairly widespread in the Recording Area*. Recorded as 'not common, but already increasing' in the Recording Area in the early 1970's, (SBBO); in *six or more tetrads by the early 1980's* (Philp 1982), and *maintaining this status* in Philp (2010). A plant of waste land, railway embankments and burnt ground.

68.10 Large-flowered Evening-primrose (*Oenothera glazioviana* P. Micheli.) Neophyte. Described as '*erratic in appearance but not infrequent on grassy roughs about the Estate*' in the early 1970's (SBBO) and recorded from there by Philp (2010). Also recorded by Philp (2010) from TR36L, at Pegwell.

68.11 Common Evening-primrose (*Oenothera biennis* L.) Neophyte. A species of roadsides and waste places which was recorded from the Cinque Ports Golf Club area in Philp (1982) but which has declined in the county and now apparently only occurs in a few sites in the west of Kent (Philp 2010).

68.12 Small-flowered Evening-primrose (*Oenothera cambrica* Rostanski) Neophyte. **CR**. Recorded from TR35T, based on the Estate in Philp (2010). No other records.

68.13 Fragrant Evening-primrose (*Oenothera stricta* Ledeb.) Neophyte. **CR**. *Locally common*. The species has been established on fixed dunes, especially around the Estate, since at least the 1860's (Philp, 1982). *Known from only one other site in Kent, at Littlestone*.

71. ANACARDIACEAE (Sumachs)

71.1 Stag's-horn Sumach (*Rhus typhina* L.) Neophyte. *Very local*. Recently-recorded as a garden discard or escape in the Middle Field of the Estate, (TR35T) (SBBO 2012) and also planted along the Guilford Road. (KC 2018).

72. SAPINDACEAE (Maples)

Formerly included within Aceraceae and Hippocastanaceae

72.1 Horse Chestnut (*Aesculus hippocastanum* L.) Neophyte. Very local introduction within the Recording Area. Planted in Waldershare Avenue on the Estate in 1985 (SBBO).

72.2 Norway Maple (*Acer platanoides* L.) Neophyte. Only known from one site in the Recording Area. A plant was recorded in 2012 growing in the Middle Field on the Estate in TR35T where it is probably a garden 'escape', but is likely to become naturalised there (SBBO).

72.3 Field Maple (*Acer campestre* L.) Native. Local in the Recording Area. Occurs along the Worth railway embankment; at Archer's Low and the Elms area, the latter resulting from deliberate planting (SBBO).

72.4 Sycamore (*Acer pseudoplatanus* L.) Neophyte. A species which occurs in *almost all parts of the Recording Area* as a self-sown naturalised tree (SBBO).

75. MALVACEAE (Mallows)

Formerly Tiliaceae

75.1 Common Mallow (*Malva sylvestris* L.) Archaeophyte. A long-introduced species which can be found *throughout the entire Recording Area*, especially along roadsides, edges of cultivated areas and on waste land (SBBO).

75.2 Dwarf Mallow (*Malva neglecta* Wallr.) Archaeophyte. Local in the Recording Area. This species is recorded from the Sandwich Bay Estate and nearby areas, and at New Downs in 2014 (ET). It is a species which can be found in arable areas, garden edges and on other disturbed ground (SBBO).

75.3 Tree-mallow (*Malva arborea* L.) Probable neophyte. Scarce and very local in the Recording Area. It has been noted in the Sandwich Bay Estate area and also at Richborough-Stonelees (Philp 2010).

75.4 Marsh-mallow (*Althaea officinalis* L.) Native. **RDBLRns. CR.** Scarce and very local in the Recording Area. Recorded by SBBO and Philp (1982), from several sites by ditches near the Green Wall (TR35P) and still there within recent years and in the adjacent tetrad TR35N. (KFC 2012). Also reported from the river-bank in the Sampher in 1996 (TR36F) (SBBO),

75.5 Hollyhock (*Althaea rosea* L.) Neophyte. Very scarce and infrequent, with only two old records. A garden escape which was recorded from the seaward side of the then refuse tip at Pegwell Bay in 1978 and on the Estate in 1979 (SBBO).

76. THYMELAEACEAE (Mezereons)

76.1 Spurge-laurel (*Daphne laureola* L.) Native. Very local with only one known site within the Recording Area. Reported from the Elms area in 2012 (SBBO) almost certainly as a result of deliberate introduction as part of a planting programme.

80. RESEDACEAE (Mignonettes)

80.1 Weld (*Reseda luteola* L.) Archaeophyte. *Widespread in the area*. Grows on roadsides and waste ground, including the upper beach. It has been recorded from the KWT Reserve; Sandwich Bay Estate (SBBO 1969 to 1994) and south into the Lydden Valley (Philp 2010).

80.2 Wild Mignonette (*Reseda lutea* L.) Native. *Occasional records* from rough grassland and waste ground from Sandwich Bay Estate northwards across the Golf Courses and also at Pegwell Bay. The plant grows on well-drained sandy areas, including the dunes (Philp, 2010).

81. BRASSICACEAE (Crucifers, cabbages, cresses and mustards)

Formerly Cruciferae.

81.1 Treacle-mustard (*Erysimum cheiranthoides* L.) Archaeophyte. Recorded in Philp (1982) in tetrads TR35P and TR35J and growing '*quite commonly*' along the sides of the Worth Track (TR35N) in 1985 and along the track to New Downs Farm (TR35P) in 1986 (SBBO). It was not recorded for anywhere in the Recording Area in Philp (2010) and '*appears to have declined in recent years, probably through changes in farming practices*', (Philp 2010). However, a single plant was found growing on waste ground at the northern end of the Royal Cinque Ports Golf Course in 2021 (SB) so it is still present in the Area.

81.2 Wallflower (*Erysimum cheiri* L.) Archaeophyte. Local and infrequent in the Recording Area. This is the familiar biennial garden plant which is widely naturalised in cliff environments. Specimens were observed growing in the Kings Avenue and upper beach area of the Estate from 1985 to 1987 (SBBO) but Philp (2010) lists only *one record for it* in the tetrad centred on Shellness Point (TR36K). A specimen in full flower was found on Princes Beach in March 2020 (SBBO) after a gap of over ten years since the last record.

81.3 Thale Cress (*Arabidopsis thaliana* L.) Native. Recorded on the Estate in 1971 and at Pegwell Bay Country Park in 1980 in Philp (1982) but at only three scattered sites at the margins of the Recording Area by Philp (2010) and with no subsequent records.

81.4 Shepherd's-purse (*Capselia bursa-pastoralis* L.) Archaeophyte. Occurs *throughout the entire Recording Area* on both cultivated and disturbed ground in fields, gardens and waste places (SBBO).

81.5 Winter-cress (*Barbarea vulgaris* W.T. Alton) Native. Local in the Recording Area. Known from the edges of streams and ponds in the Lydden Valley area (Philp 2010) and from drier areas of salt-marsh on the KWT Reserve (SBBO).

81.6 American Winter-cress (*Barbarea verna* Miller) Neophyte. **CR.** No recent records since it was listed by Philp (1982) from TR36F as a casual in the Richborough Port area.

81.7 Marsh Yellow-cress (*Rorippa palustris* L.) Native. No recent records from anywhere in the Recording Area since it was recorded from just outside the Area on the banks of the Stour and on waste ground by the railway at Richborough in 1972 (SBBO).

81.8 Great Yellow-cress (*Rorippa amphibia* L.) Native. **CS.** One old record from the sides of ditches at Stonar and below Richborough Castle in 1972 *but no further reports* (SBBO). Philp (2010) only records it from about ten riverside locations in West Kent.

81.9 Water-cress (*Nasturtium officinale* L.) Native. *Widespread in suitable habitats.* Found in the Lydden Valley-Worth Marshes and Bay marshes area in clear streams and ponds (Philp 2010).

81.10 Narrow-fruited Water-cress (*Nasturtium microphyllum* L.) Native. Local in the Recording Area. Identified from Worth marshes in 1972 and 1985 and from the Haven Stream in 1985 (SBBO). Also reported from one tetrad by Philp (2010) in the New Downs Farm area.

81.11 Water-cress agg. (*Rorippa nasturtium-aquaticum* / *Rorippa microphylla* agg.) *Widespread in suitable habitats.* Occurs in the Lydden Valley-Worth marshes area, also on the Bay marshes (Philp 2010).

81.12 Horse-radish (*Armoracia rusticana* P. Gaertn.) Archaeophyte. The species can be *found in many localities* in the Recording Area on roadsides and waste ground (SBBO).

81.13 Large Bittercress (*Cardamine amara* L.) Native. Only one record. Several specimens were recorded in flower in the Haven area of the Estate (TR35N) in June 1986 in a typical habitat for this species (SBBO) but apparently with no further records in subsequent years..

81.14 Cuckooflower (*Cardamine pratensis* L.) Native. *Widespread in suitable habitats.* Found in damp areas and meadows from Sandwich Bay Estate northwards to Pegwell Bay (SBBO).

81.15 Wavy Bittercress (*Cardamine flexuosa* With.) Native. Although a common plant throughout most of the British Isles, this species had apparently not been recorded at Sandwich Bay before April 2016, when at least one plant was found only a few feet from the front door of the Observatory (ET).

81.16 Hairy Bittercress (*Cardamine hirsuta* L.) Native. Found *throughout the Recording Area* on the dunes and other dry areas such as road-banks (SBBO).

81.17 Field Pepperwort (*Lepidium campestre* L.) Archaeophyte. Rare and very local in the Recording Area. Specimens were found growing in an old dune grassland area, (now partly in the Restharrow Dunes Reserve) in 1973 and 1994 but apparently not since (SBBO).

81.18 Smith's Pepperwort (*Lepidium heterophyllum* Benth.) Native. **CR.** Very local in the Area. Philp (2010) recorded this species from fixed sand-dunes at Pegwell Bay-Stonelees (TR36G). It is known from only one other site in Kent.

81.19 Narrow-leaved Pepperwort (*Lepidium ruderae* L.) Archaeophyte. Very rare and local within the Recording Area, with only two old records. Recorded near Sandilands on the Estate in 1974 (SBBO) and by Philp (1982) as occurring at the Pegwell Bay picnic site (TR36L) in 1978 but not recorded subsequently.

81.20 Dittander (*Lepidium latifolium* L.) Native. **NS.** Local and infrequent in the Area, but often common where it does occur. Recorded from the banks of the River Stour in the Great Stonar area and further downstream in some years, (SBBO; Philp 2010; SB 2014).

81.21 Hoary Cress (*Lepidium draba* L.) Neophyte. A species which occurs *throughout the Recording Area* on roadsides, arable and waste land (SBBO).

81.22 Swine-cress (*Lepidium coronopus* L.) Archaeophyte. Can be found *throughout the Recording Area*, especially 'on pathways, particularly by gateways, in farmyards and on nutrient-rich arable fields' (Philp 2010).

81.23 Lesser Swine-cress (*Lepidium didymum* L.) Neophyte. Very local in the Recording Area. The species has been reported from the Cinque Ports Golf Course and also from Stonelees (Philp 2010).

81.24 Honesty (*Lunaria annua* L.) Neophyte. Occurs as an escaped garden plant. It is *naturalised in several localities* on the Sandwich Bay Estate, (SBBO, 2012), and doubtless elsewhere in the wider Recording Area.

81.25 Sweet Alison (*Lobularia maritima* L.) Neophyte. A garden escape, recorded from one main area. It occurs at Sandwich Bay Estate in such areas as dunes, open waste ground and the sides of some of the roads (SBBO).

81.26 Flixweed (*Descurainia sophia* L.) Archaeophyte. **CR.** Very local in the Recording Area but often abundant where it does occur. Recorded on bare ground and roadsides on the Estate in 1985 and on Princes Golf Course in 1990 (TR36K) (SBBO). The plant was still there in 2011 when several hundred individuals were found and again on the same site in 2021 (SB 2014 and 2021). *A declining species in the county.*

81.27 Common Whitlow-grass (*Erophila verna* L.) Native. *Widespread in suitable habitats.* Recorded from Sandwich Bay Estate and then northwards to the Stour Estuary on well-drained areas such as the sand-dunes (SBBO).

81.28 Perennial Wall-rocket (*Diplotaxis tenuifolia* L.) Archaeophyte. *Widespread in the area.* Recorded on coastal dune areas northwards from Sandwich Bay Estate and from both sides of the mouth of the River Stour. (SBBO; Philp 2010) and still commonly there September 2022 (KC).

81.29 Annual Wall-rocket (*Diplotaxis muralis* L.) Neophyte. *Fairly widespread in the area.* First recorded in Kent following a shipwreck on Thanet in 1778. It has

been recorded from Pegwell Picnic Site; Stonelees; Sandwich Bay Estate and the area to the south. It grows on waste ground, old walls and in garden (Philp 2010).

81.30 Wild Cabbage (*Brassica oleracea* var. *oleracea* L.) Native. **NS.** Very scarce and infrequent in the Recording Area. Recorded on the sea-wall, south of Sandilands in 1978; on the seaward side of the KWT Reserve in 1981 and in the '100-acre field' section of the Reserve in 1986 but not apparently subsequently, (SBBO). It is possible that all of these records actually *relate to relics of cultivation, rather than to the truly wild plant*.

81.31 Oil-seed Rape (*Brassica napus* L. ssp. *oleifera*) Neophyte. Grown widely in the area as an arable crop and short-lived self-sown casual plants appear on roadside verges and waste ground in such areas as New Downs and Worth Marshes (SBBO).

81.32 Bargeman's Cabbage (*Brassica napus* ssp. *campestris* L) **CR.** Neophyte. Only one record. A plant growing at the Observatory Headquarters in May 1985 was probably from scattered bird-seed. The identity was confirmed by Kew Gardens, but it was not recorded in any subsequent years (SBBO).

81.33 Turnip (*Brassica rapa* ssp. *rapa* L.) Neophyte. Casual record only. Recorded in the western side of the '100-acres' section of the KWT Reserve in 1981 and in flower there in June 1986 (SBBO) but *no further records*.

81.34 Black Mustard (*Brassica nigra* L.) Native. Scattered records over a number of years. Recorded on the KWT Reserve in 1981; along the Stour river bank track in 1984; in the Middle Field of the Estate in 1994 (SBBO), and, more recently, along the bank of the North Stream on Worth Marshes (SB 2014).

81.35 Charlock (*Sinapis arvensis* L.) Archaeophyte. Found *throughout the Recording Area* on the sides of roads and other waste places, *but appears to be declining* (SBBO).

81.36 White Mustard (*Sinapis alba* L.) Archaeophyte). Scarce and local within the Recording Area. Recorded in 1985 at Old Downs Farm and along the Worth track and described as "flowering commonly" on the Estate in 1987 (SBBO). Not recorded anywhere in the Recording Area in Philp (2010). An introduced species which is grown less commonly than previously, "and this is reflected in its present scarcity as a wild plant", (Philp, 2010).

81.37 Hoary Mustard (*Hirschfieldia incana* L.) Neophyte. First recorded in Kent only in the 1950's in the Thanet-Sandwich area, this species has spread into many areas of the county. It is found *throughout the Recording Area* on sand dunes and waste places (SBBO).

81.38 Sea Rocket (*Cakile maritima* Scop.) Native. **CS.** *Only shown at one locality* in the Recording Area by Philp (2010) but previous records show it as occurring

along the whole of the upper beach between the Princes Golf Club's old club house and Shellness Point (SBBO). In 2014 it was also found growing in the north corner of Pegwell Bay in TR36M (KC).

81.39 Steppe Cabbage (*Rapistrum perenne* L.) Neophyte. One old record. Reported from a patch of waste ground on the Estate in 1975 but there are no subsequent records (Philp 1982).

81.40 Sea-kale (*Crambus maritima* L.) **CS**. Spreading from the south *all along the foreshore* at Sandwich Bay, where it typically grows in shingle substrates (SBBO).

81.41 Wild Radish (*Raphanus raphanistrum* ssp. *raphanistrum* L.) Archaeophyte. A casual and infrequent species which grows in arable fields and waste places, (SBBO; Philp 2010). It has been recorded from tetrad TR35N; inland of Sandwich Bay Estate; at New Downs Farm, (TR35P), in the Cinque Ports Golf Club area and from the Green Wall (TR340580) on 12.09.2024 (SZW)

81.42 Garden Radish (*Raphanus sativus* L.) Neophyte. A casual record of two plants found growing on wasteland on the Estate seafront in TR35T in July 1984 were presumably the result of a picnic discard (SBBO).

81.43 Tall Rocket (*Sisymbrium altissimum* L.). Neophyte. **CS**. Very scarce and local in the Recording Area. Recorded in various sites around the Estate; on St. George's Golf Course and on the 100-acre section of the KWT Reserve up to the mid-1980's and again on the Estate in 1994 (SBBO). Only recorded in Philp (2010) *from one site in the Recording Area* in stable dunes in tetrads TR35P and TR35U, along with comments on the plant's apparent marked range contraction in Kent since the 1970's, with records from only two other sites in Kent.

81.44 Eastern Rocket (*Sisymbrium orientale* L.). Neophyte. Very scarce and local in the Recording Area. It was recorded from waste ground at New Downs Farm in 1975 (SBBO); the Estate in 1980 (SBBO); and from the Pegwell Bay Country Park picnic-site in 1980 (SBBO). Philp (2010) only records it in *one tetrad within the Recording Area* (TR35S) in the Cinque Ports Golf Club area.

81.45 Hedge Mustard (*Sisymbrium officinale* L.) Archaeophyte. A fairly common plant throughout the Recording Area in roadside verges, hedgerows, both farmed and waste land and occasionally, as in 1984, on drier areas of the salt-marsh near Shellness Point (SBBO).

81.46 Garlic Mustard (*Alliaria petiolata* M. Bieb.) Native. Found throughout the Recording Area in similar habitats to the previous species, but more infrequently around the Estate (SBBO).

81.47 Field Penny-cress (*Thlaspi arvense* L.) Archaeophyte. Local in the Recording Area. Recorded from arable fields and other disturbed ground in the Worth Marshes-Lyddon Valley area (SBBO).

81.48 Dame's Violet (*Hesperis matronalis* L.) Neophyte. A garden escape, with a *record from just one tetrad* (TR35M) in our area, centred on the Lydden Valley - Worth area in Philp (2010).

81.49 Hoary Stock (*Matthiola incana* L.) Neophyte. A species which grows on cliffs or sand dunes. It was recorded from the Sandwich Bay Estate area by Philp, (2010), but this is the only record.

81.50 English Scurvy-grass (*Cochlearia anglica* L.) Native. *Widespread in suitable habitats*. Recorded from the mouth of the River Stour, where it grows on the salt-marsh there; in the 100-acre field of the KWT Reserve; in the Sampher and, less commonly, on some muddy patches on the Estate (SBBO 1981)

81.51 Danish Scurvy-grass (*Cochlearia danica* L.) Native. *Widespread in suitable habitats*. Found along the sandy and shingle coastal strip northwards from Sandwich Bay Estate. It has also been recorded from dry grassy paddocks on the Estate in the 1980's, TR35N and TR35T, (SBBO).

84. TAMARICACEAE (Tamarisks)

84.1 Tamarisk (*Tamarix gallica* L.) Neophyte. *Widespread in scattered localities in the area*. An introduced species which is well-known for its tolerance of coastal habitats. It can be found at Sandwich Bay Estate (where it appears much less vigorous than in past years); at Mary Bax's and in the Richborough-Stonelees area. In the past (SBBO 1971), it was also found on Princes Golf Course and in the 100-acre section of the KWT Reserve.

85. PLUMBAGINACEAE (Sea-lavenders and Thrifts)

85.1 Common Sea-lavender (*Limonium vulgare* Mill.) Native. *A familiar plant of muddy areas of the older areas of salt-marsh on both sides of the Stour Estuary at Pegwell Bay* (SBBO).

85.2 Lax-flowered Sea-lavender (*Limonium humile* Mill.) Native. Reported from the salt-marsh area of the KWT Reserve, (TR36L), by two different observers in 1972 and 1981 (SBBO) but Philp (1982 and 2010) states that there is no conclusive proof that this species occurs in the county, so misidentification may be involved.

85.3 Rock Sea-lavender (*Limonium binervosum* agg. G.E. Sim.) Native. **CS.; UKBAP C; RDBLRns.** Very local in the Recording Area. Found on the drier parts of the salt-marsh on both sides of the Stour Estuary at Pegwell Bay (Philp, 1982 and 2010; SBBO). It is not known which of the two local subspecies, *binervosum* or *cantianum*, are involved in these records.

85.4 Thrift (*Armeria maritima* L.) Native. Local in the Recording Area. Found in the 1970's and 1980's from such scattered sites as Shellness Point, the KWT Reserve and Backsand Point, but also present in 2012 along the beach road on the Estate (SBBO).

86. POLYGONACEAE (Knotweeds)

86.1 Amphibious Bistort (*Persicaria amphibia* L.) Native. *Found throughout the Recording Area* in fresh-water environments and in damp fields and dune slacks and sometimes in drier areas as well (SBBO).

86.2 Redshank (*Persicaria maculosa* L.) Native. *Recorded widely* in the Recording Area, where it can be found in farmed areas and along streams and ditches (SBBO).

86.3 Pale Persicaria (*Persicaria lapathifolia* L.) Native. Very scarce and local in the Recording Area. Reported as frequent in the Old Downs Farm area in the 1980's and recorded from an arable field opposite the Observatory in 1979 (SBBO) but only recorded in Philp (2010) from two tetrads in the Bay marshes area, one of which is only marginally within the Observatory's Recording Area, (TR35S). Found again in the Jubilee Field on 04.08.2024 (SZW). A plant of cultivated and waste ground, ponds and ditches (Philp 2010).

86.4 Water-pepper (*Persicaria hydropiper* L.) Native. Recorded from the Haven Stream and a damp slack next to it and from near the Vigo sluice in 1979, (SBBO) but apparently no subsequent records.

86.5 Small Water-pepper (*Persicaria minor* Huds.) Native. **RDB 2. CR.** Probably extinct in the area. A rare species which was recorded growing along the edge of ditches on the Worth side of the railway line and near Roaring Gutter in 1982 (TR35M) *but not subsequently* (SBBO).

86.6 Ray's Knotgrass (*Polygonum oxyspermum* ssp. *rail* Mey and Bunge) Native. **CR.** Rare, very local and intermittent in the Recording Area. This plant was recorded from stable dune grassland on the upper beach at Royal St George's (TR35P) in 1970 and again in 1980 (SBBO) but not subsequently. It may well still be present as it easy to overlook (SB 2014)

86.7 Equal-leaved Knotgrass (*Polygonum arenastrum* Boreau). Archaeophyte, or possible native, which is *found commonly in most parts of the Recording Area* on tracks and other trampled areas (SBBO; Philp 2010)

86.8 Knotgrass (*Polygonum aviculare* L.) Native. *Common* in almost all habitats throughout the whole Recording Area (SBBO).

86.9 Japanese Knotweed (*Fallopia japonica* Houtt.). Neophyte. Only one record, from TR36L at Tubbs Corner opposite Stonelees in 1972 (SBBO) but (fortunately) no subsequent records of this highly invasive species.

86.10 Russian Vine (*Fallopia baldschuanica* Regel). Neophyte. Very locally naturalised at two sites in the Recording Area. A garden escape which has colonised areas around Sandwich Bay Estate and has also been recorded around work buildings on Princes Golf Club (TR35P) (SBBO).

86.11 Black Bindweed (*Fallopia convolvulus* L.) Native. Fairly local in the Recording Area. Recorded from the Sandwich Bay Estate area and adjacent farmland where it can be found in such areas as gardens and disturbed or arable land (Philp 2010; SBBO 2013)

86.12 Sheep's Sorrel (*Rumex acetosella* L.) Native. *Found throughout the Recording Area* on sandy areas, including the dunes and shingle beaches. Philp (2010) describes a taxon which occurs at Sandwich Bay, with narrow linear leaves, as being the variety *tenuifolius* Wallr.

86.13 Common Sorrel (*Rumex acetosa* L.) Native. *Widespread and common*. Recorded from almost all the tetrads making up the Recording Area, where it grows in meadows and other grassy areas (SBBO).

86.14 Water Dock (*Rumex hydrolapathum* Huds.) Native. Recorded *throughout the Recording Area*, where it can be found by the sides of slow-flowing freshwater streams and by ditches and pools (SBBO).

86.15 Greek Dock (*Rumex cristatus* DC) Neophyte. Very scarce and local in the Recording Area. An introduced species which has only been recorded from Pegwell. Its habitat includes sea-walls, the sides of roads and other waste places (Philp 2010).

86.16 Patience Dock (*Rumex patientia* L.) Neophyte. **CR.** Only one old record and not recorded subsequently. Shown in Philp (1982) as occurring in the Richborough Port area at TR36F but not in Philp (2010) where it is only reported from two widely-separated sites in the entire county.

86.17 Curled Dock (*Rumex crispus* L.) Native. *A very common species* of both farmed and waste land throughout the Recording Area (SBBO). Philp (2010) refers to ssp. *crispus* as being the common form but with ssp. *littoreus* occurring on some sand and shingle beaches.

86.18 *Rumex crispus* x *obtusifolius*. Native. This hybrid between Curled Dock and Broad-leaved Dock is included in Philp (2010) from *several scattered sites* in the Recording Area including the Sandwich Bay Estate and at Pegwell.

86.19 Clustered Dock (*Rumex conglomeratus* Murray). Native. *Common and widespread* in wet areas throughout the Recording Area (SBBO).

86.20 Wood Dock (*Rumex sanguineus* L.) Native. Shown in Philp (1982), from TR35L, M and N, but Philp (2010), has it only occurring in tetrads at the southern and western inland fringes of the Recording Area.

86.21 Fiddle Dock (*Rumex pulcher* L.) Native. *Fairly widespread*. Found in dry coastal pastures, for example around Sandwich Bay Estate and on the KWT Nature Reserve on the south side of Pegwell Bay (Philp, 2010).

86.22 Broad-leaved Dock (*Rumex obtusifolius* L.) Native. Found *commonly throughout the Recording Area* in almost all areas – by roadsides, edges of fields, waste ground and similar sites (SBBO).

88. CAROPHYLLACEAE (Pinks)

Formerly Illecebraceae.

88.1 Thyme-leaved Sandwort (*Arenaria serpyllifolia* ssp. *serpyllifolia* L.) Native. A *common plant* of the sand-dunes and other dry waste places throughout the Recording Area (SBBO).

88.2 Slender Sandwort (*Arenaria serpyllifolia* ssp. *leptocladus* L.) Native. Local in the area. This subspecies sometimes occurs with the previous subspecies but Philp (2010) states that it is more often found closer to human habitation. In the SBBO Recording Area it has been recorded on the Sandwich Bay Estate, at Pegwell Bay and near Chequers.

88.3 Sea Sandwort (*Honckenya peploides* L.) Native. **CS.** *Common* along the upper beach-line at Sandwich Bay and Pegwell Bay where it is a pioneer coloniser of soft, sandy areas (SBBO).

88.4 Fine-leaved Sandwort (*Minuartia hybrida* Vill.). Reported from the White House paddock in 1993 but this record was never confirmed and should perhaps remain doubtful.

88.5 Common Chickweed (*Stellaria media* L.) Native. A *common plant* found in all the tetrads of the whole Recording Area, on both cultivated and waste ground (SBBO).

88.6 Lesser Chickweed (*Stellaria pallida* Dumort) Native. A dune-land species, found *all along the coastal zone of the Recording Area* (Philp 2010).

88.7 Greater Stitchwort (*Stellaria holostea* L.) Native. Recorded in a few scattered localities around the Estate (TR35T) between the mid-1980's and 1990's

(SBBO). However, it does not appear for anywhere in the Recording Area in Philp (2010).

88.8 Lesser Stitchwort (*Stellaria graminea* L.) Native. This species is *thinly-spread* in rough grassland and pasture areas near the coastline *throughout much of the Recording Area* (Philp 2010).

88.9 Field Mouse-ear (*Cerastium arvense* L.) Native. *Locally frequent* on rough grassland in four tetrads on the Golf Courses to the north and south of Sandwich Bay Estate (Philp 2010).

88.10 Snow-in-Summer (*Cerastium tomentosum* L. and/or *Cerastium beibersteinii* Fries.) Neophyte. Local in the Recording Area, but common where it occurs. This species is a garden escape which is naturalised in such sites as at Sandwich Bay Estate where it has spread invasively into dune areas and out onto the shingle beaches. A difficult group, with much variation within the species and some hybridisation adding to the confusion, for example, hybridisation with Field Mouse-ear to produce *Cerastium x maureri* (SB 2014 and 2020).

88.11 Common Mouse-ear (*Cerastium fontanum* L.). Native. *Widespread*. Found in all the tetrads of the Recording Area. A common plant of farmland, rough pastures, golf course fairways and roadside edges (SBBO).

88.12 Sticky Mouse-ear (*Cerastium glomeratum* L.). Native. *A common plant* of arable land and waste areas, especially those with a sandy substrate. It occurs throughout the Recording Area (SBBO).

88.13 Sea Mouse-ear (*Cerastium diffusum* L.). Native. Found in the White House rough on the Estate and at the sea-front in 1994 (SBBO). Recorded in Philp (2010) from *six tetrads* in the north of the Recording Area where it grows on open grassland and stable dune areas.

88.14 Little Mouse-ear (*Cerastium semidecandrum* L.). Native. Found *along the entire coastline* of the Recording Area on sand-dunes and road edges and has also been recorded in the White House paddock in 1994. (SBBO; Philp 1982 and 2010).

88.15 Upright Chickweed (*Moenchia erecta* L.). Native. **NR. CS.** Scarce and local in the Recording Area. Recorded in Philp (1982) from sand-dunes on the Estate (TR35T); in Philp (2010) from *just two tetrads* within the Recording Area (TR35S and TR35N); in 2013 from Restharrow Dunes (SB) and from the White House Field in 2022 (KBRG). It occurs on sandy grassland and dunes and is 'easily overlooked' (Philp 2010).

88.16 Knotted Pearlwort (*Sagina nodosa* L.): Native. **KRDB 1. CR.** Very local in the Recording Area. This inhabitant of open dune slacks was recorded from only two localities in 1982, by a pool at Mary Bax's and below the sea-wall at the Cinque Ports Golf Club and in 1989 from near the practice green at the old Princes Golf

Clubhouse (SBBO). It was found at only two sites in the whole of Kent during the fieldwork for Philp (2010) the other being at Dungeness. The Princes Golf Course site has subsequently produced records of up to 100 plants in 2021 (SB).

88.17 Procumbent Pearlwort (*Sagina procumbens* L.) Native. *Found in most tetrads* within the Recording Area along tracks and paths and Estate gardens (SBBO).

88.18 Annual Pearlwort (*Sagina apetala* Ard.) Native. *Widespread in suitable habitats*. Found on bare, sandy areas, especially around Sandwich Bay Estate and areas to the north and south (SBBO).

88.19 Sea Pearlwort (*Sagina maritima* Don) Native. Very rare and local with just one record from tetrad TR35S in the Cinque Ports Golf Course area in Philp (1982) and no subsequent records.

88.20 Annual Knawel (*Scleranthus annuus* L.) Native. **RDB 1. CR.** One old record only. Noted in Philp (1982) from TR36F on bare sandy ground in the Richborough Port area.

88.21 Strapwort (*Corrigiola littoralis* L.) Neophyte. Introduced. **CR.** *“Doubtfully recorded as a casual introduction at Sandwich Bay in the past but there are no recent records”* (Philp 2010).

88.22 Corn Spurrey (*Spergula arvensis* L.) Native. **RDB 2.** Very local and infrequent in the Recording Area. This species of disturbed sandy soil was noted as ‘common’ in a fallow field outside the Observatory H.Q in 1970; ‘quite common’ on New Downs in 1980; ‘in flower’ opposite the Observatory H.Q. in 1985 and in the White House paddock in 1994 (SBBO). It was recorded *from only two tetrads* in Philp (2010) in the Sandwich Bay Estate-Cinque Ports Golf Club areas.

88.23 Greater Sea-spurrey (*Spergularia media* L.) Native. *Fairly common in suitable habitats*. A plant of the riverside salt-marshes and similar muddy areas which can be found downstream of Sandwich as far as Pegwell Bay and the KWT Nature Reserve (SBBO).

88.24 Corncockle (*Agrostemma githago* L.) Native. A new record for the Recording Area relates to three flowering stems found growing at the former Pegwell Bay Hoverport site in June 2014 (KC).

88.25 Lesser Sea-spurrey (*Spergularia marina* L.) Native. Local in the Recording Area. Found on salt-marshes and brackish grazing areas, for example at Pegwell Bay (SBBO).

88.26 Nottingham Catchfly (*Silene nutans* L.) Native. **RDBLRnt. NS. CS.** First recorded from the area in 1999 on the seaward side of Sandilands on the Estate, (SBBO). It is not believed that this plant has persisted at this site.

88.27 Bladder Campion (*Silene vulgaris* ssp. *vulgaris* Moench). Native. Very local in the Recording Area. Recorded as 'infrequent' between the 1960's and mid-1990's in various places around the Estate and elsewhere (SBBO). Philp (2010) only has it from one tetrad in the Recording Area (TR35M) centred on the Hacklinge-Lydden Valley area and SB (2014) recorded it from Princes Golf Course in 2013. It was also in flower on the former Pegwell Bay Hoverport site in 2014 (KC).

88.28 Sea Campion (*Silene uniflora* L.) Native. **CS**. This species was found in the Recording Area in the 19th Century (SB 2014). The next record relates to a few plants which were found along the sea-wall to the south of Sandilands in 1970 and 1979 (SBBO) but there have been no subsequent records.

88.29 Night-flowering Catchfly (*Silene noctiflora* L.) Archaeophyte. One plant was found in flower near The Green Barn in an area of 'set-aside' fallow arable land on 7th August 1993. This remains the only record for the area (DMB / SBBO)

88.30 White Campion (*Silene latifolia* Poir.) Native. *Widespread and common* throughout the Recording Area at the edges of farmed land and on waste ground, road banks, etc. (SBBO).

88.31 *Silene latifolia* x *diocia*. Native. Very scarce and local. A hybrid which has been recorded from the Sandwich Bay Estate area (Philp 2010).

88.32 Red Campion (*Silene diocia* L.) Native. This species was recorded as 'common about the Estate' in 1969 but by the mid-1980's was described as being 'much scarcer than formerly' (SBBO). More recent surveys show it to be of restricted distribution in the Recording Area, with sightings from only four tetrads, at Pegwell; just north of Sandwich Bay Estate and in the Lydden valley area, (Philp 2010).

88.33 Sand Catchfly (*Silene conica* L.) Native. **RDB 2; NS; KRDB 2. CR**. *Fairly widespread in the area*. This plant has only ever been recorded from two sites in Kent, near Greatstone and, more widely, at Sandwich Bay where it has been found in five tetrads on fixed sand-dunes and shingle areas of the upper beach along the coastal strip from Princes Golf Club south to the Cinque Ports Golf Club (Philp 2010); (KC 2014). Abundant there at one site in June 2016 with perhaps 100 plants (KC 2016).

88.34 Ragged Robin (*Silene flos-cuculi* L.) Native. A *widespread but local* plant of wet pasture and dune slacks in the Recording Area, for example, in the 'White House' area of Sandwich Bay Estate; on the KWT Reserve and in Stonelees (SBBO).

88.35 Soapwort (*Saponaria officinalis* L.) Archaeophyte. Local in the Recording Area. It was recorded as being familiar in various sites about the Estate at least until the mid-1980's, persisting in the Middle Field and near the Sanctuary Flats in

1994 and in the Middle Field in 1995 (SBBO). Philp (2010) did not show it as being present anywhere in the Recording Area but it was found growing abundantly in the northern end of the Middle Field and on the edge of Royal St. George's Golf Course in July 2021 and subsequently (KC).

88.36 Baby's Breath (*Gypsophila paniculata* L.) Neophyte. **CR.** An introduced species which is only known in Kent from Sandwich Bay (TR35P), where it has been established for many years. It was initially identified near the Gullies on the Estate, where it was apparently damaged by cattle but survived at least until the mid-1990's, then found just north of the Estate in July 1982; and finally established itself at the north end of St. George's Golf Club by the former Princes Golf Club H.Q. by 1996 (SBBO; Philp 2010).

88.37 Deptford Pink (*Dianthus armeria* L.) Native. **RDB 2; UK BAP; KRDB 2; CR. WCA 8.** Known from only one site in the Recording Area. Formerly known from the roadside near Stonar Cut, between the A259 and the River Stour at Backsand, it was then recorded in several years in the 1980's and 1990's growing on the seaward side of the beach at the KWT Reserve (KWT; SBBO). It could not be found by the Philp (2010) survey at these former sites, but it was confirmed as still present on the KWT Reserve (KWT) also by SB, (2014) and KBRG (2015). Annual counts have fluctuated in recent years from 16 to over 1500 plants.

89. AMARANTHACEAE (Goosefoots)

Formerly Chenopodiaceae.

89.1 Good King Henry (*Chenopodium bonus-henricus* L.) Archaeophyte. **CR.** Probably extinct in the Recording Area. A long-introduced species. It was recorded as 'common' in the Middle Field area of the Estate in 1970 following soil disturbance by housing development and on New Downs Farm in 1979 (SBBO) but Philp (1982), referred to it as being a 'scarce' species and by the time of Philp (2010), it was only recorded in three Kent tetrads, not including the SBBO Recording Area.

89.2 Red Goosefoot (*Chenopodium rubrum* L.) Native. Very local in the area. Found on the Estate, including the sea-front near Sandilands, in 1970; on the 100-acres section of the KWT Reserve in 1980 and 'persisting' on the Estate in 1994. Recorded only from TR35S (Cinque Ports Golf Club) and TR35L, (Betteshanger Country Park) by Philp (2010).

89.3 Stinking Goosefoot (*Chenopodium vulvaria* L.) Archaeophyte. **RDB 2; UKBAP C; KRDB 2; CR; WCA 8.** This rare plant, which smells of rotten fish, was found in the area in 1986 (RF) constituting the first and so far, only, record for the Recording Area.

89.4 Nettle-leaved Goosefoot (*Chenopodium murale* L.) Archaeophyte. **RDB 2; CR.** This *rare and local* inhabitant of disturbed light sandy soils and dune areas was discovered at Restharrow Scrape on the Estate in 2013 (SB) and was a new species for the Recording Area.

89.5 Fig-leaved Goosefoot (*Chenopodium ficifolium* Sm). Archaeophyte. A *fairly widespread* species of waste and disturbed ground which has been recorded in the Estate area in TR35N, TR35S and TR35T and also on New Downs Farm in TR35P (Philp 2010; SBBO).

89.6 Fat-hen (*Chenopodium album* L). Native. A *common plant* throughout the Recording Area, particularly on arable farmland and disturbed ground (SBBO).

89.7 Spear-leaved Orache (*Atriplex prostrata* Boucher) Native. *Commonly found* along the upper shoreline and salt-marsh areas at Sandwich and Pegwell Bays, along with other members of the *Atriplex* genus. Also recorded from throughout the Estate area (SBBO; Philp 2010).

89.8 Babington's Orache (*Atriplex glabriuscula* Edmonston). Native. **CS.** Local in the area. This prostrate annual plant was recorded by Philp (1982) on the beach north of the old Princes Golf Club House but in 2010 he shows it only on the shingle upper beach from Sandwich Bay Estate southwards towards Deal. More recently it has been again confirmed from the Prince's Beach area (SB, 2014; KBRG 2015).

89.9 Grass-leaved Orache (*Atriplex littoralis* L.) Native. Local in the area. Largely confined in the Recording Area to the margins of the salt-marshes at the mouth of the River Stour, but also recorded from further upstream on the banks of the Stour in, for example, TR35P (SBBO) and south of the Estate (Philp 2010).

89.10 Common Orache (*Atriplex patula* L.) Native. A plant of arable and waste ground. Shown in almost all the Recording Area by Philp (1982) persisting at least on the Estate until 1994 (SBBO) but Philp, (2010) has no records for anywhere in the area and there appear to be no current records (SB 2014).

89.11 Frosted Orache (*Atriplex laciniata* L.) Native. **KRDB 3. CR.** Very local in the Recording Area. This species is found in *only about six sites around the Kent coast* where it grows in loose sand along the line of the high tides. It was recorded from the beach frontage of St. George's Golf Course as far north as Shellness Point (TR36L) up to the mid-1990's (SBBO) and confirmed from at least the latter locality by Philp (2010) and in 2015(KBRG). It was also found in the northern corner of Pegwell Bay (TR36M) in June 2014 (KC).

89.12 Sea Purslane (*Atriplex portulacoides* L.) Native. A *common and characteristic plant* of the salt-marshes on both the north and south sides of the Stour estuary. The plant prefers to grow on slightly more elevated, better-drained areas, for example, along the edges of the many drainage runnels (SBBO).

89.13 Sea Beet (*Beta vulgaris*, ssp. *maritima* L.) Native. This is a *common and characteristic plant* all along the whole shoreline and adjacent parts of the Recording Area decreasing inland (KC).

89.14 Perennial Glasswort (*Sarcocornia perennis* Mill.) Native. **NS.** Local in the Recording Area. In Kent it is found *only on parts of the North Kent marshes and at the River Stour Estuary* where it is found on the middle and upper-parts of the salt-marsh. (SBBO; Philp 2010; KBRG 2015).

89.15 One-flowered Glasswort (*Salicornia pusilla* Woods) **NS; CS.** Very local in the Recording Area. This species of the drier parts of salt-marshes is mostly found in North Kent but was recorded for the area in 1998 (FR). This remained the only record of the species until 2015 when it was reported as 'a very large population on what appeared to be a fairly newly-formed area of saltmarsh' (KBRG 2015).

89.16 Purple Glasswort (*Salicornia ramosissima* Woods) Native. Local in the area. This species has been recorded from the tidal River Stour downstream of Sandwich and at the Stour Estuary (SBBO; Philp 2010). It favours the middle and upper areas of salt-marshes with a firm, muddy substrate. It was reported as 'frequent' there in September 2015, 'especially on newly-formed areas of saltmarsh which have developed behind storm-built sandbanks at the top of the beach' (KBRG 2015).

89.16a Hybrid Glasswort (*Salicornia pusilla* x *ramosissima*). Scarce and local within the Recording Area. 'Several plants observed near Shellness Point in September 2015 within a large area dominated by *S. pusilla*' (KBRG 2015).

89.17 Common Glasswort (*Salicornia europaea* L.) Native. Local in the Recording Area. In Kent, found *only on the North Kent Marshes and at the Stour Estuary* where it occupies a zone where it is regularly covered by high tides. Despite its name, Philp (2010), points out that it is not, in fact, the most common species in the county.

89.18 Yellow Glasswort (*Salicornia fragilis* P.W. Ball and Tutin) Native. Local in the Recording Area. Recorded in *only two Kent sites*, the North Kent Marshes and from the lower levels of salt-marshes from the Stour Estuary, in TR36L (Philp 2010). A 'large expanse' of this species was recorded at Shellness Point in September 2015 (KBRG).

89.19 Long-spiked Glasswort (*Salicornia dolichostaya* Moss). Native. **CS.** Very scarce in the Recording Area, with one old record. Philp (1982 and 2010) does not record this species anywhere away from North Kent, but *it was recorded for the Sandwich Bay area* by FR (1946).

89.20 Annual Sea-blite (*Suaeda maritima* L.) Native. This is a *characteristic and common plant* of the lower and middle sections of the salt-marshes which line the banks of the River Stour downstream from Sandwich to the Stour estuary (SBBO).

89.21 Prickly Saltwort (*Salsola kali*. ssp. *kali* L.) Native. **RDB 2; KRDB 3; CR.** Very local in the Recording Area. Found at only five scattered coastal sites in Kent, including the sandy beach from Princes old Golf Clubhouse northwards to Shellness Point on the Stour Estuary (TR36L) (SBBO; SB, 2014)). Also found in June 2014 on a sandy beach in the northern corner of Pegwell Bay north of the former Hoverport site (KC).

89.22 Common Amaranth (*Amaranthus retroflexus* L.) Neophyte. Casual and very infrequent in the area. A species originating from sources such as garden escapes and discarded bird seed. It has been recorded from the Pegwell Bay area in TR36L (Philp 2010); at the Bird Observatory in September 2015 (ET); on the waste dump at the northern end of the Cinque Ports golf course in September 2017 (KC) and on the Green Wall (TR340580) on 12.09.2024 (SZW)

89.23 Springbeauty (*Claytonia perfoliata*. Donn ex Willd.) Neophyte. Several plants were found growing on disturbed ground around rabbit burrows near Sandilands on the Estate in May 2014. (CW / KC). This constitutes a new record of this species for the Recording Area. Philp (2010) recorded it from only four sites in the county, three of them in West Kent. A further record relates to a plant found at Shellness Point on 21.03.2026 (AFH).

90. AIZOACEAE (Dewplants)

90.1 New Zealand Spinach (*Tetragonia tetragoniodes* Pall.) Neophyte. This is an introduced casual plant of waste ground, usually short-lived. It was first recorded in the Sandwich Bay area in 2015 when eight plants were found along the drift-line of the sandy beach at Shellness Point (KBRG 2015).

95. CORNACEAE (Dogwoods)

95.1 Dogwood (*Cornus sanguinea* L.) Native. Very local in the area. A plant of scrub and hedgerows which has been recorded mainly from sites to the south and west of the Recording Area (Philp1982 and 2010); It has also been found in Stonelees where it is probably a wild plant and at one or two places on the Estate, where it is doubtless an introduced species (SBBO)..

97. BALSAMINACEAE (Balsams)

97.1 Indian or Himalayan Balsam (*Impatiens glandulifera* Royle). Neophyte. Recorded in the North Stream area near St. George's Golf Clubhouse and along the Haven in the 1980's (SBBO) but (fortunately) this highly invasive species appears not to have established itself in the area.

99. PRIMULACEAE (Primroses)

99.1 Primrose (*Primula vulgaris* L.) Native. Very local in the area. Recorded from near the Estate Tollgate between 1970 and 1994 and, more recently, from the Elms in 2012-2013 probably as a result of deliberate planting or garden discard (SBBO).

99.2 Cowslip (*Primula veris* L.) Native. Very local in the area. 'Formerly plentiful on many old pastures of the Lydden Valley' and recorded there at least up until the late-1990's (SBBO). It was confirmed as still present in at least one locality along the margin of an 'improved' pasture, in Spring 2014 (SB / KC) was also reported from the Middle Field on the Estate at the same time and has now established a small colony there (KC 2021).

99.3 Water Violet (*Hottonia palustris* L.) Native. Very local in the Recording Area. Recorded from the Worth Marshes in the 1970's and 1980's (SBBO) but it was feared to have been eradicated by dredging and bank clearance in subsequent years. However, its' continued presence was confirmed by the finding of plants in several ditches on the Minnis Farm RSPB site in 2022 (EC 2022).

99.4 Yellow Loosestrife (*Lysimachia vulgaris* L.) Native. Very local in the Recording Area. Recorded in the Haven Stream on the Estate in 1985 and on Worth Marshes in the same year (SBBO). Recorded in Philp (2010) from just one tetrad in the area, in the Lydden Valley, and an adjacent tetrad to the west.

99.5 Sea-milkwort (*Glaux maritima* L.) Native. Local in the Recording Area. A plant of the upper parts of salt-marshes. It has only been recorded in East Kent by Philp (2010), *from two tetrads*, one centred on Sandwich Bay Estate and the other centred on Shellness Point. It was reported as being 'widespread and common' on the banks of the Stour from Vigo Sluice to the river-mouth, and on the KWT Reserve, at least up to the mid-1990's (SBBO) and again confirmed from Shellness Point in September 2015 (KBRG).

99.6 Bog Pimpernel (*Anagallis tenella* L.) Native. **KRDB 3; CR**. Very local in the Recording Area. A plant of bogs and damp peaty areas which was recorded from Ham Fen, just outside the Recording Area, in Philp (2010) but which was also reported in 2009 from two *localities inside the Recording Area*, 'a calcareous scrape in fixed dunes' in TR35N (KFC) and confirmed from there in both 2011 and 2022 (KBRG). It has also been found in the Dragonfly Pond Field on the Estate (SBBO; PSL 2022).

99.7 Scarlet Pimpernel (*Anagallis arvensis* L.) Native. Found *throughout most of the Recording Area* on both farmed and other disturbed ground (SBBO). Blue-flowered variants, (*A.a. ssp. foemina*) have been recorded near Sandilands and Mary Bax's.

99.8 Brookweed (*Samolus valerandi* L.) Native. **CS**. Local and infrequent in the area. This plant grows at the edges of dykes, usually in coastal locations. It was present on the Worth Marshes in the 1970's and 1980's and on dune slacks on Princes Golf Club in the 1990's (SBBO). It was also recorded from the Lydden Valley (Philp 2010), Sandwich Bay Estate in 2012 (SBBO) and at the edge of a pool in the St. George's bushes area of the Royal St. George's Golf Course on 27.07 2026 (AFH).

102. ERICACEAE (Heathers)

102.1 Heather (*Calluna vulgaris* L.) Native. Unusually, this plant of acid heath-land has been recorded from one tetrad in the area, initially in 1963 and 1972 near Mary Bax's and then at a beach location just south of Sandwich Bay Estate (SBBO; Philp 2010), being still present there in 2026 (SZW).

104. RUBIACEAE (Bedstraws)

104.1 Field Madder (*Sherardia arvensis* L.) Native. Local and infrequent in the Recording Area. Previously found at the edge of arable fields, in the White House paddock and on disturbed waste ground on the Estate between the 1980's and mid-1990's (SBBO) but from nowhere within the Recording Area in Philp (2010).

104.2 Common Marsh-bedstraw (*Galium palustre* ssp. *palustre* L.) Native. *Fairly widespread*. Recorded from damper dune slacks on the KWT Reserve; St. George's Golf Course; the Haven Stream and Restharrow Dunes, (SBBO).

104.3 Great Marsh-bedstraw (*Galium palustre* ssp. *elongatum* L.). Local in the Recording Area. Shown in Philp (1982 and 2010) as occurring in TR35N and TR35P. This plant is 'practically always (found) in standing water (Philp 2010).

104.4 Lady's Bedstraw (*Galium verum* L.) Native. *Abundant* throughout the Recording Area on well-drained grassland, sand-dunes, golf course roughs and similar locations (SBBO).

104.5 Hedge Bedstraw (*Galium album* L.) Native. *Recorded from all tetrads* in the Recording Area in hedgerows, scrub and roadside edges. (SBBO; Philp 2010).

104.6 Cleavers or Goosegrass (*Galium aparine* L.) Native. *Common and widespread*. Found throughout the Recording Area in hedgerows, woodland plantations on the Estate and waste ground (SBBO).

105. GENTIANACEAE (Gentians)

105.1 Common Centaury (*Centaureum erythraea* Rafn) Native. Found *throughout the Recording Area* on dry grassy areas and sand dunes. (SBBO; Philp 2010) and also common on the former Hoverport site in Pegwell Bay (KC, 2014). A 'noticeably robust' form was reported from the dunes at Shellness Point in September 2015 (KBRG 2015).

105.2 Lesser Centaury (*Centaureum pulchellum* Druce.) Local in dune slacks on the golf courses; in the KWT Reserve, including salt-marsh areas, and in the Sampher, (SBBO; Philp 2010).

105.3 Yellow-wort (*Blackstonia perfoliata* L.) Native. *Locally common* in rough grassland in such localities as the KWT Reserve; the Sampher; the Golf Courses around the Estate and on the former Hoverport site in Pegwell Bay (SBBO; KC).

106. APOCYNACEAE (Periwinkles)

106.1 Greater Periwinkle (*Vinca major* L.) Neophyte. Local in the Recording Area. Recorded as a garden escape in the Prince's Plantation and in the Restharrow and Elms area of the Estate from the 1960's to the mid-1990's (SBBO). It does not appear in Philp (2010), for anywhere in the Recording Area, but it is still common and apparently spreading in the Elms area especially as conservation work produces clearings and thus allows in more light. It also occurs in the derelict Gardens area at the north end of the Estate and at Dickson's Corner (KC 2014).

107. BORAGINACEAE (Borages) (Formerly Hydrophyllaceae)

107.1 Viper's-bugloss (*Echium vulgare* L.) Native. *Widely-recorded throughout the area* on dune pastures; along the coastal sand-dune frontage; and elsewhere (SBBO).

107.2 Russian Comfrey (*Symphytum x uplandicum* Lepech). Neophyte. Very local in the Recording Area. Shown in Philp (1982 and 2010) as occurring in TR35N, in the Observatory-Old Downs Farm area, and in May 2014 it was recorded from Waldershare Avenue on the Estate and also along the Worth track (KC).

107.3 Bugloss (*Anchusa arvensis* L.) Archaeophyte. *Widespread but infrequent*. Recorded in the 1980's and 1990's from the sea-front on the Estate; on old dunes fronting the Cinque Ports Golf Club and elsewhere. (SBBO; Philp 2010). More recently confirmed from the same general localities (SBBO 2012; KC 2014).

107.4 Green Alkanet (*Pentaglottis sempervirens* L.) Neophyte. Local in the area, but often abundant where it does occur. Long-known as an early-Spring plant from such areas as the Elms; Restharrow Dunes and the Little Gully on the Estate (SBBO).

107.5 Borage (*Borago officinalis* L.) Neophyte. Casual and very local. Recorded from the Estate in Philp (2010).

107.6 Water Forget-me-not (*Myosotis scopioides* L.) Native. *Widespread in wet habitats* on New Downs, the Estate and Worth Marshes and in wet dune slacks on the Estate (SBBO).

107.7 Tufted Forget-me-not (*Myosotis laxa* Lehm.) Native. *Found in most of the Recording Area* where there are ditches and ponds with some soil disturbance (SBBO).

107.8 Wood Forget-me-not (*Myosotis sylvatica* Ehrh.) Native. Very local in the area. Probable garden escape which was recorded from waste ground on the Estate and at the southern edge of the St. George's Golf Course in the late-1970's to mid-1980's (SBBO). Philp (2010) records it from the same tetrad.

107.9 Field Forget-me-not (*Myosotis arvensis* L.) Archaeophyte. Local and infrequent. Recorded from the southern edge of St. George's Golf Course and in places on the Estate in the 1970's and 1980's (SBBO); still present in the same general area at the time of Philp (2010) and in more recent years (PD, 2014).

107.10 Early Forget-me-not (*Myosotis ramoisissima* Rochel) Native. A *common ephemeral species* of early-Spring on fixed dune and dune pasture throughout the Recording Area (SBBO).

107.11 Changing Forget-me-not (*Myosotis discolor* Pers.) Native. Very local in the Recording Area. Found in the Estate area by Philp (1982) and from several sites around, or adjacent to, the Estate during the mid-1980's (SBBO). Not recorded for the area at all (or anywhere in East Kent) in Philp (2010), but reported from the Little Gully and other areas around the Estate in 2013 (PD 2014).

107.12 Hound's-tongue (*Cynoglossum officinale* L.) Native. **RDBLRnt**. Not an uncommon species in Kent and within the Recording Area it is a *fairly common inhabitant* of old drier dunes and waste-ground on the golf courses and around the Estate (SBBO; Philp 2010; KC 2014).

108. CONVULVACEAE (Bindweeds)

Formerly Cuscutaceae.

108.1 Field Bindweed (*Convolvulus arvensis* L.) Native. *Abundant* in former cultivated areas, sand dunes and waste ground throughout the whole of the Recording Area (SBBO; Philp (1982 and 2010).

108.2 Sea Bindweed (*Calystegia soldanella* L.) Native. **CS**. A *familiar plant* of recently-stabilised dunes and shingle areas throughout the coastal fringe of the Recording Area (SBBO).

108.3 Hedge Bindweed (*Calystegia sepium* L.) Native. *Common throughout the Recording Area* in waste ground and bush clumps (SBBO).

108.4 Large Bindweed (*Calystegia silvatica* Griseb.) Neophyte. Recorded mainly from fences, hedgerows and waste ground *towards the inland edges of the Recording Area and very common at Pegwell Bay*, behind the former Hoverport site (SBBO).

108.5 Dodder (*Cuscuta epithymum* L.) Only one historical report from the Recording Area when a plant was found parasitizing Gorse, (*Ulex europaeus*), at The Chequers in 1976 (SBBO) and with apparently no further records of this nationally scarce and declining species.

109. SOLANACEAE (Nightshades)

109.1 Duke of Argyll's Teaplant (*Lycium barbarum* L.) Neophyte. At scattered locations in the Recording Area. Known from at least the mid-1960's in various sites on the Estate. Also recorded from near Chequers; on Prince's Golf Course and in the southern end of the KWT Nature Reserve (SBBO). Philp (2010) confirmed its continued presence in most of these areas.

109.2 Henbane (*Hyoscyamus niger* L.) Archaeophyte. **CS.** Rare and very intermittent in its appearance in the Recording Area with no records since 1987. Described as 'an ephemeral plant on the Estate (SBBO 1968) with subsequent records of small groups of plants growing in only three years -1968, 1971 and 1987, often as a result of soil disturbance. No records from either of the editions of Philp (1982 and 2010), of this nationally-declining species.

109.3 Apple of Peru (*Nicandra physalodes* Adans.) Neophyte. Four plants were found growing in the Green Wall area on 12.09.2024 (SZW). This is the only existing record of this casual species.

109.4 Thorn-apple (*Datura stramonium* L.) Neophyte. Very erratic in its appearance. Back in the 1970's it was 'not uncommon' in the White House paddock on the Estate when donkeys were habitually kept there and patches of disturbed soil resulted (SBBO 1974), but it was not until 1994 that it was recorded again from the same site. No other records since, apparently, until several plants appeared on spoil heaps near Dickson's Corner in the Autumn of 2021 and in subsequent years (KC/SBBO).

109.5 Black Nightshade (*Solanum nigrum* ssp. *nigrum* L.) Native. *Fairly widespread within the Recording Area.* Found on patches of disturbed ground, fallow arable fields and gardens (SBBO).

109.6 Bittersweet Nightshade or Woody Nightshade (*Solanum dulcamara* L.) Native. *Quite common amongst shrubs* in suitable areas around the Estate, on the KWT Reserve and elsewhere, (SBBO). Philp (2010) refers to the subspecies *marinum* which occurs on shingle beaches on the coast and which may well be present in the Recording Area.

109.7 Deadly Nightshade (*Atropa belladonna* L.) Very scarce and intermittent in the Recording Area. Reported from the late 1970's and early 1980's from near the Green Barn on Prince's Golf Course where it was probably brought in on imported top-soil (MB) and also in a garden along the Sandown Road from 2012 onwards (PD).

110. OLEACEAE (Ashes)

110.1 Forsythia (*Forsythia x intermedia* Zabel) Neophyte. A single plant in flower in the hedgerow at Old Downs Bridge, on the approach to the Estate

Tollgate, in April 2024. (SZW). The familiar and common garden shrub which is common as an 'escape' but this is the first record for the Recording Area.

110.2 Ash (*Fraxinus excelsior* L.) Native. Local in the Recording Area. Planted in Estate gardens from the late 1960's and in later years also in the Elms plantations. Also recorded from the railway embankment on Worth Marshes, *where presumably self-sown* (SBBO). In recent years it has been much affected by Ash Dieback disease caused by the fungus *Hymenoscyphus fraxineus*.

110.3 Wild Privet (*Ligustrum vulgare* L.) Native. Local in the Recording Area. Planted as garden hedgerows on the Estate in the late 1960's and presumed bird-assisted specimens have persisted in the Big Gully and Middle Field areas since then (SBBO).

110.4 Garden Privet (*Ligustrum ovalifolium* Hassk.) Neophyte. Local in the Recording Area. Present as a hedging plant in many gardens on the Estate as well as in the Slazengers and Cellars derelict sites (SBBO).

113. VERONICACEAE (Speedwells)

113.1 Foxglove (*Digitalis purpurea* L.) Native. Apparently always a scarce plant in the Recording Area (SBBO), though recorded from the Estate tetrad in Philp (2010).

113.2 Heath Speedwell (*Veronica officinalis* L.) Native. The sole record relates to plants in flower in the White House rough (TR35N) in May 1985 (SBBO).

113.3 Brooklime (*Veronica beccabunga* L.) Native. Local in the Recording Area. Reported from muddy verges of ditches from Worth Marshes in the 1970's, persisting in that site (Philp 2010) and also reported from the New Downs area, (TR35P) (Philp 2010).

113.4 Blue Water-speedwell (*Veronica anagallis-aquatica* L.) Native. *Fairly widespread in suitable habitats*. Reported from such sites as Worth Marshes; the Haven Stream; ditches on Princes Golf Course and on the KWT Reserve in the 1970's to the 1990's (SBBO) but only from Worth Marshes in Philp (2010).

113.5 Pink Water-speedwell (*Veronica catenata* Pennell) Native. Recorded as *frequent in and beside ditches* on Worth Marshes and in the Haven Stream in the 1970's and 1980's (SBBO) and noted widely in the area by Philp (2010). Confirmed as being still present on the Worth Marshes RSPB Reserve in August 2023 (KBRG).

113.6 Thyme-leaved Speedwell (*Veronica serpyllifolia* L.) Native. Recorded as widespread and common in drier grassland, waste places and arable land on the Estate, golf courses and Old Downs Farm in 1972 (SBBO) but, somewhat

inexplicably, it does not appear for anywhere in the Recording Area in either of the editions of Philp (1982 and 2010).

113.7 Ivy-leaved Speedwell (*Veronica hederifolia* L.) Archaeophyte. *Widespread and common* on short turf areas around the Estate, the golf courses and disturbed ground throughout the area (SBBO; Philp 2010).

113.8 Grey Field-speedwell (*Veronica polita* L.) Neophyte. Very local and intermittent within the Recording Area. Recorded as a frequent weed in an arable field near the Observatory Headquarters (TR35N) in 1982 and in the White House paddock area in 1994 (SBBO) but no other subsequent records.

113.9 Germander Speedwell (*Veronica chamaedrys* L.) Native. *A fairly common and widespread plant throughout much of the Recording Area* in rough grassland, dune slacks and field-edges (SBBO).

113.10 Wall Speedwell (*Veronica arvensis* L.) Native. *Widespread*. Found on old walls, thinly-turfed sand-dunes and waste ground throughout much of the Recording Area (SBBO; Philp, 2010)

113.11 Common Field Speedwell (*Veronica persica* Poir.) Neophyte. Recorded from *all tetrads in the Recording Area as a widespread and common species* of cultivated and disturbed ground (SBBO; Philp 2010).

113.12 Snapdragon (*Antirrhinum majus* L.) Neophyte. Occasional naturalised plants were recorded from stabilised shingle on the Estate upper beach in the 1970's and 1980's (SBBO), and still present in the area in the Philp (2010) survey period, but no recent records.

113.13 Small Toadflax (*Chaenorhinum minus* L.) Archaeophyte. Recorded from along the railway line between the Worth level-crossing and Cottington in 1972, (SBBO), and recorded from the same general area in Philp (1982), but no subsequent records exist of this declining species from anywhere in the Recording Area until it was found in August 2013 in an area of footpath repair near the Great Wood on Worth marshes (KBRG)

113.14 Ivy-leaved Toadflax (*Cymbalaria muralis* P. Gaertn) Neophyte. Naturalised in a few scattered sites on bare stony places and shingle beaches but on the Estate mostly recorded from rubble and foundations of derelict buildings in such areas as the Cellars and at Slazengers (SBBO).

113.15 Common Toadflax (*Linaria vulgaris* Mill.) Native. Found in a few scattered sites where it is sometimes common. Recorded from such areas as the railway line across Worth Marshes; the edge of the Ancient Highway on the Estate; the White House paddock: along the river-bank at the Sampher and along roadsides at Discovery Park at Stonar (SBBO; Philp 2010).

113.16 Purple Toadflax (*Linaria purpurea* L.) Neophyte. Very scarce and local in the Recording Area. Found growing in old rubble at Shingle End on Princes Golf Course in 1972 (SBBO) and from the same general area and on the Cinque Ports Golf Course by Philp (2010). Quite abundant, however, on the site of the former Hoverport in Pegwell Bay in 2014 and also found at Blue Pigeons Farm, Worth and in the Bird Observatory garden in June 2019 (KC).

113.17 Pale Toadflax (*Linaria repens* L.) Archaeophyte. **CR**. Described as 'never a common plant in the county' in Philp (2010). The only report from the Recording Area relates to an old record of the plant being 'quite common' along the edge of the railway line near the sub-station on Worth Marshes in 1972 (SBBO).

114. PLANTAGINACEAE (Plantains)

114.1 Buck's-horn Plantain (*Plantago coronopa* L.) Native. *Widespread and common throughout the Recording Area* on sand-dunes, sea-walls, golf-course fairways and the upper levels of beaches (SBBO; Philp 2010).

114.2 Sea Plantain (*Plantago maritima* L.) Native. *Widespread in suitable sites throughout the area*. Found on salt-marshes along the River Stour; on the KWT Reserve; and in muddy depressions on the seaward edge of the Estate and on the frontage of the Cinque Ports Golf Course (SBBO).

114.3 Greater Plantain (*Plantago major* ssp. *major* L.) Native. *Found commonly in all parts of the Recording Area* on short turf areas, paths and tracks and occasionally on stabilised shingle of the upper beach (SBBO).

114.4 Hoary Plantain (*Plantago media* L.) Native. Scarce in the area. Recorded from the edge of the Ancient Highway, near The Chequers, in the early 1970's and from grass verges on the Estate in 1979 (SBBO) but only appears in tetrads further south and west in Philp (2010).

114.5 Ribwort Plantain (*Plantago lanceolata* L.) Native. *Abundant throughout the Recording Area* in pasture and rough grassland (SBBO; Philp 2010).

115. HIPPURIDACEAE (Mare's-tails)

115.1 Mare's-tail (*Hippuris vulgaris* L.) Native. **CS**. Local in the area. Recorded from marsh dykes in TR35M and TR35N in the Lydden Valley area in Philp (1982 and 2010) and from other sites on the Worth Marshes, with the latest records dating from 2022 (SBBO; EC2022).

116. CALLITRICHACEAE (Water-starworts)

116.1 and 116.2, Water-starworts (*Callitriche* spp.) Native. Philp, (2010), has a useful discussion of the difficulties in separating the various species of *Callitriche*. He records unspecified members of the genus from ditches and streams on the

Worth marshes and Lydden Valley, but the following two species have since been confirmed.

116.1 Short-leaved Water-starwort (*Callitriche truncata* ssp. *occidentalis* Guss.) **CS.** Very local in the Recording Area. Identified from TR35N and TR35M on the Hacklinge-Worth Marshes in 2008 (KBRG).

116. 2 Blunt-fruited Water-starwort (*Callitriche obtusangula* L. Native. Very local in the Recording Area. Plants of this species are listed by Philp (2010) for the Lydden Valley-Worth Marshes area.

117. SCROPHULARIACEAE (Figworts)

Formerly Buddlejaceae.

117.1 Great Mullein (*Verbascum Thapsus* L.) Native. Local and infrequent in the Recording Area. Recorded from a range of habitats though typically on roadside verges and old dune areas (SBBO; Philp 2010).

117.2 Common Figwort (*Scrophularia nodosa* L.) Native. Infrequent in the Recording Area. Recorded in the damp slacks of St. George's bushes at the edge of the Estate in 1969 and present on the south side of the Elms in 1994 (SBBO) but apparently no subsequent records.

117.3 Water Figwort (*Scrophularia auriculata* L.) Native. *Fairly widespread and common* in the edges of ditches and ponds in most of the fresh-water wetland parts of the Recording Area (SBBO; Philp 2010), including such sites on the Estate and the North Stream, the Haven Cut and the Gullies.

117.4 Butterfly-bush. (*Buddleia davidii* Franch.) Neophyte. At *scattered sites throughout the area* and widely-planted in gardens. Naturalised on the Estate in such sites as Slazengers and The Cellars, and elsewhere in the wider Recording Area such as at Richborough and Pegwell Bay (SBBO).

118. LAMIACEAE (Dead-nettles)

Formerly Labiatae.

118.1 Hedge Woundwort (*Stachys sylvatica* L.) Native. Local. Recorded from by the Estate Toll-gate and at Mary Bax's in the late 1970's, on St. George's Golf Course in the 1980's (SBBO) and still confirmed as present in the same general area by Philp (2010).

118.2 Marsh Woundwort (*Stachys palustris* L.) Native. Very scarce, with only one recent report from the area. A species of streams and ponds which was recorded from ditches between the Observatory and Mary Bax's in the late 1970's and in the Haven in 1980 (SBBO). There was no record of it in Philp (2010), but it was reported from the pond in the Middle Field on The Estate in late-April 2015 (SBBO).

118.3 Hybrid Woundwort (*Stachys x ambigua*). Very local. Recorded from the Pegwell Bay Country Park area (TR36L) in 2013 (KBRG).

118.4 Black Horehound (*Ballota nigra* ssp. *meridionalis* L.) Archaeophyte. Recorded from *throughout the whole Recording Area* (SBBO; Philp 2010), growing on roadsides, field-edges, gardens and waste-ground.

118.5 White Dead-nettle (*Lamium album* L.) Archaeophyte. *Found in most parts of the Recording Area* except on new dunes, preferring sheltered edges of wooded areas, hedgerows and waste ground (SBBO).

118.6 Spotted Dead-nettle (*Lamium maculatum* L.) Neophyte. Very scarce and local in the Recording Area. Found in a garden-dump near the sea-front at Slazengers on the Estate in 1983 and persisting there at least until 1994, (SBBO). *No other records* until 2017 when it was found on a soil mound on the Ancient Highway (SB).

118.7 Red Dead-nettle (*Lamium purpureum* L.) Archaeophyte. *Found in almost every tetrad of the Recording Area* on both cultivated and disturbed ground (SBBO; Philp 2010).

118.8 Henbit Dead-nettle (*Lamium amplexicaule* L.) Archaeophyte. Local. Found on waste ground in several sites around the Estate and adjacent farmland (SBBO; Philp 2010).

118.9 Jerusalem Sage (*Phlomis fruticosa* L.) Archaeophyte. Garden escape found naturalising itself on rough ground off Waldershare Avenue, Sandwich Bay Estate, in May 2026 (KE/SBBO)

118.10 Skullcap (*Scutellaria galericulata* L.) Native. Very scarce, local and intermittent in the Recording Area. Recorded in TR35N in the Old Downs Farm and Haven Cut areas in the early 1950's and in the latter locality, *after a gap of 40 years*, in 1994 (SBBO). Philp (2010) records it from *just one tetrad* (TR36F) centred on Stonelees.

118.11 Eastern or Persian Catmint (*Nepeta racemosa* Lam.) Neophyte. A specimen of this plant was found in the Cellars area of the Estate in June 2023 (SZW). It is much-grown in gardens, which is doubtless where this plant originated, but it was the first documented record for the Area.

118.12 Ground Ivy (*Glechoma hederacea* L.) Native. Recorded from grassland, hedgerows and waste ground *throughout most of the area* (Philp 1982 and 2010) except in the narrow sand-dune coastal strip.

118.13 Selfheal (*Prunella vulgaris* L.) Native. Recorded as '*not uncommon*' in a range of grassland sites around the Estate (White House, Restharrow Dunes),

(SBBO) between the 1960's and 1990's, and confirmed from there in Philp (2010). Also found at Pegwell; Stonelees; and in the Cinque Ports-Worth Marshes areas.

118.14 Wild Marjoram (*Origanum vulgare* L.) Native. Only historically recorded once, apparently. Two plants growing besides the Ancient Highway on Cinque Ports Golf Club, just south of The Chequers, in 1978 (SBBO). In 2014 it was also found to be naturalising itself at the edge of the Observatory car-park (KC).

118.15 Gipsywort (*Lycopus europaeus* L.) Native. Local in the Recording Area. Found growing along ditches in TR35N in the Lydden Valley in the late 1970's; in the Haven Cut in the mid-1980's (SBBO) and again in the Lydden valley area by Philp (2010).

118.16 Corn Mint (*Mentha arvensis* L.) Native. Very local and intermittent, possibly now extinct in the Recording Area. Previously found in damp areas by St. George's bushes on the Estate, along the Haven Stream and in the New Downs Farm area in the late-1970's to mid-1980's but not subsequently (SBBO), and not shown for anywhere in the Recording Area by Philp (2010).

118.17 Water Mint (*Mentha aquatica* L.) Native. Found commonly in permanently wet or damp habitats such as older dune slacks on the KWT Reserve; the Golf Courses; the Gullies area on the Estate and on Worth Marshes-Lydden Valley (SBBO).

118.18 Whorled Mint (*Mentha arvensis* x *aquatica* = *Mentha* x *verticillata* L) Recorded as common in the early 1980's in damp areas of the Estate, (for example, the White House; Haven; Waldershare and the Gullies) (SBBO) and still found in this tetrad by Philp (2010).

118.19 Spear Mint (*Mentha spicata* L.) Archaeophyte. Local in the area. A garden escape found in several places around the Estate in the 1980's and also at one site on Prince's Golf Course in TR35P (SBBO). Still present on the Estate at the time of the Philp (2010) survey.

118.20 Apple-mint (*Mentha spicata* x *suaveolens*). Neophyte. Very local in the area. A garden escape, found at two sites on the Estate (Middle Field and Old Highway) in 1985 and 1994 (SBBO) but not recorded by Philp (2010).

118.21 Wild Clary (*Salvia verbenaca* L.) Native. Local in the Recording Area. Recorded from rough grassland and on Golf Courses to the north and south of the Estate between the late 1970's and mid-1990's (SBBO). The plant was confirmed from these tetrads, and from sites on both sides of the river mouth at Pegwell in Philp (2010) and was found on St. George's Golf Course in 2014 (KC).

121. OROBANCHACEAE (Broomrapes)

121.1 Eyebright (agg). (*Euphrasia* agg.) A very difficult group. *E. nemorosa* Pers. was reported in the late 1960's as '*abundant throughout the Recording Area on golf courses and rough pastures*' (SBBO) and recorded from suitable tetrads in Philp (1982). No records appear in Philp (2010) for anywhere in the Recording Area but it (or one of the many other *Euphrasia* micro-species) was found on the Estate in 2012 (SBBO) and *nemorosa* was identified from the 100-Acre Field On 21.05.2026. (AFH).

121.2 Red Bartsia (*Odontites vernus* ssp. *serotinus* Bellard) Native. Recorded as *common in rough grassland throughout the Recording Area* from the late 1960's onwards (SBBO) and shown as present in all tetrads with this habitat in Philp (2010).

121.3 Yellow Bartsia (*Parentucella viscosa* L.) Native. **CR.** Local in the Recording Area but often abundant where it does occur. This hemi-parasitic plant was first recorded in East Kent at Sandwich Bay in 1960 (FR). It was long known from one main colony on the Estate, in the White House paddock, in one of its very few sites in Kent (SBBO). It was then recorded from a single specimen at the Restharrow Scrape in 2006 (KFC), probably due to inadvertent seed dispersal from the White House as a result of conservation management work. Since then, the plant has established itself at this new site and was, '*in good numbers*' in 2013 (PD, 2014) and again in 2014 (KC). In the past the species has also been found on the Princes Golf Course turf nursery; St. George's Golf Course bushes and the '100-acres' section of the KWT Reserve (SBBO).

121.4 Yellow Rattle (*Rhinanthus minor* L.) Native. A *widespread and common species* of fixed dune areas from the KWT Reserve, through the Golf Courses and around the Estate and in Stonelees (SBBO; Philp 2010).

121.5 Bedstraw Broomrape (*Orobanche caryophyllacea* Sm.) Native. **RDBVU; UKBAP C; KRDB 3; BAP 3; WCA 8; NR; CR.** Local but common in its preferred habitat within the Recording Area. Formerly known as **Clove-scented Broomrape**, this species is *only known from two sites in the United Kingdom*, both in Kent, and with the main concentration being at Sandwich Bay. The plant is parasitic on Hedge Bedstraw, (*Galium mollugo*), and Lady's Bedstraw, (*Galium verum*) and can be found in such areas as the golf course roughs near to the Estate (SBBO).

121.6 Common Broomrape (*Orobanche minor* Sm.) Native. **KRDB 3; CR.** Local but common in its preferred habitat within the Recording Area. A parasite on a number of plants, including members of the pea and dandelion families, also on Sea Holly, (*Eryngium maritimum*) and Shrub Ragwort (*Brachyglottis x jubar*) (SZW 2022). This taxon is very variable and includes plants previously described as *O. amethystea* (now usually designated as *O.m.* var. *amethystea*) and *O. maritima*.

For a brief discussion of this complexity, see Philp (2010). The species is *widespread, and in some years very common*, in a range of habitats from open sandy dune, through consolidated dune, to golf course roughs (SBBO).

122. LENTIBULARIACEAE (Bladder-worts)

122.1 Bladderwort (*Utricularia australis* L.) or **Greater Bladderwort**, (*Utricularia vulgaris* L.). Very local within the Recording Area. 'Bladderwort' but identified by the Latin name for 'Greater Bladderwort', is recorded in the SBBO data-base as 'common in clean streams on Worth Marshes' (TR35S) from the 1970's to the mid-1990's. Neither species was recorded as being present there by Philp (2010) but plants identified as *U. vulgaris* were found there in several ditches in 2022. (EC 2022) and again in 2023 (KBRG).

123. ACANTHACEAE (Bear's-breeches)

123.1 An *Acanthus*, either *A. mollis* or *A. spinosus* was found growing along the Princes Drive in May 2023 (PSL). A new record for the Recording Area of an obvious garden escape.

124. VERBENACEAE (Vervains)

124.1 Vervain (*Verbena officinalis* L.) Archaeophyte. Recorded from TR35N in Philp (2010). *Locally frequent* on drier, rough grassland and the sides of roads in well-drained areas.

125. AQUIFOLIACEAE (Hollies)

125.1 Holly (*Ilex aquifolium* L.) Native. Very local within the Recording Area. Planted in gardens on the Estate from at least the early 1980's (SBBO). Not known to have spread much by bird-dispersal from those plantings, but a small tree in the White House paddock may be an exception (SBBO 2012).

127. MENYANTHACEAE (Bogbeans)

127.1 Bogbean (*Menyanthes trifoliata* L.) Native, but, in the case of this record, more likely deliberately introduced. **KRDB 3**. A single record in 1986 from the pond at the Observatory Headquarters and in the nearby Haven Stream (SBBO). Not recorded by either of the surveys by Philp (1982 and 2010).

127.2 Fringed Water-lily (*Nymphoides peltata* Kuntze) Neophyte. Discovered in the Observatory pond and the nearby Haven Stream in 1986 (SBBO). The only record for the area and not reported by Philp (2010) (cf., also, *Menyanthes trifoliata*, above).

128. ASTERACEAE (Daisies, including thistles, hawkweeds, mayweeds etc.)

Formerly Compositae

128.1 Glandular Globe Thistle (*Echinops sphaerocephalus* L.) Neophyte. Only one record, between 1984 and at least 1994, when several plants were found naturalised on waste ground at Slazengers on the Estate (SBBO). No subsequent records, however.

128.2 Carline Thistle (*Carlina vulgaris* L) Native. *Recorded from peripheral areas* such as Cottington Tip (now Betteshanger Country Park) and the edge of the then Pegwell Bay Municipal Tip in the 1970's, but apart from an isolated record from a field on New Downs in 1990, it apparently no longer occurs in the Recording Area (SBBO).

128.3 Greater Burdock (*Arctium lappa* L.) Native. *Fairly widespread and common* on various sites around the Recording Area on waste ground and roadsides – Old Downs Farm; the Haven; the track to New Downs; the Sampher and on the Estate (SBBO).

128.4 Lesser Burdock (*Arctium minus* ssp. *minus* Hill.) Native. *Fairly widespread*. Recorded from various sites around the Estate in TR35T and Philp (2010) records it from a range of other areas across most of the remainder of the Recording Area.

128.5 Slender Thistle (*Carduus tenuiflorus* Curtis) Native. *Plentiful* on old sea-walls, the upper parts of the foreshore and rough grassland areas throughout the Recording Area, (SBBO; Philp 2010).

128.6 Welled Thistle (*Carduus crispus* L.) Native. Declining and now scarce within the Recording Area. Philp (1982) recorded this species of banks and verges from a number of tetrads within the Recording Area and there are SBBO records from 1976 onwards where it was said to be 'common' on rough grassy banks in the former Green Barn area of Princes Golf Course and elsewhere. By 2010 it was reported that the plant 'appears to have become a lot less frequent in recent years' (Philp 2010).

128.7 Spear Thistle (*Cirsium vulgare* Savi) Native. *A widespread and fairly common* plant of short-grass meadows, arable fields and waste places, which has been found in every tetrad in the Recording Area (SBBO).

128.8 Marsh Thistle (*Cirsium palustre* L) Native. *Fairly widespread and locally plentiful* in such areas as damp slacks on the KWT Reserve; near the Green Barn on Princes Golf Course, and on the Estate in the White House paddock (SBBO). Philp (2010) only recorded it from the Worth Marshes-Lydden Valley area.

128.9 Creeping Thistle (*Cirsium arvense* L.) Native. *A common and abundant* weed in arable areas, short-grass meadows and, less frequently, the upper beach, throughout the Recording Area (SBBO; Philp 2010).

128.10 Cotton Thistle (*Onopordum acanthium* L.) Archaeophyte. Irregular in appearance on roadside banks, rough grassland and waste ground, including around the Estate; on the Cinque Ports Golf Course and especially, in recent years, around the farm buildings at The Chequers (SBBO; KC).

128.11 Greater Knapweed (*Centaurea scabiosa* L.) Native. An uncommon species in the Recording Area found on roadside verges and rough grassland along the sea-front, on the golf courses and the Ancient Highway (SBBO).

128.12 Common Knapweed (*Centaurea nigra* L.) A *common and widespread* species of rough grassland throughout the Recording Area (SBBO).

128.13 Chalk Knapweed (*Centaurea debeauxii* Gren. and Godr.). A single record of the species, which is very similar to *C. nigra*, is listed for St. Georges Golf Course in 1984 under the scientific name *C. nemoralis* (SBBO).

128.14 Chicory (*Cichorium intybus* L.) Archaeophyte. Rare. Casual records from the Estate, Mary Bax's and the upper beach of Princes in the 1970's and 1980's (SBBO), *not recorded* in Philp (2010) but found on the Pinnock Wall at Worth in June 2026 (AFH).

128.15 Nipplewort (*Lapsana communis* L.) Native. *Locally common*. Recorded from various sites around the Estate; from St. George's Golf Course; the Worth railway verge and the Green Wall to New Downs Farm (SBBO: Philp 2010).

128.16 Cat's-ear (*Hypochaeris radicata* L.) Native. Recorded from *most tetrads in the Recording Area where it is widespread* in meadows, sand-dunes, the golf courses and roadside verges (SBBO; Philp 2010).

128.17 Smooth Cat's Ear (*Hypochaeris glabra* L.) Native. **NRDBVU. UKBAP C; NS.** A rare plant which grows on dune-grassland. Philp (1982 and 2010) only recorded it from St. Mary's Bay and Lydd but a single record exists for the Recording Area in 1996 (FR).

128.18 Autumn Hawkbit (*Scorzoneroidea autumnalis* L.) Native. *Common and widespread* throughout the Recording Area (SBBO).

128.19 Rough Hawkbit (*Leontodon hispidus* L.) Native. Recorded as *locally common* on dry rough grassland throughout much of the Recording Area, (SBBO) though *not shown* in Philp (2010).

128.20 Lesser Hawkbit (*Leontodon saxatilis* Lam.) Native. *Common and widespread* on dry rough grassland throughout the area. Hybrids with *L. autumnalis* have been recorded from the KWT Reserve (Philp 2010).

128.21 Hawkweed Oxtongue (*Picris hieracioides* L.) Native. Recorded *from almost every tetrad* in the area on open scrub and roadside verges (Philp 2010).

128.22 Bristly Oxtongue (*Helminthotheca echioides* L.) Archaeophyte. A *widespread and generally common* plant, recorded from throughout the Recording Area in rough grassland, waste ground and roadside banks (SBBO; Philp 2010).

128.23 Goat's-beard (*Tragopon pratensis* ssp. *minor* L.) Native. Local in the area. Found in rough grassland in such localities as the KWT Reserve, the golf courses and around the Estate (SBBO).

128.24 Salsify (*Tragopon porrifolius* L.) Neophyte. In the past, an *uncommon casual, with a single, historical, record* of two plants found growing at the Elms end of the Waldershare Gully in 1973, (SBBO), but in 2014 and subsequent years a number of plants were found growing in various localities along the roadside at Stonar and Richborough and on the former Hoverport site at Pegwell Bay (KC 2014) and near The Samfer on 1st May 2026 (SZW)

128.25 Perennial Sow-thistle (*Sonchus arvensis* L.) Native. A *widespread* plant of roadside verges, cultivated and waste land and the upper beach, in all tetrads of the Recording Area (SBBO).

128.26 Smooth Sow-thistle (*Sonchus oleraceus* L.) Native. Recorded *from all tetrads* in the Recording Area (SBBO) on roadside verges, disturbed grassland, arable fields, waste land and gardens.

128.27 Prickly Sow-thistle (*Sonchus asper* L.) Native. Recorded from *almost all tetrads* in the Recording Area (Philp 2010) in similar habitats to *S. oleraceus*, above.

128.28 Prickly Lettuce (*Lactuca serriola* L.) Archaeophyte. Recorded infrequently but from a range of sites across the Recording Area especially on roadsides, sea-walls, disturbed sandy areas on the dunes and arable land (Philp 2010).

128.29 Great Lettuce (*Lactuca virosa* L.) Native. *Only two reports* from Philp (1982) for the Pegwell Bay tetrad and on the upper beach in TR36K in 1993, (SBBO). In more recent years the species appears to have become much more widespread in the Recording Area, especially in tetrads TR35N and TR35T around the Estate and Royal St. George's Golf Course.

128.30 Wall Lettuce (*Mycelis muralis* L.) Very scarce and infrequent. Not recorded in either of the editions of Philp, so two reports involving plants in the derelict 'Cellars' area of the Estate in 1978 and at New Downs Farm in 1980, (SBBO), constitute the only records of this species in the Recording Area.

128.31 Dandelion (*Taraxacum* agg.) There are over 230 micro-species of *Taraxacum* in the British Isles, of which Philp (1982 and 2010) lists nearly 80 which are to be found in Kent. 12 of these are listed for Sandwich Bay in Philp (1982):

- *T. arenastrum* A.J. Richards. Recorded from the sand-dunes. Rare.

- *T. dunense* V. Soest. On fixed dunes. Very local.
- *T. fulviforme* Dahlst. On sandy soils on the Estate. Local.
- *T. oxoniense* Dahlst. On well-drained coastal soils and sand-dunes.
- *T. tortilobum* Florstrom. On fixed dunes. Rare.
- *T. proximiforme* V. Soest. On fixed dunes. Very rare.
- *T. subundulatum*. Dahlst. On fixed dunes at the north end of Sandwich Bay. Rare.
- *T. tenebricans*. Dahlst. On roadside verges, rough grassland and coastal dunes.
- *T. ekmanii*. Dahlst. On roadsides and grassy places.
- *T. dahlstedtii*. H. Lindb. Roadsides and other grassy places.
- *T. hamatum*. Raunk. Native. Roadside verges, waste ground, grassy places.
- *T. scotiniforme*. Dahlst. Native. By a ditch on Princes Golf Course. Rare.

Dudman and Richards, (1997), show a further four *Taraxacum* micro-species from the 10 km. square centred on Sandwich Bay. These are: *T. fulvum*; *T. rubundicum*; *T. lacistophyllum* and *T. polyodon*.

128.32 Rough Hawk's-beard (*Crepis biennis* L.) Native. Only one record, from the upper beach area of the KWT Reserve in 1981 (SBBO).

128.33 Smooth Hawk's-beard (*Crepis capillaris* L.) Native. A *widespread and common* plant on open grassland, fixed sand dunes and other open ground in every tetrad of the Recording Area, (SBBO; Philp 2010).

128.34 Beaked Hawk's-beard *Crepis vesicaria* ssp. *taraxacifolia* L) Neophyte. Found *throughout the area* in similar habitats to the other members of the genus, (SBBO).

128.35 Mouse-ear-hawkweed (*Pilosella officinarum* F.W. Schultz & Sch.) Native. *Locally common* in dry short grassland areas on fixed dunes such as on the golf courses and in the White House paddock (SBBO).

128.36 Fox-and-cubs (*Pilosella aurantiaca* L.) Neophyte. Very occasional records of this naturalised garden plant, from Stonelees in the 1970's and 1980's and from the Restharrow Dune Reserve on the Estate in 1994 (SBBO). Several flowering spikes were found on the former Hoverport site at Pegwell Bay in June 2014 (KC).

128.37 Umbellate Hawkweed (*Hieracium umbellatum* L.) Native. There are over 400 micro-species of *Hieracium* in the British Isles, which Stace (2010) divides into 15 groups. Philp (2010) records about 35 micro-species for the county, but so far, only one of these appears in the records as having been identified at Sandwich Bay. The present species was described as '*not uncommon*' on a transect across the Hundred Acre Field on the KWT Reserve in TR36K in 1984 (SBBO).

128.38 Common Cudweed (*Filago vulgaris* Lam.) Native. **CS.** Only one record for the Recording Area, in fields at New Downs Farm and the adjacent Prince's Golf Course in 1978, (SBBO). Philp (2010) also recorded it from three tetrads just outside the southern limit of the Recording Area.

128.39 Marsh Cudweed (*Gnaphalium uliginosum* L.) Native. Very scarce and infrequent. Recorded from the Restharrow Scrape area in 2013, apparently a new species for the Recording Area (SBBO). Philp (2010), comments that the plant is found, 'in compacted arable and cultivated land and wet land trampled by cattle'.

128.40 Curry-plant (*Helichrysum italicum* Thunb.) Neophyte. A casual escape from cultivation which Philp (2010) recorded from waste sandy ground in TR35T, (the Estate) at Sandwich Bay. This remains as the only record for the Recording Area.

128.41 Golden Samphire (*Inula crithmoides* L.) Native. **NS.** Formerly rare and very local. Only recorded on three occasions prior to 2014, on the salt-marsh of the KWT Reserve in 1972 (KC) and at Backsand Point on the River Stour in 1973 and 1980 (SBBO). However, in 2014 it was found growing abundantly at the upper edge of the salt-marsh at Pegwell Bay Country Park in TR36L (KC) and in 2015 also noted on the edge of the salt-marsh at Shellness Point (KBRG 2015).

128.42 Common Fleabane (*Pulicaria dysenterica* L.). Native. Widespread and common throughout the Recording Area in damper depressions, dune slacks and similar sites (SBBO).

128.43 Goldenrod (*Solidago virgaurea* L.). Native. One record only, in Philp (1982) from the Pegwell Bay area, but not seen subsequently.

128.44 Canadian Goldenrod (*Solidago canadensis* L.). Neophyte. Local in the area. Naturalised garden plant with records from rough grassland and slacks in Stonelees, at Princes Plantation and, less commonly, from the Restharrow Dunes on the estate, (Philp 1982; SBBO).

128.45 Early Goldenrod (*Solidago gigantea* Aiton) Neophyte. Casual escaped garden plant only recorded from the Pegwell-Stonelees area in Philp (1982).

128.46 Michaelmas-daisy (*Aster agg./Aster novi-belgii* L.) Neophyte. 'Michaelmas-daisy' was recorded in the 1970's and 1980's from various sites in the area including Stonelees and parts of the Estate, (Philp 1982; SBBO). At least seven micro-species of Michaelmas-daisy are known to occur in Kent and it now seems very likely that these records were wrongly ascribed to *A. novi-belgii*, which is now only known from sites along the Medway valley.

128.47 Sea Aster (*Aster tripolium* L.) Native. Found commonly on muddy salt-marsh areas around Pegwell Bay and further upstream on the River Stour at least as far as Sandwich (SBBO; Philp 2010).

128.48 Seaside Daisy (*Erigeron glaucus* Ker Gawl) Neophyte. Local in the area but abundant where it does occur. A garden plant now established on shingle beaches, walls and waste places, especially near the coast. Recorded in Philp (2010) from the upper Estate Beach in TR35T, where it is still common.

128.49 Blue Fleabane (*Erigeron acris* L.) Native. Recorded as 'locally common' across the Recording Area, including sites such as Stonelees; the Hundred Acre field of the KWT Reserve; Princes Golf Course and Restharrow Dunes on the Estate (SBBO).

128.50 Canadian Fleabane (*Conyza canadensis* L.) Neophyte. *Widespread in suitable habitats.* Recorded in the 1980's from Stonelees; the seaward end of transects on the KWT Reserve; from Backsand Point; from the Cellars area on the Estate and from the Estate sea-front (SBBO). Confirmed as persisting in the area, at least along the sea-front in Philp (2010) and from the sea-front, Elms and Restharrow Scrape in 2012-2013 (PD 2014).

128.51 Guernsey Fleabane (*Conyza sumatrensis* Retz) Neophyte. This is an introduced and naturalised species of waste and rough ground in Southern England. It was first recorded in the Sandwich Bay area in 2015, growing near Shellness Point (KBRG 2015) and in 2022 was found on the old practice green site on Princes Golf Course (SB 2022).

128.52 Daisy (*Bellis perennis* L.) Native. *Common and widespread in all the tetrads of the Recording Area*, especially on areas of shorter grassland (SBBO).

128.53 Feverfew (*Tanacetum parthenium* L) Archaeophyte. At scattered sites in the Recording Area. Recorded in Philp (2010) from the Pegwell and Stonar area and the Estate and elsewhere (SBBO).

128.54 Tansy (*Tanacetum vulgare* L.) Native. Infrequent. Recorded on grassy banks and roadside verges around the Estate in TR35N and TR35T, also at Stonelees New Downs Farm and elsewhere (SBBO).

128.55 Mugwort (*Artemisia vulgaris* L.) Archaeophyte. *Widespread and common.* Recorded from *all tetrads* in the Recording Area (Philp 2010), on roadside verges, rough ground and waste places.

128.56 Chinese Mugwort (*Artemisia verlotiorum* Lamotte). Neophyte. Local in the Recording Area. Found on waste ground at Great Stonar and Richborough Port in 1986 (SBBO) and recorded for the Pegwell Bay area up to the present day (Philp 2010; KBRG 2013).

128.57 Wormwood (*Artemisia absinthium* L.) Archaeophyte. Local in the Recording Area. Recorded from the Estate in the late 1980's (SBBO) and in Philp (2010) and by KBRG (2013) from Pegwell Bay.

128.58 Yarrow (*Achillea millefolium* L.) Native. *Widespread and abundant* in all tetrads of the Recording Area on short-grass meadows, other grassland habitats and on stabilised dunes (Philp 2010).

128.59 Stinking Chamomile (*Anthemis cotula* L.) Archaeophyte. **RDB2. CR.** Only one record, of plants growing in an arable field near the Green Wall in 1984, (SBBO).

128.60 Ox-eye Daisy (*Leucanthemum vulgare* ssp. *vulgare* Lam.) Native. Found in a range of scattered sites in pastures, rough grassy areas and roadside verges in areas from Stonelees, the KWT Reserve, the golf courses and the Estate (SBBO).

128.61 Scented Mayweed (*Matricaria chamomilla* L.) Archaeophyte. *Widespread and often common* in most of the Recording Area, favouring roadsides, waste ground and the edges of arable fields (SBBO; Philp 2010).

128.62 Pineapple-weed (*Matricaria discoidea* DC.) Neophyte. Found in *most tetrads* of the Recording Area on recently-disturbed ground, such as livestock-feeding stations, and in arable fields, (SBBO; Philp 2010).

128.63 Sea Mayweed (*Tripleurospermum maritimum* L.) Native. *Widespread and common* on the sand and shingle of the upper beach zone and adjacent areas, from the Estate northwards (SBBO).

128.64 Scentless Mayweed (*Tripleurospermum inodorum* L.) Archaeophyte. *Widespread and plentiful* in the Recording Area in arable fields, roadside verges and waste ground (SBBO). Stace (2010) suggests that this plant may best be considered a sub-species of *T. maritimum* (above).

128.65 Silver Ragwort or Dusty Miller (*Senecio cineraria* DC. syn. *Jacobaea maritima*) Neophyte. Recorded from only one site along the Estate sea-front.

128.66 Hybrid Silver x Common Ragwort (*S. x albescens*) This hybrid was reported in Philp (2010) and confirmed in 2023 from Prince's Drive beach (PSL).

128.67 Common Ragwort (*Senecio jacobea* L.) Native. *Widespread and common* throughout the whole of the Recording Area in dunes, over-grazed meadows, roadsides and waste ground, (SBBO).

128.68 Marsh Ragwort (*Senecio aquaticus* Hill) Native. **CR.** Very local and now probably extinct in the area. Present in TR35N in the Philp (1982) survey and reported from the St. George's area, near the Green Wall, in 1987. Not recorded subsequently and Philp (2010) describes it as 'having become very scarce in recent years', with records from only three sites in the county.

128.69 Hoary Ragwort (*Senecio erucifolius* L.) Native. *Widespread*. Recorded from fixed sand dunes, roadside verges and waste places from the KWT Reserve southwards across the golf courses and the Estate (SBBO).

128.70 Oxford Ragwort (*Senecio squalidus* L.) Neophyte. Described as 'fairly common' along roadsides and on waste ground on the Estate in 1980 and found on the KWT Reserve later in that decade (SBBO). Philp (2010) records it from tetrads from Pegwell southwards but comments that it has '*become less frequent* (in the county as a whole) *in recent years*' (Philp 2010). It was found quite commonly along the route of the A256 in 2014 (KC).

128.71 Groundsel (*Senecio vulgaris* L.) Native. *Widespread and very common*. Recorded in all tetrads of the area as a common plant of both cultivated and waste ground (SBBO).

128.72 Heath Groundsel (*Senecio sylvaticus* L.) Native. Local in the Recording Area. Recorded from three tetrads in Philp (2010) (TR35T, P and S) where it grows on fixed sand-dunes and shingle beaches.

128.73 Sticky Groundsel (*Senecio viscosus* L.) Neophyte. *Fairly common* on rough grassland and waste ground around the Estate and the Cinque Ports Golf Course and also at the Sampher, Stonelees and Pegwell (SBBO; Philp 2010).

128.74 Shrub Ragwort or Daisy Bush (*Brachyglottis x jubar* P.D. Sell) Neophyte. Has been reported along the top of the Estate Beach (SBBO) but confusion with **128.65** (Silver Ragwort) seems likely.

128.75 Colt's-foot (*Tussilago farfara* L.) Native. Widespread but local and infrequent. Found in a range of habitats throughout the Recording Area on dunes, river and railway embankments, roadside verges and elsewhere (SBBO).

128.76 Butterbur (*Petasites hybridus* L.) L. Native. Probably now extinct in the Recording Area. Last recorded from the raised sea-wall at Mary Bax's in 1985 (SBBO).

128.77 Winter Heliotrope (*Petasites fragrans* Vill.) Neophyte. Known from only one site in the Recording Area. Listed in Philp (1982 and 2010) from the Pegwell Bay area, south of the Country Park car park, where it persists (SBBO 2023).

128.78 Pot Marigold (*Calendula officinalis* L.) Neophyte. Very local in the area. A common garden plant which is naturalised, *particularly around the Estate sea-front* and nearby areas, along the Ancient Highway and on the former Hoverport site in Pegwell Bay (SBBO; Philp 2010; KC).

128.79 Spiny Cocklebur (*Xanthium spinosum* L.) Neophyte. Isolated records of this alien plant growing along the Worth Track in 1978 and at Little Sandown Farm

in 1982 (SBBO). Philp (2010) comments that the species has not been seen in the county since the mid-1980's.

128.80 Black-eyed Susan (*Rudbeckia hirta* L.) Neophyte. Probably no longer in the Recording Area. Recorded as a casual from the old Ramsgate Municipal Dump in Pegwell Bay in 1980 (now the Country Park) and from the upper beach of the KWT Reserve in 1985, but no subsequent records (SBBO)

128.81 Gallant-soldier (*Galinsoga parviflora* Cav.) Neophyte. Probably extinct in the Recording Area. A casual species of disturbed ground which was recorded as plentiful in the then Downsbridge Nature Reserve (TR35N) in the mid-1980's, but there are no subsequent records (SBBO).

128.82 Shaggy Soldier (*Galinsoga quadriradiata* Ruiz & Pav.) Neophyte. Probably extinct in the Recording Area and certainly very scarce and infrequent. Philp (1982) recorded it from the Stonar Lake area, but there are no other subsequent records.

128.84 Trifid Bur-marigold (*Bidens tripartita* L.) Native. The sole record relates to two plants growing near the gorse area at Mary Bax's in bare shingle and sand, in 1972 (SBBO).

128.85 Hemp Agrimony (*Eupatorium cannabinum* L.) Native. Recorded from *all tetrads* within the area in damp dune slacks, stream and river edges, ditches and similar habitats (SBBO).

131. CAPRIFOLIACEAE (Honeysuckles)

131.1 Elder (*Sambucus nigra* L.) Native. *Widespread and locally common* and recorded from *virtually every tetrad* in the Recording Area, though often only small stunted specimens are found, due, perhaps, to exposure (SBBO).

131.2 Guelder-rose (*Viburnum opulus* L.) Native. Specimens recorded from the Big Gully and the Elms extension on the Estate (SBBO 2012), and from the Observatory Pond (KC 2014), would seem to be the only records for this species in the Recording Area, and these are all almost certainly the result of deliberate planting for 'habitat-creation'.

131.3 Wayfaring-tree (*Viburnum lantana* L.) Native. Introduced as part of 'habitat-creation' schemes. Still very local in the Recording Area but now *naturalised in several sites* around the Estate including the Middle Field; the Elms extension and Waldershare Gully. It also has been recorded from Stonelees (SBBO).

131.4 Snowberry (*Symphoricarpos albus* L.) Neophyte. Originally a garden escape but long-naturalised in scattered sites. Noted in the 1980's from St. George's Golf Clubhouse; from Prince's plantation; the edge of the Estate near

Slazengers; beside the Ancient Highway; near the junction with King's Avenue, in 1994; from the Little Gully in 2012, and the Observatory track in 2015 (SBBO).

131.5 Japanese Honeysuckle (*Lonicera japonica* Thunb.) Neophyte. Recorded from only a few sites, all on the Estate, where it is a naturalised species in the Big Gully; the Middle Field and the White House areas (SBBO 2012).

131.6 Honeysuckle (*Lonicera periclymenum* L.) *Locally common*. Recorded from Stonelees in the north to the railway line across the Worth Marshes. Well - established on the Estate, especially in the White House paddock and in the Elms (SBBO).

131.7 Perfoliate Honeysuckle (*Lonicera caprifolium* L.) Neophyte. Recorded, possibly as a garden escape, in the White House bushes during the 1970's but there are no subsequent records and its current status is unclear.

132. VALERIANACEAE (Valerians)

132.1 Common Cornsalad (*Valerianella locusta* L.) Native. A *widespread and common species* of short turf on stable dunes; roadside verges and waste places on, or near the coastal areas of the recording area (SBBO).

132.2 Keeled-fruited Cornsalad (*Valerianella carinata* Loisel.) Archaeophyte. **CS**. The sole occurrence for the Recording Area relates to a record in Philp (1982) for the Pegwell Bay tetrad (TR36L).

132.3 Red Valerian (*Centranthus ruber* L.) Neophyte. Restricted to a few sites near the Estate, southwards to Deal, and near The Chequers, where it is naturalised on old dune grassland, the top of shingle beaches and on roadside verges, (SBBO). Flowers of this species can be red, pink or white.

133. DIPSACACEAE (Teasels)

133.1 Wild Teasel (*Dipsacus fullonum* L.) Native. *Widespread and fairly common* in rough grassland and damp areas in most parts of the Recording Area (SBBO).

133.2 Field Scabious (*Knautia arvensis* L.) Native. Infrequently recorded from several sites about the Estate; from the golf courses and near Mary Bax's from 1970 to 1995 (SBBO) and persisting there in the time of the survey work for Philp (2010). It was found growing abundantly on roadside verges near Stonar in 2014 (KC).

133.3 Devil's-bit Scabious (*Succisa pratensis* Moench) Native. Noted in the mid-1980's as uncommon in the Recording Area (SBBO) with records from just a few locations around the Estate and at Mary' Bax's from 1970 to the late-1990's, but it does not appear in Philp (2010) so its present status is obscure.

133.4 Small Scabious (*Scabiosa columbaria* L.) Native. Recorded in Philp (1982) for the Estate and there are SBBO records from this period for dune grassland on St. George's Golf Course and along the Ancient Highway. However, Philp (2010) does not show it for the Recording Area at all, commenting on the species' *apparent decline in the county*.

136. ARALIACEAE (Ivies)

136.1 Common Ivy (*Hedera helix* ssp. *helix*) Native. Found in *almost all parts* of the Recording Area except the sea front and golf course tetrads to the north of the Estate (Philp 2010; SBBO).

136.2 Atlantic Ivy (*Hedera hibernica* G. Kirch.) Neophyte. Very local in the Recording Area. Recorded from the Estate, (TR35T), in Philp, (2010), where it would have been introduced. Grows in built-up areas and around old buildings.

137. HYDROCOTYLACEAE (Pennyworts)

137.1 Marsh Pennywort (*Hydrocotyle vulgaris* L.) Native. Recorded from damp dune slacks and marshy areas in most parts of the Recording Area (Philp 2010).

138. APIACEAE (Carrots)

Formerly Umbelliferae.

138.1 Sea-holly (*Eryngium maritimum* L.) Native. A *familiar and common* constituent of the sand and shingle beach flora along most of the shoreline of the Recording Area (Philp 2010; SBBO).

138.2 Tripartite Eryngo (*Eryngium tripartitum* Desf.) Neophyte. A casual garden escape, recorded from the sea-front opposite 'Restharrow' area in 1971; in a field by the Elms in 1975 and by the seaward end of the St. George's-Sandwich footpath (TR35P) in 1983 (all SBBO) but has apparently not been seen since.

138.3 Rough Chervil (*Chaerophyllum temulum* L.) Native. *Fairly widespread*. Recorded from tetrads TR35S, N and P, centred on the Estate (Philp 1982); from Stonelees; the Princes Plantation; and from the Worth track (SBBO). Only reported from tetrad TR35T in Philp (2010).

138.4 Cow Parsley (*Anthriscus sylvestris* L.) Native. Occurs *commonly throughout the whole Recording Area* (Philp 1982 and 2010).

138.5 Bur Chervil (*Anthriscus caucalis* M. Beeb.) Native. Infrequent but recorded from sites ranging from the KWT Reserve; Princes Golf Club; St. George's Golf Club and on the Estate (SBBO; Philp 2010).

138.6 Alexanders (*Smyrniolum olustratum* L.) Archaeophyte. Recorded in Philp (2010) from *almost all parts of the Recording Area* and always a common Spring plant of sheltered hedgerows and roadsides on the Estate (SBBO).

138.7 Pignut (*Conopodium majus* Gouan). Only one record, from TR35P (New Downs) in Philp (1982), but no subsequent reports.

138.8 Greater Burnet-saxifrage (*Pimpinella major* L.) Native. Found in three tetrads in Philp (1982) in the Estate area but only in TR35T in Philp (2010). No other records.

138.9 Burnet-saxifrage (*Pimpinella saxifraga* L.) Native. Reported as *widespread and quite frequent* on roadside verges and drier grassland areas around the Estate in the 1970's (SBBO), and recorded from other localities such as St. George's Golf Club and the KWT Reserve in Philp (2010).

138.10 Ground-elder (*Aegopodium podagraria* L.) Archaeophyte. *Widespread and locally common*. Recorded from the old Prince's Golf Club practice green, north of the footpath to Sandwich in the late 1960's (TR35P); growing at Slazengers on the Estate in the mid-1990's and in the Observatory garden (SBBO 2014).

138.11 Lesser Water-parsnip (*Berula erecta* Huds.) Native. *Widespread and common* in ditches throughout the Recording Area (Philp 2010; SBBO).

138.12 Rock Samphire (*Crithmum maritimum* L.) Native. **CS.** Local in the Recording Area. Recorded from the stabilised pebbles of the upper shore near Restharrow on the Estate and on the KWT Reserve in the 1980's and again on the KWT Reserve area in Philp (2010). A seeding clump was found on the beach north of the Estate in October 2018, again on stabilised shingle on the upper shore (KC) and the species is now (2026) abundant there (SZW).

138.13 Tubular Water-dropwort L. (*Oenanthe fistulosa* L.) Native. Local in the Recording Area. Recorded from the edges of ditches on the Worth Marshes and from the Haven on the Estate in the 1980's and 1990's (SBBO) and from the same areas in Philp (2010). Still present there in 2014 (SB; KC). Also recorded from the Willow Farm section of the RSPB Reserve in 2022 (EC 2022).

138.14 Parsley Water-dropwort (*Oenanthe lachenalii* C.C. Gmel.) Native. Recorded primarily from *the northern section of the Recording Area*, in dune slacks, ditches and marshy areas, including brackish zones such as on the KWT Reserve (SBBO; Philp 2010) but also from the Estate (SBBO 2012) and the RSPB Lydden Valley Reserve in 2022 (EC 2022).

138.15 Hemlock Water-dropwort (*Oenanthe corocata* L.) Native. *Widespread and locally frequent* in ditches and ponds in the northern section of the Recording Area (SBBO; Philp 2010).

138.16 River Water-dropwort (*Oenanthe fluviatilis* Bab.) Native. Local in the Recording Area. In Kent, found *only along the River Stour upstream of Canterbury*

but also recorded by Philp (1982 and 2010) in TR35N, centred on the North Stream-Worth Marshes area.

138.17 Fool's Parsley (*Aethusa cynapium* L.) Native. Described as *locally common* in waste corners of gardens and fields around the Estate in the 1980's and 1990's (SBBO); recorded for that area in Philp (2010) and SBBO (2013).

138.18 Fennel (*Foeniculum vulgare* Mill.) Archaeophyte. Found *abundantly in almost all parts of the Recording Area*, especially on roadside banks and waste ground (SBBO).

138.19 Hemlock (*Conium maculatum* L.) Probably native. Found in suitable sites on river and stream banks, waste ground and roadside verges in scattered sites from Stonelees to the Lydden Valley, (SBBO).

138.20 Sickle-leaved Hare's-ear (*Bupleurum falcatum* L.) Archaeophyte. A colony of this very scarce plant was present on the river-wall at Black Sluice (TR35N) between at least 1972 and 1983 but was probably destroyed by river-bank engineering work in 1986 (SBBO).

138.21 Slender Hare's-ear (*Bupleurum tenuissimum* L.) Native. **RDB 2. NS.** Very scarce and infrequent. A historical record exists of this species involving several plants growing beside the North Stream near Old Downs Farm in 1953, (TR35N). The next record is an undated one from Vigo Sluice, probably from the mid-1980's (SBBO) and then again from the riverbank at The Sampher on August 7th 1993. No subsequent published records. It is recorded from a number of sites in North Kent.

138.22 Wild Celery (*Apium graveolens* L.) Native. *Fairly widespread in the area*. Recorded in ditches near the Observatory Headquarters in 1979 and on the KWT Reserve in 1981. Found in four tetrads in the New Downs area, north towards Ebbsfleet (Philp 2010).

138.23 Fool's water-cress (*Apium nodiflorum* L.) Native. Found in shallow water in ditches and streams *throughout much of the Recording Area* (SBBO; Philp 2010).

138.24 Corn Parsley (*Petroselinum segetum* L.) Native. Found at only a few sites within the Recording Area - from waste ground at Stonar Lake in 1971 and 1980 (KFC) and at the Pegwell Picnic Site in the same year. Shown as present in TR35T, centred on the Estate (Philp 2010).

138.25 Wild Angelica (*Angelica sylvestris* L.) Native. Local in the Recording Area. Recorded from ditches on the Worth Marshes in the 1970's (SBBO) and still present there in Philp (2010) survey.

138.26 Wild Parsnip (*Pastinaca sativa* L.) Native. *Fairly widespread and common.* Recorded from roadside verges, waste ground and rough grassland from the KWT Reserve, the Estate and the Cinque Ports Golf Course area. (SBBO; Philp 2010).

138.27 Hogweed (*Heracleum sphondylium* L.) Native. *Very common* throughout the Recording Area on roadsides and rough ground (SBBO; Philp 2010).

138.28 Giant Hogweed (*Heracleum mantegazzianum* Sommier & Levier) Neophyte. Persists in one or two scattered sites in the area. It was present at least from the late 1960's along the Green Wall and North Stream areas, still present there in the Philp (2010) survey period and with a couple of plants along the Green Wall in 2026 (SZW). It has also been recorded from Restharrow on the Estate and the Black Sluice areas in the 1990's (SBBO).

138.29 Upright Hedge-parsley (*Torilis japonica* Houtt.) Native. *Widespread and common.* Recorded from most tetrads in the recording area, on roadsides and rough grassland sites (SBBO; Philp 2010).

138.30 Knotted Hedge-parsley (*Torilis nodosa* L.) Recorded from a few scattered sites, preferring dry banks such as at Pegwell Picnic Site; the KWT Reserve; around the Estate and on the Cinque Ports Golf Club. (SBBO; Philp 2010).

138.31 Wild Carrot (*Daucus carota* ssp. *carota* L.) Native. *Widespread and generally common throughout the Recording Area*, especially on older dune grassland (SBBO).

139. ACORACEAE (Sweet-flags)

139.1 Sweet-flag (*Acorus calamus* L.). Neophyte. Local in the Recording Area Recorded in wet ditches and the North Stream on the Worth Marshes in the late 1960's, and again by the North Stream near St. George's Golf Club in 1980, but *no other subsequent records*, (SBBO) until 2023 when it was again found at a site on the North Stream and at Downsbridge (PSL 2023)

140. ARACEAE (Lords-and-Ladies)

140.1 Lords-and-Ladies (*Arum maculatum* L.) Native. Not common in Kent coastal areas but recorded from the Elms on the Estate from at least the late 1970's, up to the present, *where it is now abundant*. (SBBO 2013; Philp 2010).

141. LEMNACEAE (Duckweeds)

141.1 Fat Duckweed (*Lemna gibba* L.) Native. Recorded from marshland ditches and dykes *throughout the Recording Area* (Philp 2010).

141.2 Common Duckweed (*Lemna minor* L.) Native. Recorded from marshland ditches and dykes *throughout the Recording Area* (Philp 2010).

141.3 Least Duckweed (*Lemna minuta* Kunth.) Neophyte. First recorded in Kent in 1981 and has spread rapidly to ponds, lakes and ditches. Recorded in Philp (2010) from tetrads *mostly in the northern end of the Recording Area*.

141.4 Ivy-leaved Duckweed (*Lemna trisulca* L.) Native. Found in ponds and ditches, especially near the coast and *from all suitable habitats in the Recording Area* (Philp 2010).

141.5 Rootless Duckweed (*Wolffia arrhiza* L.) Native. **RDB 2.** Very local in the area. A rare and declining species of ponds and marsh dykes. It was recorded from two tetrads in Philp (2010) at Pegwell Bay and on the Worth Marshes but there appear to be no subsequent records.

143. ALISMATACEAE (Water-plantains)

143.1 Arrowhead (*Sagittaria sagittifolia* L.) Native. Probably extinct in the area. A historical record from a site on Worth Marshes in 1967, which was destroyed by dredging in 1969 (SBBO).

143.2 Lesser Water-plantain (*Baldellia ranunculoides* ssp. *ranunculoides* L.) **RDBNT; KRDB 2; CS.** Native. Very local in the area. Recorded from the edges of open ponds and ditches in the Lydden Valley / Worth Marshes area in TR35H and TR35M in Philp (2010) and subsequently (KBRG; EC 2022). This species is declining nationally but apparently increasing on the RSPB Worth Marshes as a result of the enlargement of water areas there (KBRG,2023)

143.3 Water-plantain (*Alisma plantago-aquatica* L.) Native. Found locally throughout the Recording Area by the sides of ditches and ponds (SBBO).

143.4 Narrow-leaved Water-plantain (*Alisma lanceolatum* With). Native. Very local in the Recording Area. Recorded from the Stonar Cut / Richborough Port tetrad in Philp (1982 and 2010) where it is described as 'rather local and scarce in the county' (Philp 2010).

144. BUTOMACEAE (Flowering-rushes)

144.1 Flowering Rush (*Butomus umbellatus* L.) Native. Reported as local and infrequent from sites along the North Stream and the Worth Marshes at least until the late 1980's and, although not recorded for anywhere in the area in Philp (2010), it is assumed to be still present and should be looked for there.

145. HYDROCHARITACEAE (Frogbits)

Formerly *Najadaceae*)

145.1 Frogbit (*Hydrocharis morsus-ranae* L.) Native. **NS.** Very local in the Recording Area. Originally only recorded from the Worth Marshes area in ponds and marsh dykes in the 1980's -1990's when it was also introduced into the pond

at the Observatory (SBBO). It was described as being relatively widespread on the RSPB Worth Marshes Reserve in 2022 (EC2022), was found in the Great Wood in 2023 (KBRG) and by the footbridge across the North Stream in June 2026 (SZW).

145.2 Water-soldier (*Stratiotes aloides* L.) Neophyte. Very scarce and local and possibly now extinct in the area. Present in one or two ditches on Worth Marshes in the 1980's and introduced into the pond at the Observatory in 1986 (SBBO).

145.3 Canadian Waterweed (*Elodea canadensis* Michx.) Neophyte. Local in the area. Recorded from the Lydden Valley-Worth Marshes (SBBO), and in Philp (2010) where comment is made that the species is being rapidly replaced in the county by Nuttall's Waterweed (*E. nuttallii*) (Philp 2010).

143.4 Nuttall's Waterweed. (*Elodea nuttallii* Planch.) Neophyte. *Local but increasing in its range*. First recorded in the county in 1974 and has spread rapidly to occupy many areas of un-polluted fresh water such as on the Lydden Valley-Worth Marshes and elsewhere (Philp 2010).

148. JUNCAGINACEAE (Arrowgrasses)

148.1 Marsh Arrowgrass (*Triglochin palustris* L.) Native. **CR.** Very local. A declining species of the edge of marsh ditches which persists in the Lydden Valley-Worth Minnis area (Philp 2010) and was also found in the Haven Field on the Estate in 2014 (SB).

148.2 Sea Arrowgrass (*Triglochin maritima* L.) Native. *Common* on river-side salt-marshes from New Downs to the estuary and on the KWT Reserve (SBBO).

150. POTAMOGETONACEAE (Pondweeds)

(Formerly Zannichelliaceae)

150.1 Broad-leaved Pondweed (*Potamogeton natans* L.) Native. *Local in the area*. Found in slow-moving water and ponds in the Lydden Valley and Worth Marshes area (Philp 2010).

150.2 Fen Pondweed (*Potamogeton coloratus* Hornem.) Native. **CR. KRDB 3; N.** Very local in the Recording Area and only found in calcium-rich marsh dykes in the Lydden Valley-Worth Marshes area (TR35 H, M & N). This now apparently the only site for the species in the county (Philp 2010; RSPB 2022) but the plant may be increasing as a result of the enlargement of water areas on the RSPB Reserve.

150.3 Shining Pondweed (*Potamogeton lucens* L.) Native. Very local and possibly now extinct in the Recording Area. Recorded from the 'long, deep dyke south of the North Stream on Worth Marshes', (SBBO 1976) but no subsequent records or confirmation.

150.4 Perfoliate Pondweed (*Potamogeton perfoliatus* L.) Native. Local. Recorded from ditches on New Downs and the Worth Marshes in Philp (1982) and Philp (2010).

150.5 Flat-stalked Pondweed (*Potamogeton friesii* Rupr.) Native. **CR. KRDB 3; RDBLRnt.** Very local in the Recording Area. Described in Philp (2010) as a 'scarce plant restricted to a limited area in the north-east of the county'. Found in the Lydden Valley-Worth Marshes area and possibly on New Downs. The most recent records relate to plants recorded in the Botanical Society of the British Isles data base for 2021-2022.

150.6 Lesser Pondweed (*Potamogeton pusillus* L.) **CR.** Very local in the Recording Area. Recorded from just one tetrad in the Lydden Valley in Philp (1982). It did not appear for anywhere in the Recording Area in the 2010 edition of Philp but was rediscovered in a pool near The Chequers in September 2018 (SB).

150.7 Small Pondweed (*Potamogeton berchtoldii* Fieber) Native. Local. Recorded from ditches and ponds in the Lydden Valley-Worth Marshes area (Philp 2010) and in 2023 (KBRG).

150.8 Curled Pondweed (*Potamogeton crispus* L.) Native. Found *throughout the Recording Area* in ditches and ponds (SBBO).

150.9 Fennel Pondweed (*Potamogeton pectinatus* L.) Native. Present in streams, ponds and ditches *throughout the Recording Area* from the KWT Reserve, New Downs and the Worth Marshes-Lydden Valley areas (SBBO; Philp 2010).

150.10 Opposite-leaved Pondweed (*Groenlandia densa* L.) Native. **RDB 2. CR.** Very local in the Recording Area. Recorded from the Lydden Valley-Worth Marshes area in Philp (2010) where it is noted that the species is in decline in the county. A new location for the Recording Area relates to specimens found in 2018 in new excavations at the southern edge of Royal St. George's Golf Club, (SB).

150.11 Horned Pondweed (*Zannichellia palustris* L.) Native. Recorded as *locally frequent* in shallow fresh water and brackish streams and ditches from New Downs to Worth Marshes and elsewhere (Philp 2010; SBBO).

Preston (1995) records these other members of the *Potamogeton* genus from the 10 km. square centred on Sandwich Bay: **Red Pondweed**, (*Potamogeton alpinus*), prior to 1970 and not recorded since; **Blunt-leaved Pondweed**, (*Potamogeton obtusifolius*), prior to 1970 and not recorded since and **Hair-like Pondweed**, (*Potamogeton trichoides*).

151. RUPPIACEAE (Tasselweeds)

151.1 Beaked Tasselweed (*Ruppia maritima* L.) Native. Very local in the area. Found in brackish ditches but in recent years has only been reported from one part

of the Recording Area, on the KWT Reserve (Philp 2010) and from the other side of the river, north of the Country Park in July 2019 (KBRG).

153. DIOSCOREACEAE (Black Bryonies)

153.1 Black Bryony (*Tamus communis* L.) Native. Very scarce and no recent records for the Recording Area. Reported in 1982 from the shrubby verge of the railway line near to the Worth Track (SBBO) and Philp (2010) recorded it for the Estate tetrad.

156. COLCHICACEAE (Meadow Saffrons)

156.1 Pyrenean Autumn Crocus (*Merendera montanum* L.) Neophyte. Introduced / garden escape. Up to eight of these plants were regularly found up to the early 1990's flowering in Autumn beside the footpath across the St. George's Golf Course. It is assumed that the colony has died out because there have been no recent records.

157. LILIACEAE (Lilies)

157.1 Garden Tulip (*Tulipa gesneriana* L.) Neophyte. A garden escape which was recorded as *naturalised in several sites around the Estate*, at least until the mid-1990's (SBBO) and listed as present in the same area in Philp (2010). It is assumed that the colony has died out because there have been no recent records.

157.2 Fritillary (*Fritillaria meleagris* L.) Neophyte. A single record involved a small group of this species (presumed to be a casual garden escape or possibly even a deliberate introduction) in the Haven and White House paddock area in two years in the mid-1970's. The colony did not establish itself and no further records exist (SBBO).

158. ORCHIDACEAE (Orchids)

Formerly Cypripediaceae

158.1 Marsh Helleborine (*Epipactis palustris* L.) Native. **RDBLR1c; UKBAP C; KRDB 2; CITES**. Previously found at only two Kentish localities, in a chalk-pit in Swanscombe and at Sandwich Bay, but the Swanscombe site has now been destroyed by development and drainage, so the plants at Sandwich Bay are now the only ones known in the county. In the Recording Area the plant has been known from at least the early 1800's. It is found in the Little Gully on the Estate, where, after a setback due to salt-water flooding, it is now increasing; from the White House in 2012-2013 (PD 2014) and also on the St. George's Golf Course. It has also been recorded from fields between St. George's Golf Clubhouse and New Downs Farm and at Stonelees (SBBO) though at the last locality the species may be under threat from the steady drying out of the site in recent years (KBRG 2013).

158.2 Broad-leaved Helleborine (*Epipactis helleborine* L.) Native. **RDBLRlc.** Known from only two or three sites in the area and under threat. Reported from as far back as the 1970's (DCHW in SBBO 2011) and then regularly throughout the 1990's, from one site at the edge of the Royal St. George's Golf Course, in tetrad TR35N, growing within a clump of bushes. By 2000 there were concerns about the lack of appearance of the plant at this site due to the encroachment of brambles and nettles (SBBO). The bushes were cleared in 2009 and the orchid only intermittently re-appeared in the years after that event, for example, three plants in 2010. (DCHW; SBBO 2011) reported that it was growing, 'in a garden just outside the Estate', and it was also recorded from Stonelees in 2013 (KBRG). More recent evidence has shown that the plant is still present at the Golf Course site when about eighteen spikes were discovered in July 2020 (SZW/SBBO, 2020) and it was also found elsewhere on the Estate in October 2018 (CW/SBBO).

158.3 Common Twayblade (*Neottia ovata* L.) Native. Very local but often numerous where it does occur. Known for many years from its main site on the Estate, in the Little Gully, but also more occasionally from other localities on the Estate and elsewhere, including the former practice green inland of the old clubhouse on Princes Golf Course and at Stonelees (SBBO; JvdD 2014).

158.4 Autumn Lady's-tresses (*Spiranthes spiralis* L.) Native. **RDBLRnt.** Very local in the Recording Area. Found in short turf areas on roadside verges along the front of, and north of the Estate, including the former practice green area inland of the old Princes Golf Clubhouse (SBBO; JvdD 2014).

158.5 Pyramidal Orchid (*Anacamptis pyramidalis* L.) Native. **RDBLRlc.** This species is a *familiar and widespread plant* of sandy pastures, fixed dune and roadside verges throughout the Recording Area and especially on St. George's Golf Course. In some years the number of spikes can be counted in their thousands. White forms are reported in most years (SBBO).

158.6 Chalk Fragrant Orchid (*Gymnadenia conopsea* L.) Native. **RDBLRlc.** Very scarce and local in the Recording Area. Recorded in Philp (1982) from Princes Golf Course in TR36K with records continuing intermittently to the present day from the same general area (SBBO 2013).

158.7 Common Spotted-orchid (*Dactylorhiza fuchsii* Druce) Native. Very local in the Recording Area. Recognised in the past as occasionally occurring within colonies of Southern Marsh Orchids on the Estate, but identification was often accepted as difficult (SBBO). It is known that some plants of this species may have been inadvertently introduced to the Little Gully in the early 1970's as a result of a tree-planting programme. Further identification of this species in recent years involved plants in the Princes Golf Course Plantation and on the Estate in 2012 (SBBO). In contrast, at Stonelees, the species can be numerous in good years (DCHW; SBBO 2011) and it was confirmed as present at Stonelees during a survey

in 2013 (KBRG). Just outside of the Recording Area, a colony of some one hundred plants is also established on the Monks Wall Nature Reserve in Sandwich (KC 2019).

158.8 Heath Spotted-orchid (*Dactylorhiza maculata* L.) Very local in the area and possibly mis-identified. Small numbers of this species were reported by different observers near the Gullies on the Estate in the late 1960's and early 1970's; on Cottington Tip, now Betteshanger Country Park (TR35L); in the Prince's plantation (TR36K); and at Stonelees (TR36F). There is the possibility of misidentification for some, if not all, of these records, however (SBBO).

158.9 Southern Marsh Orchid (*Dactylorhiza praetermissa* Druce) Native. **RDBLRlc. CS.** A *common, and often abundant, species* of damper dune slacks throughout the Recording Area, from Stonelees, the KWT Reserve and southwards across the golf courses to the Estate, (where it has appeared on new sites in recent years), to the Lydden Valley. Numbers vary from year to year but in good seasons the total numbers of spikes from just single sites within the recording area can be in excess of ten thousand. The *D. praetermissa* var. *junialis* variety of the plant, ('**Leopard Marsh Orchid**') is recorded in small numbers in most years from *D. praetermissa* colonies (SBBO), and also hybrids with Common Spotted Orchid, to give the form *D. x grandis* (KBRG 2013).

158.10 Green-winged Orchid (*Anacamptis morio* L.) Native. **RDBLRnt; UKBAP C; CITES; CR.** Found on damp stabilised dunes and meadows *throughout much of the area*, with particularly reliable sites on the Estate in the White House paddock and towards the northern end of St. George's Golf Course (SBBO). White forms occur in most years.

158.11 Early-purple Orchid (*Orchis mascula* L.) Native. Very scarce and infrequent in the Recording Area, with two plants found on Worth Marshes in 1968 and one plant in the Little Gully in 1973 (SBBO). No records since.

158.12 Man Orchid (*Orchis anthropophora* L.) Native. **RDBEN; CITES.** Scarce and local in the Recording Area, but with one developing major colony. Recorded from the Little Gully, Slazengers and stabilised roadside dunes at the south-eastern edge of St. George's Golf Course, adjacent to the Estate, from the late 1960's and a few have been reported in most recent years from the same general area (SBBO). After records were made of up to five spikes in 2018 and 2019 on the old Hoverport slipway in Pegwell, this colony was found to have made a major expansion in April 2020, with at least 150 spikes present, all apparently of the yellow variety *flavescens*.

158.13 Lizard Orchid (*Himantoglossum hircinum* L.) **RDBVU; UKBAP C; KRDB 3; CITES; WCA 8.** Local in the area, but often very numerous where it does occur. A nationally rare plant but in the Recording Area it is a familiar, and in some good years very common, species in the south-eastern corner of the St. George's Golf

Course and adjacent areas of the Estate, also along the roadside verges there. A survey for the Kent Wildlife Trust in 2006 found 4871 plants within the Recording Area, 3989 of which were on St. George's Golf Course (PF; KWT 2006). *Numbers are increasing* and the species is colonising new sites, such as in the Middle Field and the Little Gully (SBBO; PD). Slightly further afield, it is known from the Betteshanger County Park and occurs in a large and growing colony on the roadside embankment of the A256 Ramsgate Road near the junction with Monk's Way and along Monks Way itself (KC 2020). An unusual pale variant which was found on the Estate in July 2020 (SZW) has apparently never before described from the U.K. although it is known to occur on the Continent.

158.14 Bee Orchid (*Ophrys apifera* Huds.) Native. **UKBAP C; CITES.** Local in the area but sometimes numerous where it does occur. Regularly recorded from the south-eastern side of the St. George's Golf Course, favouring the sides of ditches or depressions and roadside banks, at Stonelees (SBBO) and on the former Hoverport slipway on the north side of Pegwell Bay, (KC; KWT). Just outside of the Recording Area, it also occurs at the old Richborough Power Station site, and in drier parts of the Monks Wall Nature Reserve in Sandwich (KC 2019)

158.15 Early Spider-orchid (*Ophrys sphegodes* L.). **RDBLRnt UKBAP C; CITES; WCA 8; CS.** Only two records for the Recording Area. A single spike of this species was found in May 1995 by a very reliable observer growing from the concrete apron of a derelict house at Slazengers at the north end of the Estate. This constituted *the first sighting for the Recording Area* for a plant which is normally restricted to the chalk (DMB/SBBO). However, in 1999 the species was again recorded from fixed dune on the adjacent St. Georges Golf Club (FR/ KWT) so it appears that the species may have appeared in very small numbers in the area in the late 1990's at least.

159. IRIDACEAE (Irises)

159.1 Pale Yellow-eyed grass (*Sisyrinchium striatum* Sm.) Neophyte. Very local casual, with only one record. Philp (2010), records this introduced species from waste ground on roadsides in the Lydden Valley-Hacklinge tetrad, (TR35M), at the extreme southern edge of the Recording Area.

159.2 Siberian Iris (*Iris sibirica* L.) Neophyte. Recorded in 1981 as naturalised in several waste corners of the Estate such as Slazengers, the Cellars, the Middle Field and by Kentlands, but apparently no recent records (SBBO).

159.3 Garden Iris (*Iris germanica* L.) Neophyte. Garden discard. Recorded from several areas around the Estate up to the 1980's (SBBO) and may still persist in odd corners.

159.4 Yellow Iris (*Iris pseudacorus* L.) Native. *Widespread and abundant* throughout most of the Recording Area in such sites as dune slacks and

depressions on the golf courses, in the Gullies on the Estate and by the edges of ditches and streams (SBBO).

159.5 Stinking Iris, (*Iris foetidissima* L.) Very local in the area. Recorded in the early 1980's from near St. George's Golf Clubhouse and Vigo Sluice; in the 1990's from the Middle Field on the Estate and said to be well-established there, and recorded in 2013 from the White House paddock (SBBO). A further record relates to several plants in fruit along the Worth track near the railway crossing, in November 2015 (KC).

159.6 Eastern Gladiolus (*Gladiolus communis* L.) Neophyte. Garden discard. Recorded from sites around the Estate from the late 1970's to the mid-1980's and one or two plants persist around the Estate. In May 2022 several plants were in flower around the edge of the Observatory car park (SBBO; KBRG).

159.7 Montbretia (*Crocasmia pottsii x aurea*) Neophyte. Very local in the Recording Area. A garden-escape which was recorded from several sites on the Estate in the early 1980's but apparently not since, until a clump was found in the paddock at Slazengers in 2014 (SBBO; KC).

160. XANTHORROEACEAE (Asphodels)

160.1 Orange Day-lily (*Heemerocallis fulva* L.) Neophyte. Reported from the Middle Field on the Estate in 2023, where it may become naturalised. An obvious garden discard but this is the only site in the Recording Area where it has been found (PSL)

160.2 Red-hot Poker (*Kniphofia uvaria* L.) Neophyte. Very local in the Recording Area. The familiar garden plant which is naturalised in a few places in Kent, including Sandwich Bay, where it has been found on the Estate, (TR35T), and also on Princes Golf Course, (TR35P) (SBBO).

161. AMARYLLIDACEAE (Daffodils)

161.1 Rosy Garlic (*Allium roseum* L.) Neophyte. Very local in the area but often abundant where it does occur. A former garden plant which has become naturalised in a few coastal sand-dune sites. It was first noted in the Recording Area in 1999 from the Cellars area of the Estate and since then from other sites on the Estate and the stretch of dune grassland to the north (TR35T and TR35U) (Philp, 2010; SBBO). In 2016 it was also noted from several sites alongside the Ancient Highway south of The Chequers (KC).

161.2 Neapolitan Garlic (*Allium neapolitanum* L.) Very local in the area. A number of apparently naturalised plants were found in flower by the side of the A256 at Stonar Cut in April 2014. This appears to be a new record for this species within the Recording Area. (KC). It has since also been recorded from along the Guilford Road on the Estate and also from a roadside verge near Stonar Lake (KC).

161.4 Wild Onion or Crow Garlic (*Allium vineale* L.) Native. *Widespread and generally abundant* on stabilised sand-dunes and dry pastures from Pegwell Bay southwards across the golf course to the Estate (SBBO).

161.41 Spring Starflower (*Tristagma uniflorum* L.). This attractive plant, formerly placed in the genus *Ipheion*, is a widespread garden species. It was found growing in short mown roadside turf near Sandilands on the Estate in early April 2016. (PM-S; KC). It has presumably ‘escaped’ from the garden at Sandilands but seems to be naturalising itself, as it has reportedly done in other south and south-west coastal areas where, in some places, it has become a plant pest. The first record for the Sandwich Bay Bird Observatory Recording Area. Increased numbers were present at the same site in April 2021 (KC). It was also found growing on a roadside verge at Stonar Lake in 2023 (KC).

161.5 Summer Snowflake (*Leucojum aestivum* L.) Neophyte. Very local in the area. A garden escape, recorded from the White House paddock in 2012 and 2013, but it is not known how long it has been established there (SBBO).

161.6 Snowdrop (*Galanthus nivalis* L.) Neophyte. Local in the area. Known from at least the early 1980’s from the Elms on the Estate, where it is *currently abundant and spreading*, but also recorded from other sites such as Vigo Sluice and Archer’s Low (SBBO). A presumed garden-discard.

161.7 Greater Snowdrop (*Galanthus elwesii* Hook) Neophyte. Very local. The first record for the Recording Area relates to plants identified in February 2019 from The Elms on the Estate (SB) where it grows as a naturalised species alongside *G. nivalis*.

161.8 Daffodil (*Narcissus pseudonarcissus* L.). Native. Local in the area. ‘True, wild-type Daffodils’ were recorded as being established along the Guilford Road and elsewhere on the Estate in the mid -1990’s (SBBO) but there is no record of this species in Philp (2010). Large-scale plantings of garden cultivars along the Guilford Road in recent years, plus garden discards, have confused the picture, (SBBO 2014) especially as in places these are spreading into areas of conservation interest.

161.9 Pheasant’s-eye Daffodil (*Narcissus poeticus* L.) Neophyte. A garden escape recorded as naturalised in several sites around the Estate between the late 1960’s and the mid -1990’s, including the Elms and the verge of the Ancient Highway by Restharrow Dunes (SBBO). More recent (SBBO 2013) records on the Estate refer to ‘Narcissus cultivars’.

162. ASPARAGACEAE (Asparaguses)

Includes bluebells; hyacinths; Star of Bethlehem etc.

162.1 Star-of-Bethlehem (*Ornithogalum umbellatum* ssp. *campestre* Boreau) Native. However, the records here almost certainly relate to garden discards. Recorded from several scattered sites on the Estate and from St. George's Golf Course adjacent to the Estate, from the mid-1960's to at least the late-1990's (SBBO) and shown for that area in Philp (2010). Subsequently it was found in the Plantation area on Princes Golf Course (SBBO). More recent records have come from the Oasis area on the Estate and from a roadside verge at Stonar Lake in 2023 (KC).

162.2 Glory of the Snows (*Chionodoxa forbesii* Baker). Introduced / naturalised. Only one record and now extinct in the Recording Area. Several plants found in flower in the Little Gully on the Estate in August 1993 were clearly garden discards and did not establish themselves (SBBO).

162.3 Bluebell (*Hyacinthoides non-scripta* L.) Native. Local in the Recording Area. Several records of this species are listed for the Estate and for the upper beach area on the KWT Reserve, between the late 1960's and the mid-1990's, (SBBO), where it was thought to be spreading more vigorously than the **Spanish Bluebell**, (*H. hispanica*). It is assumed that all these records relate to garden discards or possibly deliberately-introduced plants.

162.4 Spanish Bluebell (*Hyacinthoides hispanica* Mill.) Neophyte. Local in the Recording Area. Present on rough ground around the Estate, and at Princes Plantation in TR36K. Often a garden escape where it has been deliberately planted in mistake for the native species (Philp 2010).

Hyacinthoides non-scripta* x *hispanica Most of the 'bluebells' which occur in the Elms on the Estate are hybrids between the two above species (PD 2014; SBBO).

162.5 Hyacinth (*Hyacinthus orientalis* L.) Neophyte. One recent record. A casual garden escape, reported from the Big Gully on the Estate in 2012 (SBBO), and from the nearby Elms in 2014 (PD 2014).

162.6 Garden Grape-hyacinth (*Muscari armeniacum* Leichtlin ex Baker) Neophyte. *A casual garden escape*, recorded from the southern end of St. George's Golf Course, adjacent to the Estate, between the late 1960's and the mid-1980's and again in the Elms on the Estate in the mid-1990's but apparently not since (SBBO).

162.7 Garden Asparagus (*Asparagus officinalis* L.) Archaeophyte. *A familiar and widespread* plant of stabilised sand-dunes and sandy grassland throughout much of the Recording Area (SBBO).

162.8 Butcher's Broom (*Ruscus aculeatus* L.) Native. Very local in the area. Recorded in the 1980's from the edge of the Recording Area along Sandown Road at Archer's Low (SBBO) but the only other records then relate to a plant in the Middle Field on the Estate from 2012-2015. It was photographed in flower and fruit

there in November 2015 and still present in 2017. (PD; HW *pers. comm.* 2014 – 2015; KC 2017). Another plant was also found at the eastern end of the Elms plantation on the Estate in February 2022 (KC).

162.9 New Zealand Cabbage Palm (*Cordyline australis* G.Forst) *Neophyte. Very local in the Recording Area.* A single established plant was first reported from the Middle Field on the Estate in 2021 (SZW). A garden escape but with no evidence yet of it setting seed and becoming self-sustaining, which has occurred widely in other south coast locations.

165. TYPHACEAE (Bulrushes and Bur-reeds)

Formerly Sparganiaceae

165.1 Branched Bur-reed (*Sparganium erectum* L.) *Native. Fairly widespread in the area.* Found in shallow waters of ditches and ponds from Pegwell Bay to the Worth Marshes-Lyddon Valley area, including sites such as the Haven Cut on the Estate (Philp, 2010; SBBO).

165.2 Unbranched Bur-reed (*Sparganium emersum* Rehman) *Native. CS.* Described as ‘widespread and frequent’ in streams and wetter ditches on Worth Marshes, the Green Wall, New Downs and adjacent golf courses’ in 1972 (SBBO) and recorded from the same general area in Philp (2010).

165.3 Least Bur-reed (*Sparganium natans* L.) *Native. CR. Very local in the Recording Area and not seen in the past 16 years.* This plant was still recorded as present in marsh dykes in the Lydden Valley- Hacklinge area in Philp (2010) at its only known site in Kent, but was not found there at any of its previously known ditch sites in 2022 (EC 2022) or in 2023 (KBRG).

165.4 Bulrush (*Typha latifolia* L.) *Native. Widespread and locally common throughout the Recording Area* in shallow areas of fresh water by marshland dykes (SBBO).

164.5 Lesser Bulrush (*Typha angustifolia* L.) *Native. Widespread and locally common.* Found on the Worth Marshes-Lyddon Valley area and on the marshes around Pegwell Bay (SBBO; Philp 2010).

***Typha latifolia* x *angustifolia*.** *Native.* This hybrid has been recorded from the Stonelees-Pegwell Bay area (Philp 2010).

168. JUNCACEAE (Rushes)

168.1 Blunt-flowered Rush (*Juncus subnodulosus* Schrank) *Native. CR. Very local in the Recording Area.* Recorded in Philp (2010) from *only five locations in the county*, the most important of which is on the Worth Marshes-Lyddon Valley area, but it is also found, sometimes abundantly, in or near ditches on the Estate (SBBO; Philp 2010; KBRG 2023).

168.2 Jointed Rush (*Juncus articulatus* L.) Native. *Fairly widespread*. Found on the Estate in such sites as Restharrow Scrape, in ditches on New Downs, on the KWT Reserve and at Stonelees (SBBO; Philp 2010; SB2021).

168.3 Sharp-flowered Rush (*Juncus acutiflorus* Ehrh.) Native. Local and infrequent. Recorded from Worth Marshes and New Downs in Philp (1982) but *not recorded anywhere in the Recording Area* in Philp (2010.).

168.4 Sea Rush (*Juncus maritimus* Lam.) Native. *Recorded commonly* from Pegwell Bay and KWT Reserve salt-marshes, the tidal banks of the River Stour, in one or two localities on the Estate and southwards to the Cinque Ports Golf Course (SBBO; Philp 2010).

168.5 Sharp Rush (*Juncus acutus* L.) Native. **RDBLRns; CR; KRDB 1**. The Sandwich Bay Recording Area is the only site in Kent for this formidable plant where it grows widely on fixed sand-dunes and the drier parts of salt-marshes, such as in the KWT Reserve, but also at Stonelees; in the Sampher; on the Estate and on the Cinque Ports Golf Course (SBBO; Philp 2010).

168.6 Saltmarsh Rush (*Juncus gerardii* Loisel.) Native. *Locally common* on the salt-marshes at the Stour Estuary, but relict plants have been recorded from New Downs and the Estate areas (SBBO; Philp 2010).

168.7 Toad Rush (*Juncus bufonius* L.) Native. *Widespread and locally common*. Recorded from a range of damp areas and edges of ditches from the KWT Reserve southwards to the Worth Marshes (SBBO; Philp 2010).

168.8 Hard Rush (*Juncus inflexus* L.) Native. *Widespread throughout the Recording Area* in ditches and damp dune slacks or meadows. It is *the common Juncus* in most areas of the Estate and damp dune-slacks on the golf courses (SBBO; Phil, 2010).

168.9 Soft Rush (*Juncus effusus* L.) Native. Not as common as other *Juncus* species within the Recording Area, with recent records only from the Lydden Valley area (Philp 2010).

168.10 Compact Rush (*Juncus conglomeratus* L.). Native. Reported from damp areas in fields by the Green Wall, and the New Downs river-bank in the early 1980's (SBBO) (TR35N) but not reported since from anywhere in the Recording Area.

168.11 Field Wood-rush (*Luzula campestris* L.) Native. *Recorded commonly* from grassy areas in the KWT Reserve and from several sites on the Estate, such as the White House rough and in the Restharrow Dunes Reserve (Philp 2010; SBBO).

169. CYPERACEAE (Sedges).

169.1 Sea Club-rush (*Bolboschoenus maritimus* L.) Native. *Widespread and sometimes abundant* at the edge of marshland ditches to the north of the

Recording Area, also on the golf course ditches and occasionally on the Estate (SBBO; Philp 2010).

169.2 Common Club-rush (*Schoenoplectus lacustris* L.) Native. *Locally frequent* in fresh-water dykes and recorded from the Lydden Valley / Worth Marshes / Estate tetrads in Philp (2010).

169.3 Grey Club-rush (*Schoenoplectus tabernaemontani* C.C. Gmel). Native. *Fairly frequent* in brackish dykes and ponds in parts of the golf courses; on the KWT Reserve; in the Stonelees area and elsewhere (SBBO; Philp 2010).

169.4 Common Spike-rush (*Eleocharis palustris* L.) Native. Recorded from ditches and ponds *throughout the Recording Area* (Philp 2010).

169.5 Slender Spike-rush (*Eleocharis uniglumis* Link.) Native. **KRDB 2. CR.** A rare plant previously known from the Lydden Valley area in TR35M, *though not found* by Philp (2010) ‘*despite repeated searches*’. However, it was re-discovered in the same area in 2021 on land now forming part of the RSPB’s Worth Marshes Reserve where new ditch work and scrape excavation had taken place (RSPB) and again there in August 2023 (KBRG).

169.6 Bristle Club-rush (*Isolepis setacea* L.) Very rare and local in the Recording Area. A small clump of this species was discovered in the Haven Field on the Estate in April 2014 (SB). This appears to be a new record for the area, although it occurs just outside the area at KWT Ham Fen Nature Reserve.

169.7 Slender Club-rush (*Isolepis cernua* Vahl.) Native. **KRDB 1; CR.** Very rare and local in the Recording Area with only two records, one of which constituted the first for the county. The reported presence of this species from Worth Minnis in the Lydden Valley is included in Philp (2010) but it is made clear by the author that all the other specimens from the nearby site at Ham Fen are of a related species, the Bristle Club-rush (*Isolepis setacea* L.). However, it was confirmed from the Lydden Valley in 2021 on land which now forms part of the RSPB’s Lydden Valley Reserve. It was also found in 2021 at a completely different site on the old practice green area on Princes Golf Course (SB).

169.8 Galingale (*Cyperus longus* L.) Neophyte. Very local. Recorded in recent years from such sites on the Estate as the White House paddock and in the pond at the Observatory H.Q. (SBBO; ET 2014).

169.9 Pale Galingale (*Cyperus eragrostis* Lam.) Neophyte. The only record of this species for the area relates to a specimen found by the side of the track between Worth village and the Great Wood on 05.10.2025. (BD) This plant is found in gardens from where it sometimes escapes and becomes naturalised.

169.10 True Fox-sedge (*Carex vulpina* L.) **RDBVU; BAP P. CR.** Only one record. Recorded from the western side of the KWT Reserve, pre-1980, in a KWT survey. No other records and otherwise only found in three sites in West Kent (Philp 2010).

169.11 False Fox-sedge (*Carex otrubae* Podp.) Native. Recorded from *all parts of the Recording Area* next to ponds and streams, ditches and in wet meadow areas (SBBO; Philp 2010).

169.12 Spiked Sedge (*Carex spicata* Huds.) Native. A scarce species in East Kent and until 2022 known from only one record in the Recording Area from the Stonelees tetrad (Philp 2010). In May 2022 it was also found on Royal St. George's Golf Course (KBRG).

169.13 Sand Sedge (*Carex arenaria* L.) Native. **CS.** *Widespread and generally common* on areas of fixed dunes from the Estate northwards across the golf courses to the KWT Reserve (SBBO; Philp 2010).

169.14 Brown Sedge (*Carex disticha* Huds.) Native. **CS.** Very local in the Recording Area. Described as 'rather local and uncommon' in the county (Philp 1982). It was recorded from the Lydden Valley in 1982, again in 2010 and also from the Estate area in the latter year (Philp 1982 and 2010). A further record relates to plants found in the Oasis/White House area of the Estate in 2022 (KBRG).

169.15 Divided Sedge (*Carex divisa* Huds.) Native. **RDB 2; RBDLRns.** Recorded in Philp (1982 and 2010) from the edge of brackish dykes and on grazing meadows *from much of the Recording Area.*

169.16 Hairy Sedge (*Carex hirta* L.) Native. *Fairly widespread* in a range of grassy habitats from the KWT Reserve southwards to the Estate and the Lydden Valley (Philp 2010).

169.17 Lesser Pond-sedge (*Carex acutiformis* Ehrh.) Native. *Fairly widespread* at the edge of dykes and ponds from the KWT Reserve southwards as far as the Lydden Valley area (Philp, 2010).

169.18 Greater Pond-sedge (*Carex riparia* Curtis) Native. *Fairly widespread* and recorded from the same areas as *C. acutiformis*, above (SBBO).

169.19 Cyperus Sedge (*Carex pseudocyperus* L.) Fairly local. Found in the New Downs and Worth Marshes-Lydden Valley tetrads growing by the side of dykes and slow-flowing streams (Philp 1982 and 2010).

169.20 Bottle Sedge (*Carex rostrata* Stokes). Native. **KRDB1; CR.** Very rare and local in the Area. A plant of acid swamps and reedbeds which was first recorded in the Great Wood at Worth in 1960 (FR; Kent Field Club) but then not subsequently

until August 2023 at the same site. It was recorded from only 8 sites in the county by Philp (1982) and from only one site (Dungeness) in 2010.

169.21 Pendulous Sedge (*Carex pendula* Huds.) Native. A rare species in the Recording Area with apparently only one known record. This relates to a plant growing in the White House paddock on the Estate (TR35N) in 2012-2013 (PD 2014). The species is widely grown as a garden plant and it is possible that this plant arrived as a garden discard. The same is probably true of a plant found growing alongside the Ancient Highway south of The Chequers in May 2016, (KC).

169.22 Glaucous Sedge (*Carex flacca* Schreb.) Native. *Widespread.* Occurs on areas of fixed sand-dune and sandy pastures in such sites as the Sampher; the KWT Reserve; New Downs and the Worth marshes (SBBO; Philp 2010).

169.23 Distant Sedge (*Carex distans* L.) Native. **CS.** *Local in the area.* Recorded from damp slacks on the Sampher and the KWT Reserve (SBBO) and other damp meadows near the coast (Philp 2010).

169.24 Long-bracted Sedge (*Carex extensa* Gooden.) Native. **KRDB 1. CR.** Very local in the Recording Area. Formerly known as 'Saltmarsh Sedge' This is a rare plant in Kent but it was still present, at its only known site in the county, at the Stour river-mouth in TR36L in the survey period for Philp (2010) and again in 2013 and 2015 (KBRG).

169.25 Common Sedge (*Carex nigra* L.) Native. **CS.** Very local in the Recording Area. Also known as **Black Sedge**, this species of marshes and wet grassy areas was never common in Kent (Philp 1982). It was only recorded from the Estate tetrad (TR35T) in the 1982 survey, was not reported from anywhere in East Kent in Philp (2010) but does appear again in SBBO records in 2012 from the Big Gully on the Estate and in 2022 from an old dune slack on Royal St. George's Golf Course (KBRG).

169.25 Tufted Sedge (*Carex elata* All.) Native. **KRDB 2; RDBIc; CR.** Very local in the Recording Area. Found at the edges of marshland dykes in the Lydden Valley and north to the Estate. This is the only known Kent locality for the species, (Philp, 2010). A number of plants were found in the Big Gully on the Estate in 2017, following scrub clearance there the previous winter (SB).

170. POACEAE (Grasses)

Formerly Gramineae.

170.1 Meadow Fescue (*Schedonorus pratensis* Huds.) Native. Fairly local in the Recording Area. Found in wet or damp meadows and the edges of roads. Recorded from the KWT Reserve (SBBO) and the Worth Marshes-Lydden Valley area (Philp 2010).

170.2 Tall Fescue (*Schedonorus arundinacea* Schreb.) Native. Found along wide roadside verges and other rough grassy areas *throughout much of the Recording Area* (SBBO; Philp 2010).

170.3 Rush-leaved Fescue (*Festuca arenaria* Osbeck) Native. **RDBLRns; KRDB 1; CR.** Local in the Recording Area and grows in only two localities in Kent (Philp 2010). It was found in 1981 in tetrad TR36K, in the KWT Reserve (KWT); and found again in TR35P and TR35U on the St. George's Golf Course (Philp 2010) and again at that site in 2022 (KBRG).

170.4 Perennial Rye-grass (*Lolium perenne* L.) Native. *Widespread and usually abundant* in grassland throughout the Recording Area, both in cultivated fields and elsewhere (SBBO).

170.5 Italian Rye-grass (*Lolium multiflorum* Lam.) Neophyte. *Found widely in the area* especially on the Worth Marshes fields and in Restharrow Dunes Reserve, (Philp 2010; SBBO). Often sown as a ley grass.

170.6 Red Fescue (*Festuca rubra* L.) Native. *A very common and widespread plant*, recorded from grassy areas in every part of the Recording Area. At least two sub-species have been identified, *F.r. rubra* being widespread and *F.r. litoralis* occurring in brackish sites in the Pegwell Bay area (Philp 2010)

170.7 Dune Fescue (*Vulpia fasciculata* Forssk.) Native. **RDBLRns; KRDB 2; CS.** 'A scarce plant of coastal sand-dunes' (Philp 2010). Only found in Kent at Greatstone and at Sandwich Bay, where it occurs patchily from the Estate, (including, in the past at least, the southern end of Restharrow Dunes), north as far as the KWT Reserve, (SBBO). A hybrid form, *Festuca rubra* x *Vulpia fasciculata* was recorded from the area in 1954 *but not since* (Philp 2010).

170.8 Squirrel-tail Fescue (*Vulpia bromoides* L.) Native. Found *commonly* on stabilised sand-dunes, the upper beach and waste places throughout the area, (SBBO; Philp 2010).

170.9 Rat's-tail Fescue (*Vulpia myuros* L.) Archaeophyte. Reported from scattered sites such as the KWT Reserve, the footpath inland from the old Princes Golf Clubhouse and in Restharrow Dunes on the Estate (SBBO; Philp 2010).

170.10 Bearded Fescue (*Vulpia ciliata* ssp. *ambiguata* LeGall) Local in the Recording Area. 'A scarce plant of coastal sand-dunes and dry sandy tracks and roadside verges' (Philp 2010). Found in sites northwards from the Estate to Pegwell Bay.

170.11 Crested Dog's-tail (*Cynosurus cristatus* L.) Native. *Widespread and common* in most grassland areas in the Recording Area, favouring drier sites (SBBO; Philp 2010).

170.12 Rough Dog's-tail (*Cynosurus echinatus* L.) Neophyte. **KRDB 3. CR.** Very local in the area. Found in only a very few widely-separated sites in Kent, including on waste ground on the Estate (Philp 2010).

170.13 Common Saltmarsh-grass (*Puccinellia maritima* Huds.) Native. This is a *common plant* of the salt-marshes at Pegwell Bay and along the tidal reaches of the Stour inland towards Sandwich (SBBO).

170.14 Reflexed Saltmarsh-grass (*Puccinellia distans* Jacq.) Native. *Common in suitable habitats*. Found on salt-marshes throughout the area, favouring the drier areas of marsh which are less often flooded. The plant has also been found along Princes Drive, the road leading northwards from the Estate (SBBO).

170.15 Borrer's Saltmarsh-grass (*Puccinellia fasciculata* Torr.) Native. **RDBLRns; RDBVU.** Locally common on drier salt-marsh areas in four tetrads just to the south of the Stour Estuary in Philp (1982) but only from the Estate tetrad in Philp (2010).

170.16 Quaking-grass (*Briza media* L.) Native. *Fairly common in the area*. Recorded from the Estate northward to Stonelees from the late-1970's to the present day (SBBO; Philp 2010). The plant prefers unimproved areas of grassland on well-drained soils.

170.17 Early Meadow-grass (*Poa infirma* Kunth.) Native. **KRDB 1: CR.** Very local in the area. Only recorded in Kent for the first time in 1999 and appears in Philp (2010) *in one tetrad only* centred on Sandwich Bay Estate (TR35T). An inhabitant of bare areas where there is no competition from other species. Found in cracks in the tarmac on a road on the Estate in 2017 (SB).

170.18 Annual Meadow-grass (*Poa annua* L.) Native. Occurs *abundantly throughout all parts of the Recording Area* on both cultivated and waste ground (Philp 2010).

170.19 Rough Meadow-grass (*Poa trivialis* L.) Native. Occurs *abundantly* in all types of grassland throughout the area (SBBO; Philp 2010).

170.20 Spreading Meadow-grass (*Poa humilis* Ehrh.) Native. *Widespread* throughout the Recording Area, especially on sand-dune habitats and the sides of roads and tracks (Philp 2010; SBBO).

170.21 Smooth Meadow-grass (*Poa pratensis* L.) Native. In pastures, meadows and roadside verges. Less widespread in the Recording Area than the two preceding species, 'usually in well-drained soils of medium to high fertility' (Philp 2010).

170.22 Narrow-leaved Meadow-grass (*Poa angustifolia* L.) Native. *Found throughout the area* on dry grassland and rough ground (Philp 2010).

170.23 Flattened Meadow-grass (*Poa compressa* L.) Native. Rare and local in the Recording Area, with just one record from the Estate tetrad in Philp (1982) but apparently not found anywhere subsequently. Occurs on rough or stony ground.

170.24 Bulbous Meadow-grass (*Poa bulbosa* L.) Native. **RDBLRns**. Fairly local in the area. Recorded from stabilised sand-dunes from Pegwell Bay southwards to the Cinque Ports Golf Course (SBBO; Philp 2010). The only other major Kentish locality is from the Dymchurch to Dungeness area.

170.25 Cock's-foot (*Dactylis glomerata* L.) Native. *Common and widespread* throughout the Recording Area on rough grassland and waste ground (SBBO; Philp 2010).

170.26 Whorl-grass (*Catabrosa aquatica* L.) **CR**. Very local in the Recording Area. Found in only a very few places in the county, including two tetrads in the Lydden Valley at Northbourne at the extreme southern edge of the Recording Area. A plant of muddy edges of ponds and slow-flowing streams (Philp 2010).

170.27 Fern-grass (*Catapodium rigidum* L.) Native. *Widespread* on sand-dune grassland and similar well-drained habitats in most tetrads of the Recording Area (Philp 2010).

170.28 Sea Fern-grass (*Catapodium marinum* L.) Native. *Widespread* in all areas of the coastal fixed sand-dunes and the upper beach (SBBO; Philp 2010).

170.29 Hard-grass (*Parapholis strigosa* Dumort) Native. Local in the Recording Area. Recorded from the edge of the salt-marsh at Pegwell Bay and occasionally from stabilised shingle areas on the seaward side of the Cinque Ports Golf Course (Philp 2010; SBBO).

170.30 Curved Hard-grass (*Parapholis incurva* L.) **NS;CS**. Very local in the Recording Area. Recorded from the beach at Shellness Point (KC 1967; Philp 1982; FR 1996).

170.31 Downy Oat-grass (*Avenula pubescens* Huds.) Native. *Local*. Recorded in the area from short grassland in slightly higher areas, from the KWT Reserve southwards as far as the Restharrow Dunes Reserve on the Estate, (SBBO).

170.32 Meadow Oat-grass (*Avenula pratensis* L.) Native. Very local and intermittent. Not recorded in either Philp (1982) or Philp (2010) for the Recording Area but SBBO has three records of this species in the 1970's and mid-1980's, from the KWT Reserve; St George's Golf Course rough and in the White House area of the Estate (SBBO).

170.33 False Oat-grass (*Arrhenatherum elatius* L.) Native. *Widespread and common* in the Recording Area, favouring rough grassland, field edges and roadside verges (Philp 2010; SBBO).

170.34 Wild Oat (*Avena fatua* L.) Archaeophyte. Found in *most of the tetrads* of the Recording Area on disturbed ground or at the margins of former cereal fields (SBBO; Philp 2010).

170.35 Winter Wild-oat (*Avena sterilis* ssp. *ludoviciana* L.) Neophyte. Only one record of this species, from the Estate area, (Philp 2010).

170.36 Cultivated Oat (*Avena sativa* L.) Neophyte. *Fairly frequent*. Recorded along field and road verges as a relic of cereal cultivation in Philp (2010).

170.37 Yellow Oat-grass (*Trisetum flavescens* L.) Native. *Common and widespread* in short-grass areas in most parts of the Recording Area (SBBO; Philp 2010).

170.38 Crested Hair-grass (*Koeleria macrantha* Ledeb. Native. *A common species* of short grass areas on old dunes within the Recording Area (SBBO).

170.39 Tufted Hair-grass (*Deschampsia cespitosa* L.) Native. Scarce in the Recording Area with reports from damp areas on the KWT Reserve in 1972, (SBBO); the Worth marshes-Lyddon Valley area (Philp 1982) and from the Observatory garden in 1992 (SBBO).

170.40 Yorkshire Fog (*Holcus lanatus* L.) Native. *Widespread and often abundant* in most grassy habitats throughout the Recording Area (SBBO).

170.41 Silver Hair-grass (*Aira caryophyllea* L.) Native. Very local in the Recording Area. Plants growing in the White House paddock on the Estate in 1992 constituted the first record for East Kent for many years. Philp (2010) confirmed the species from the same tetrad.

170.42 Early Hair-grass (*Aira praecox* L.) Native. Recorded as *frequent* on fixed sand-dune areas from the Estate and northwards (SBBO; Philp 2010).

170.43 Sweet Vernal-grass (*Anthoxanthum odoratum* L.) Native. *Locally common*. Recorded from a range of grassland habitats throughout much of the Recording Area, preferring bushier slacks and plantations such as in the White House, the Gullies and St. George's bushes on the Estate (SBBO; Philp 2010).

170.44 Reed Canary-grass (*Phalaris arundinacea* L.) Native. Found in a variety of scattered sites in wet, marshy areas from the KWT Reserve to the Worth Marshes-Lyddon Valley area. Philp (2010), observed that it is particularly found, 'where there is some fluctuation in the water level'.

170.45 Canary-grass (*Phalaris canariensis* L.) Neophyte. Infrequent and very localised in the Recording Area. Recorded in the past as a result of bird seed being spilt, for example, near a crow trap on the Estate in 1972 (SBBO). Much less frequent now, but recorded from the Estate tetrad in Philp (2010).

170.46 Awned Canary-grass (*Phalaris paradoxa* L.) Neophyte. Very local in the Recording Area, (one site). Philp (2010) noted that this species was increasing in the county and it is shown for the Estate tetrad in that edition of the Kent Atlas.

170.47 Common Bent (*Agrostis capillaris* L.) Native. Local. Only recorded as a component of short grassland sites, from the Estate tetrad, (TR35T) (SBBO; Philp 2010), but may well be more widespread.

170.48 Black Bent (*Agrostis gigantea* Roth) Archaeophyte. Reported as 'frequent' around the Estate in the 1970's and still there in 2012 (SBBO). Philp (2010) also records it from the Estate tetrad.

170.49 Creeping Bent (*Agrostis stolonifera* L.) Native. *Widespread and generally abundant* throughout much of the Recording Area, favouring damper dune slacks (SBBO).

170.50 Brown Bent (*Agrostis vinealis* Schreb) Native. **CR.** Very local and infrequent. An inhabitant of free-draining fields but the only record of this species for the Recording Area relates to plants found sometime prior to 1980 on the East side of the '100-acre field' on the KWT Reserve (KWT).

170.51 Wood Small-reed (*Calamagrostis epigejos* L.) Native. A very local and scarce species, with no records in the past 16 years. Sightings were made from the White House area of the Estate in the 1970's (SBBO), from Stonelees in July 1990 and from the Pegwell Bay Country Park area in Philp (2010).

170.52 Marram (*Ammophila arenaria* L.) Native. *Common and often abundant* on both stable and unstable sand-dunes along the whole beach frontage of the recording area, and in rough, 'grey dune' grassed areas further inland (SBBO).

170.53 Hare's-tail (*Lagurus ovatus* L.) Reported in the past as established in the dunes in TR36K (SBBO; Philp 1982) but apparently no recent records.

170.54 Annual Beard-grass (*Polypogon monspeliensis* L.) Native. **NS.** Local in the Recording Area. Not recorded for the area in either Philp (1982) or Philp (2010) but found by several different recorders in the 1970's and early 1980's by the sides of a trial 'scrape' in the '100-acre field' on the KWT reserve; in dried pools in salt-marsh areas and near cattle troughs in the Sampher (SBBO).

170.55 Meadow Foxtail (*Alopecurus pratensis* L.) Native. *Fairly widespread* in the area in rough meadows, roadside verges and damp areas on the golf courses (Philp 2010; SBBO).

170.56 Marsh Foxtail (*Alopecurus geniculatus* L.) Native. Local in the area. Recorded from the edges of inland ditches of the KWT Reserve in TR36K and also from the Worth Marshes-Lyddon Valley area (SBBO; Philp 2010).

170.57 Black-grass or Twitch (*Alopecurus myosuroides* Huds.) Archaeophyte. Local in the area. Reported from the western side of the KWT Reserve before 1980 (KC; KWT) and from the Estate and Worth Marshes in Philp (2010). An annual grass of arable fields, roadside edges and disturbed ground.

170.58 Timothy (*Phleum pratense* L.) Native. *Widespread in the Recording Area* in meadows, pastures and rough grassland (SBBO).

170.59 Smaller Cat's-tail (*Phleum bertolonii* DC) Native. *Widespread throughout the area and usually common* in short-grass habitats such as the old grazed grey dunes (SBBO).

170.60 Sand Cat's-tail (*Phleum arenarium* L.) Native. **CS**. Found at only four other localities in the county apart from Sandwich Bay, where it is *commonly found on the dunes and sandy shingle areas* (SBBO; Philp 2010).

170.61 Reed Sweet-grass (*Glyceria maxima* Hartm.). Native. *Frequent* throughout the Recording Area in wet marshes and by the sides of ditches, especially where other competitor species such as Common Reed, (*Phragmites australis*), are not present (Philp 2010; SBBO).

170.62 Floating Sweet-grass (*Glyceria fluitans* L.) Native. Infrequent, with very few records from the area but this species has been found at Archer's Low, (TR35J); in the Haven Cut and in the pond in the Middle Field on the Estate, (TR35T) and in ditches and ponds on Worth Marshes (SBBO).

170.63 Plicate Sweet-grass (*Glyceria notata* Chevall.) Native. Local in the area, with records from shallow ponds and ditches in the Estate; near St. George's Golf Clubhouse and from the Worth Marshes-Lyddon Valley areas (SBBO; Philp 2010).

170.64 Soft-brome (*Bromus hordeaceus* ssp. *hordeaceus* L.) Native. Found *commonly throughout the Recording Area* in established meadows, roadsides and waste ground (Philp 2010).

170.65 Sand Soft-brome (*Bromus hordeaceus* ssp. *thominei* L.). **CS**. Native. Was recorded as *widespread* on stabilised sand-dunes throughout the Recording Area (Philp 2010) but apparently less so in more recent years.

170.66 Meadow Brome (*Bromus racemosus* L.) Native. **CR**. Local in the Recording Area. Recorded from damp, unimproved grassland such as on the KWT Reserve; at Pegwell and in the Stonelees area (Philp 2010). Philp (2010) outlines reasons for including records of *B. commutatus* within *B. racemosus*.

170.67 Slender Soft-brome (*Bromus lepidus* Holmb.) **CR**. The only record relates to the species being found on cultivated grassland in tetrad TR35P prior to 1982 (Philp 1982).

170.68 Lesser Soft-brome (*Bromus hordeaceus* x *lepidus* = *Bromus* x *pseudothominei*). Very local. This hybrid was recorded in Philp (2010), from the Pegwell Bay Country Park and Stonelees tetrads (TR36F and TR36G).

170.69 Great Brome (*Anisantha diandra* Roth.) Neophyte. Very local and found only at two separate sites, in the Estate area (Philp 2010) and at Stonelees in 2013 (KBRG). A species of roadside verges, arable fields and disturbed waste ground.

170.70 Barren Brome (*Anisantha sterilis* L.) Archaeophyte. *Common and widespread throughout all parts of the Recording Area*, especially on roadside verges and waste ground (SBBO).

170.71 Upright Brome (*Bromopsis erecta* Huds.) Native. Very local in the Recording Area. Recorded from the Pegwell Bay Country Park and Stonelees tetrads in Philp (2010).

170.72 Tor-grass (*Brachypodium pinnatum* L.) Native. Occasional in the Recording Area. This species favours well-drained grassland and has been recorded from sites on the golf courses and around the Estate (SBBO).

170.73 False Brome (*Brachypodium sylvaticum* Huds.) Plants of this species which were found in the White House on the Estate in 1993 constituted the first record for the Recording Area (SBBO).

170.74 Bearded Couch (*Elymus caninus* L.) Native. Two old records from the Pegwell Bay-Stonelees area in Philp (1982) and beside ponds in the Mary Bax's area in 1983 (TR35T) (SBBO) but no records subsequently.

170.75 Common Couch (*Elytrigia repens* L.) Native. *Widespread and abundant* in almost all parts of the Recording Area, though less so on the sand-dune coastal zone, (SBBO; Philp 2010).

170.76 Sea Couch (*Elytrigia atherica* Link.) Native. *Widespread and common* throughout the Recording Area on tidal salt-marsh, brackish areas and both new and consolidated sand-dune sites, from Pegwell Bay to south of the Estate (SBBO).

170.77 Sand Couch (*Elytrigia juncea* L.) Native. *Found commonly* along the shore line on new dune areas just above high-tide mark and sometimes further away from the beach in more stabilised dunes (SBBO).

Elytrigia atherica* x *juncea. This hybrid has been recorded from Sandwich Bay, (Philp 2010).

170.78 Lyme Grass (*Elymus arenaria* L.) **CR**. Very local in the Recording Area. Native, 'although perhaps originally planted' (Philp 2010). This plant of mobile sand-dunes has most recently been found in TR35P and TR36K (SBBO; Philp 2010).

170.79 Wall Barley (*Hordeum murinum* ssp. *murinum* L.) Archaeophyte. Found throughout the Recording Area at the sides of roads, in rough grassland and other disturbed ground (Philp 2010).

170.80 Meadow Barley (*Hordeum secalinum* Schreb.) Native. *Recorded from most tetrads* of the Recording Area, favouring meadows and grazing marshes (Philp 2010).

170.81 Sea Barley (*Hordeum marinum* Huds.) Native. **RDBLRns. RDB 2.** Two old records exist for the area, one of which describes the plant as being 'common along the path in front of Ramsgate Tip' in 1975 and from the KWT Reserve at about the same period (SBBO). In Philp (2010) the distribution of the plant is now shown as confined to the North Kent marshes where it grows on sea-walls and coastal tracks.

170.82 Heath Grass (*Danthonia decumbens* L.) Native. One record only. Recorded from underneath sallows in the White House paddock, (TR35N), in 1989, the first record for East Kent (SBBO). Not reported from the site in subsequent years.

170.83 Pampas Grass (*Cortaderia seliona* L.) Very local in the Recording Area. Naturalised and well-established specimens of this common garden plant were found on the former Hoverport site at Pegwell Bay in 2014 (KC) and represented a new species for the Recording Area. It was also found growing in the derelict garden at Slazengers in the north end of Sandwich Bay Estate in early 2016 (KC).

170.84 Common Reed (*Phragmites australis* Cav.). Native. *Found commonly throughout the Recording Area* in ditches, edges of streams, dune slacks and other damp areas (SBBO).

170.85 Common Cord-grass (*Spartina anglica* C.E. Hubb) Native. *Locally common.* Recorded from tidal mud-flats along the River Stour downstream of Sandwich to Pegwell Bay (Philp 2010; SBBO).

170.86 Townsend's Cord-grass (*Spartina x townsendii*). This hybrid is not recognised for anywhere the county by Philp (1982 and 2010), although it is accepted that it might occur. It has been claimed by two different recorders from the KWT Reserve in TR36K and TR36L in the early 1970's and 1980's (SBBO) but confusion with the previous species seems possible.

170.87 Cockspur (*Echinochloa crus-galli* L.) Neophyte. An introduced plant which appears as a *casual species* on roadside verges and waste land, sometimes as a result of bird-seed being discarded in an area. Only one record, from the Observatory-Old Downs Farm tetrad, (TR35N) in Philp (2010).

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<i>Lemna gibba</i>	94
<i>Lemna minor</i>	94
<i>Lemna minuta</i>	94
<i>Lemna trisulca</i>	94
<i>Leontodon hispidus</i>	81
<i>Leontodon saxatilis</i>	81
<i>Leucanthemum vulgare</i> ssp.	86
<i>Leucojum aestivum</i>	102
<i>Ligustrum ovalifolium</i>	72
<i>Ligustrum vulgare</i>	72
<i>Linaria purpurea</i>	74
<i>Linaria repens</i>	74
<i>Linaria vulgaris</i>	73
<i>Lolium multiflorum</i>	109
<i>Lolium perenne</i>	109
<i>Lonicera caprifolium</i>	89
<i>Lonicera japonica</i>	89
<i>Lonicera periclymenum</i>	89
<i>Luzula campestris</i>	106
<i>Lycium barbarum</i>	71
<i>Lycopus europaeus</i>	77
<i>Lysimachia vulgaris</i>	67
<i>Matricaria discoidea</i>	86
<i>Matricaria chamomilla</i>	86
<i>Mentha aquatica</i>	77
<i>Mentha arvensis</i>	77
<i>Mentha arvensis x aquatica</i>	77
<i>Mentha spicata</i>	77
<i>Mentha spicata x suaveolens</i>	77
<i>Mentha x verticillata</i>	77

<i>Menyanthes trifoliata</i>	79
<i>Merendera montanum</i>	97
<i>Muscari armeniacum</i>	104
<i>Mycelis muralis</i>	82
<i>Myosotis arvensis</i>	70
<i>Myosotis discolor</i>	70
<i>Myosotis laxa</i>	69
<i>Myosotis ramoisissima</i>	70
<i>Myosotis scopioides</i>	69
<i>Myosotis sylvatica</i>	69
<i>Narcissus poeticus</i>	103
<i>Narcissus pseudonarcissus</i>	103
<i>Neottia ovata</i>	98
<i>Nymphoides peltata</i>	79
<i>Odontites vernus</i> ssp. <i>serotinus</i>	78
<i>Oenanthe corocata</i>	92
<i>Oenanthe fistulosa</i>	91
<i>Oenanthe fluviatilis</i>	92
<i>Oenanthe lachenalii</i>	92
<i>Onopordum acanthium</i>	81
<i>Ophrys apifera</i>	100
<i>Ophrys sphegodes</i>	100
<i>Orchis anthropophora</i>	100
<i>Orchis mascula</i>	100
<i>Origanum vulgare</i>	77
<i>Ornithogalum umbellatum</i> ssp. <i>campestre</i>	103
<i>Orobanche caryophyllacea</i>	78
<i>Orobanche minor</i>	78
<i>Parapholis incurva</i>	112
<i>Parapholis strigosa</i>	112
<i>Parentucella viscosa</i>	78
<i>Pastinaca sativa</i>	93
<i>Pentaglottis sempervirens</i>	69
<i>Petasites hybridus</i>	87
<i>Petroselinum segetum</i>	93
<i>Phalaris arundinacea</i>	113
<i>Phalaris canariensis</i>	113
<i>Phalaris paradoxa</i>	113
<i>Phleum arenarium</i>	115
<i>Phleum bertolonii</i>	114
<i>Phleum pratense</i>	114
<i>Phragmites australis</i>	117
<i>Picris hieracioides</i>	82
<i>Pilosella aurantiaca</i>	83
<i>Pilosella officinarum</i>	83
<i>Pimpinella major</i>	91
<i>Pimpinella saxifraga</i>	91
<i>Plantago coronopa</i>	74
<i>Plantago lanceolata</i>	74
<i>Plantago major</i> ssp. <i>major</i>	74
<i>Plantago maritima</i>	74

<i>Plantago media</i>	74	<i>Scorzoneroide autumnalis</i>	81
<i>Poa angustifolia</i>	111	<i>Scrophularia auriculata</i>	75
<i>Poa annua</i>	111	<i>Scrophularia nodosa</i>	75
<i>Poa bulbosa</i>	111	<i>Scutellaria galericulata</i>	76
<i>Poa compressa</i>	111	<i>Senecio aquaticus</i>	87
<i>Poa humilis</i>	111	<i>Senecio cineraria</i>	86
<i>Poa infirma</i>	111	<i>Senecio erucifolius</i>	87
<i>Poa pratensis</i>	111	<i>Senecio jacobea</i>	87
<i>Poa trivialis</i>	111	<i>Senecio squalidus</i>	87
<i>Polypogon monspeliensis</i>	114	<i>Senecio sylvaticus</i>	87
<i>Potamogeton alpinus</i>	97	<i>Senecio viscosus</i>	87
<i>Potamogeton berchtoldii</i>	96	<i>Senecio vulgaris</i>	87
<i>Potamogeton coloratus</i>	96	<i>Sherardia arvensis</i>	68
<i>Potamogeton crispus</i>	96	<i>Silene conica</i>	62
<i>Potamogeton friesii</i>	96	<i>Silene diocia</i>	62
<i>Potamogeton lucens</i>	96	<i>Silene flos-cuculi</i>	62
<i>Potamogeton natans</i>	95	<i>Silene latifolia</i>	62
<i>Potamogeton pectinatus</i>	96	<i>Silene latifolia x diocia</i>	62
<i>Potamogeton perfoliatus</i>	96	<i>Silene noctiflora</i>	62
<i>Potamogeton pusillus</i>	96	<i>Silene uniflora</i>	61
<i>Potamogeton trichoides</i>	97	<i>Silene vulgaris ssp. vulgaris</i>	61
<i>Potamogeton. obtusifolius</i>	97	<i>Sisyrinchium striatum</i>	101
<i>Primula veris</i>	66	<i>Smyrnium olustratum</i>	91
<i>Primula vulgaris</i>	66	<i>Solanum dulcamara</i>	71
<i>Prunella vulgaris</i>	77	<i>Solanum nigrum ssp. nigrum</i>	71
<i>Puccinellia distans</i>	110	<i>Solidago canadensis</i>	84
<i>Puccinellia fasciculata</i>	110	<i>Solidago gigantea</i>	84
<i>Puccinellia maritima</i>	110	<i>Solidago virgaurea</i>	84
<i>Pulicaria dysenterica</i>	84	<i>Sonchus arvensis</i>	82
<i>Rhinanthus minor</i>	78	<i>Sonchus asper</i>	82
<i>Rudbeckia hirta</i>	88	<i>Sonchus oleraceus</i>	82
<i>Ruppia maritima</i>	97	<i>Sparganium emersum</i>	104
<i>Ruscus aculeatus</i>	104	<i>Sparganium erectum</i>	104
<i>Sagittaria sagittifolia</i>	94	<i>Sparganium natans</i>	105
<i>Salicornia ramosissima</i>	65	<i>Spartina anglica</i>	117
<i>Salicornia dolichostaya</i>	65	<i>Spartina x townsendii</i>	117
<i>Salicornia europaea</i>	65	<i>Spiranthes spiralis</i>	98
<i>Salicornia fragilis</i>	65	<i>Stachys palustris</i>	75
<i>Salicornia pusilla</i>	65	<i>Stachys sylvatica</i>	75
<i>Salicornia pusilla x ramosissima</i>	65	<i>Stachys x ambigua</i>	76
<i>Salix caprea x cinerea</i>	44	<i>Stratiotes aloides</i>	95
<i>Salsola kali. ssp. kali</i>	65	<i>Suadea maritima</i>	65
<i>Salvia verbenaca</i>	77	<i>Succisa pratensis</i>	90
<i>Sambucus nigra</i>	88	<i>Symphoricarpos albus</i>	89
<i>Samolus valerandi</i>	67	<i>Symphytum x uplandicum</i>	69
<i>Saponaria officinalis</i>	62	<i>Tamus communis</i>	97
<i>Scabiosa columbaria</i>	90	<i>Tanacetum parthenium</i>	85
<i>Schedonorus arundinacea</i>	109	<i>Tanacetum vulgare</i>	85
<i>Schedonorus pratensis</i>	109	<i>Taraxacum agg</i>	83
<i>Schoenoplectus tabernaemontani</i>	106	<i>Tetragonia tetragonioides</i>	66
<i>Schoenoplectus lacustris</i>	106	<i>Torilis japonica</i>	93

<i>Torilis nodosa</i>	93	<i>Veronica beccabunga</i>	72
<i>Tragopon pratensis ssp.minor</i>	82	<i>Veronica anagallis-aquatica</i>	72
<i>Tragopon porrifolius</i>	82	<i>Veronica arvensis</i>	73
<i>Triglochin maritima</i>	95	<i>Veronica catenata</i>	72
<i>Triglochin palustris</i>	95	<i>Veronica chamaedrys</i>	73
<i>Tripleurospermum inodorum</i>	86	<i>Veronica hederifolia</i>	73
<i>Tripleurospermum maritimum</i>	86	<i>Veronica officinalis</i>	72
<i>Trisetum flavescens</i>	112	<i>Veronica persica</i>	73
<i>Tristagma uniflorum</i>	102	<i>Veronica polita</i>	73
<i>Tulipa gesneriana</i>	97	<i>Veronica serpyllifolia</i>	72
<i>Tussilago farfara</i>	87	<i>Viburnum lantana</i>	89
<i>Typha latifolia x angustifolia</i>	105	<i>Viburnum opulus</i>	88
<i>Typha angustifolia</i>	105	<i>Vinca major</i>	69
<i>Typha latifolia</i>	105	<i>Vulpia bromoides</i>	110
<i>Utricularia australis</i>	79	<i>Vulpia ciliata ssp. ambigua</i>	110
<i>Utricularia vulgaris</i>	79	<i>Vulpia fasciculata</i>	110
<i>Valerianella carinata</i>	89	<i>Vulpia myuros</i>	110
<i>Valerianella locusta</i>	89	<i>Wolffia arrhiza</i>	94
<i>Verbascum Thapsus</i>	75	<i>Xanthium spinosum</i>	88
<i>Verbena officinalis</i>	79	<i>Zannichellia palustris</i>	97