
Ainsdale Hope Learning Centre

National Vegetation Classification (NVC) Survey Report

Compiled by Ecology Services Ltd.

on behalf of

Sefton Council

November 2023



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Contents

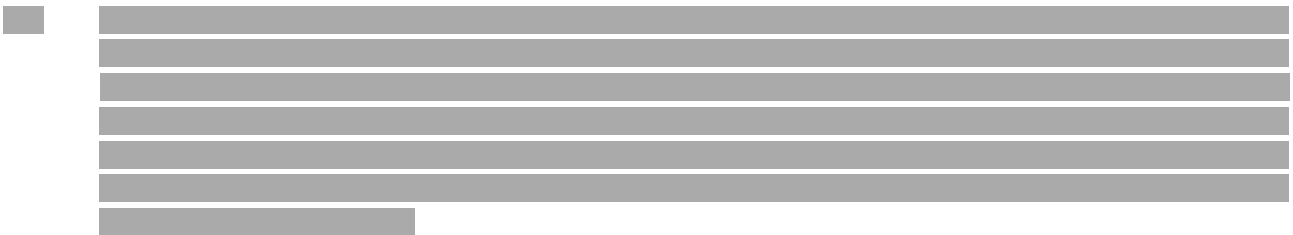
1.0	Introduction	2
2.0	Methodology	3
3.0	Results and Evaluation	7
4.0	Impacts and Recommendations	15
5.0	Conclusion	15
6.0	References	16

Figures

Figure 1: NVC Survey Plan

1.0 Introduction

- 1.1 Ecology Services Limited was commissioned by Sefton Council in March 2023 to carry out a National Vegetation Classification (NVC) Survey to inform potential residential development at the Ainsdale Hope Learning Centre, Sandringham Rd, Ainsdale, Southport, PR8 2PJ, National Grid Reference (NGR) 331260, 412950.
- 1.2 A Preliminary Ecological Assessment undertaken by Kingdom Ecology Limited in 2022 found the areas of lawn and area of unmanaged, semi-natural grassland habitat that has developed on the former sports pitches to be moderately diverse. The assessment report recommended that, where possible, the proposed development should seek to retain areas of the existing ecologically valuable grassland habitat as part of the development layout (both the moderately species-rich mown lawn habitat around the existing buildings and also the neutral grassland habitats that have developed on the former sports pitches. The areas of grassland should be managed to promote their biodiversity value as wildflower grassland through an appropriate Habitat Management Plan.
- 1.3 The site is allocated for residential development in the Sefton Local Plan (Sefton Council, 2017) with the requirement that an 'Ecological Improvement Area' is developed as a nature reserve on the site alongside the housing allocation. Development of the site must provide new habitat and ecological improvements on the adjacent 'Ecological Improvement Area', the extent of which is to be determined following the completion of future evidence (i.e. ecological surveys).



Site Description

- 1.6 The site comprises the Learning Centre Buildings plus their surrounding areas of hardstanding parking and landscaped grounds. In addition, the site includes a large area of grassland habitat that has developed on former sports pitches. The site was previously the location of Ainsdale Hope High School which closed in 2009. The site is located immediately adjacent to internationally, nationally and locally important nature conservation sites to the north and west designated for their important sand dune and coastal habitats and associated flora and fauna. To the south of the site lies residential development and to the north and east, golf courses. A large residential property and its grounds also lie adjacent to the north of the site.

- 1.7 The survey is required to determine the extent of ecologically valuable habitats, Habitat of Principal Importance or Local Biodiversity Action Plan (LBAP) within the site to inform the extent of land available on the site for residential development.
- 1.8 The survey will provide detailed baseline information which will indicate any areas that should be retained for their ecological value and provide a guide to any future development proposals put forward at this site.
- 1.9 This report presents the results of the survey, evaluates the findings and makes recommendations for retention of ecologically valuable habitats.

2.0 Planning Policy and Legislation

Planning Policy

- 2.1 The National Planning Policy Framework (NPPF, 2023) places a clear responsibility on Local Planning Authorities (LPA) to contribute to conserving and enhancing the natural and local environment. LPAs should promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species (e.g. Species of Principal importance, Local Biodiversity Action Plan species); and identify and pursue opportunities for securing measurable net gains for biodiversity. The Office of the Deputy Prime Minister (ODPM) Circular 06/2005 provides administrative guidance on the application of the law in relation to planning and nature conservation.
- 2.2 A Local Planning Authority (LPA) has a duty to ensure that protected species and habitats within the UK are a 'material consideration' in the determination of a planning application. Therefore, an LPA is unlikely to determine an application until all relevant information relating to protected species or habitats is submitted to fully inform the application. Relevant information includes adequate surveys and, where required, mitigation strategies, which will need to be submitted to inform a planning application.
- 2.3 Most Local Planning Authorities have a system of sites of local importance for nature conservation which complement the series of internationally and nationally designated wildlife and geological site. These sites are usually afforded protection through the Local Plan.
- 2.4 Local Wildlife Sites (LWS) are non-statutory sites designated through the North Merseyside Local Sites Partnership and receive policy protection through Local Plans. Local Wildlife Sites must meet selection guidelines to be designated as a Local Site. In North Merseyside (Knowsley, Liverpool, St. Helens and Sefton) Local Wildlife Sites are designated using the North Merseyside Local Sites designation guidelines (MEAS, 2008). The designation guidelines are based on Ratcliffe (1977) A Nature Conservation Review (i.e. rareness, diversity, naturalness, fragility etc.) as well as guidelines which highlight protected species and Biodiversity Action Plan species and habitats. In 2012, the North Merseyside Local Sites Partnership had responsibility for 265 Local Sites (both Local Wildlife and Local Geological Sites) in North Merseyside (MEAS, 2012).
- 2.5 Although the UKBAP has been superseded by the UK Post-2010 Biodiversity Framework and, in England, Biodiversity 2020: A strategy for England's wildlife and ecosystem services (2011), many Local Authorities have prepared and operate Local Biodiversity Action Plans (LBAPs). LBAPs not only highlight habitats and species that are of Principal Importance but also habitats and species that are of local importance. LBAPs will be prepared for these habitats and species. Listing of habitat or species in a LBAP does not confer any new statutory or planning policy protection. However, impacts upon species prioritised in LBAPs

may be a material consideration in a planning application. Under its 25 Year Environment Plan (2018), the Government proposes to publish a new strategy for nature building on Biodiversity 2020.

Legislation

Special Area of Conservation (SAC)

- 2.6 Special Areas of Conservation are designated under Regulation 12 the Conservation of Habitats and Species Regulations 2017 (as amended). Special Areas of Conservation are sites of national importance which contribute significantly to the maintenance, or restoration, at favourable conservation status in their natural range of the 189 natural habitat types listed in Annex I to the Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive) or the 788 species listed in Annex II to that Directive and to the maintenance of biological diversity within the Atlantic biogeographic region. The listed habitat types and species are those considered to be most in need of conservation at a European level (excluding birds). The Conservation of Habitats and Species Regulations 2017 (as amended) continue the same provision for European protected species, licensing requirements and protected areas after Brexit.

Ramsar Sites

- 2.7 The Convention on Wetlands was formed in Ramsar, Iran in 1971 and is now termed the Ramsar Convention. The Ramsar Convention came into action in 1975. It is an international government treaty whereby all countries, that are members, have a commitment to maintain the ecological value of their designated Wetlands of International Importance. It is the only global treaty that deals with a specific ecosystem (wetlands).
- 2.8 The Ramsar Convention provides a framework for the international cooperation and national action for the use of and conservation of wetland habitats and their associated resources.

Site of Special Scientific Interest (SSSI)

- 2.9 Sites of Special Scientific Interest are designated under The Wildlife and Countryside Act (WCA) 1981 (as amended). The WCA 1981 (as amended) is the domestic implementation of the Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention).
- 2.10 Impact Risk Zones (IRZs) are a Geographic Information System (GIS) tool developed by Natural England to enable developers and Local Planning Authorities (LPAs) to make a rapid initial assessment of the potential risks to Sites of Special Scientific Interest (SSSIs) posed by development proposals. They define zones around each SSSI according to the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.
- 2.11 European sites are underpinned by the SSSI designation and their interest features and sensitivities are covered by the SSSI IRZs. Where the notified features of the European site and SSSI are different, the SSSI IRZs have been set so that they reflect both.

Local Nature Reserves (LNR)

- 2.12 Local Nature Reserve (LNR) is a statutory designation under Section 21 of the National Parks and Access to the Countryside Act 1949 and amended by Schedule 11 of the Natural Environment and Rural Communities Act 2006 (NERC). LNRs are local sites that have been designated by the local authorities. To qualify for LNR status the site must be of importance for any of the following reasons; wildlife, geology, education or public enjoyment. The Local Plan for an area will detail any additional protection given to the LNR such as protection against damaging operations and/or protection against development within or adjacent to the

LNR. LNRs are statutorily designated sites at the local level. There is no national legal protection specifically for LNRs.

Protected Plant Species

- 2.13 All wild plants are protected under the Wildlife and Countryside Act 1981 (as amended) against unauthorised intentional uprooting. Certain plant species are afforded additional protection under Schedule 5 of the Conservation of Habitats and Species Regulations 2017 (as amended)¹ and/ or Schedule 8 of The Wildlife and Countryside Act 1981 (as amended). It is an offence to intentionally/ deliberately pick, collect, uproot or destroy and sell/ exchange listed wild plants.

Habitats and Species of Principal Importance

- 2.14 Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 (as amended) places a statutory duty on public authorities, in exercising their functions, to conserve and enhance biodiversity in England. Habitats and Species of Principal Importance for the conservation or enhancement of biodiversity in England, identified by the Secretary of State in consultation with Natural England, are listed under Section 41 of the NERC Act. The Local Planning Authority and government bodies (e.g. Natural England) will expect the overall design of the development to have regard for the conservation of these habitats and species.

3.0 Methodology

Desktop Study

- 3.1 Ecological data and historic records of protected and notable plant species and sites was collated from the following sources; listed in Table 1.

Table 1: Desktop Study Resources and Record Centres Consulted

Source of information	Information supplied
Multi-Agency Geographic Information for the Countryside (https://magic.defra.gov.uk/)	To identify statutory designated sites, Habitats of Principal Importance or features of interest within 1km of the site.
Natural Environment and Rural Communities (NERC) Act 2006 (as amended)	Review of Habitats/Species of Principal Importance known to occur in the region
North Merseyside Biodiversity Action Plan (LBAP) - https://www.merseysidebiodiversity.org.uk/	Identification of LBAP species and habitats known to occur in the region.
Merseyside Biobank	To identify locally protected sites or plant species of interest relevant to the site.

- 3.2 The data search with Merseyside Biobank was undertaken on 11th August 2022.
- 3.3 The aim of the desktop study was to assist the surveyor undertaking the NVC survey by providing background information on the likely habitats and species that occur within the local area.

NVC Survey

- 3.4 A National Vegetation Classification (NVC) survey of the site was undertaken, which defines the vegetation of selected areas more precisely in terms of its plant communities as defined by the NVC (Rodwell et. al., 1991 - 2000).

¹ The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 continue the same provision for European protected species, licensing requirements and protected areas after Brexit.

- 3.5 The site was divided into homogenous stands on the basis of the vegetation communities present. To aid the survey, no mowing of the playing fields was undertaken between April and August 2023.
- 3.6 Abundances of plant species were recorded in each vegetation stand as DAFOR abundance ratings. The DAFOR ratings included in the species lists have the following meanings: D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare. The prefix 'L' means locally, which identifies that in the case of LA for instance, the species is locally abundant and only abundant in certain parts of the target-noted area, whereas A would mean it is abundant throughout. R for rare means that the species has very low abundance and is not an indication of conservation value. The ratings have no precise definition and are affected by plant size and season of survey, but they have been shown to correlate with more quantitative measures.
- 3.7 Representative 2 x 2m quadrats were taken in each vegetation stand for comparison with the community descriptions and tables in the NVC. A quantitative measure of the abundance of each species was recorded using the Domin scale:

% Cover	Domin
< 4%	1
< 4%	2
< 4%	3
4-10%	4
11-25%	5
26-33%	6
34-50%	7
51-75%	8
76-90%	9
91-100%	10

- 3.8 Where possible, the main habitat or habitats present within each stand were placed within the National Vegetation Classification (NVC) (Rodwell et. al., 1991-2000). Where the habitat was recognisable by sight and composition as a particular community of the NVC, this was stated. Where it was uncertain which community the habitat belonged to, the species list for the quadrat was inputted into the Centre for Ecology and Hydrology's TABLEFIT computer program (Hill, 2015) to try to place the habitat within the NVC.
- 3.9 Hill (2015) advises that if the goodness of fit is very poor (<50%), then the vegetation should probably not be assigned to any NVC type unless it is known that the vegetation sample was incomplete. Where the best-fitting vegetation types have nearly equal overall goodness of fit value there are several possibilities:
- 1 The sample is intermediate between two or more distinct types.
 - 2 The sample has the dominance of one type and composition of another.
 - 3 The sample is a poor fit to any type.
 - 4 The two types are a community and one of its subcommunities.
 - 5 The two types are a community and a subcommunity of another.
- 3.10 TABLEFIT bases its identifications on (a) the species list entered and (b) the association tables published in *British Plant Communities* (Rodwell et. al., 1991-2000). Although diagnoses made with TABLEFIT are generally trustworthy, they should always be treated with caution, especially if they are based on incomplete species lists for quadrats. The community descriptions in *British Plant Communities* should be checked.
- 3.11 A map was produced detailing the location and extent of the vegetation communities present along with the locations of the quadrats and any notable plant species.

Timing

- 3.12 The Phase 2 habitat survey was undertaken on the 12th June and 11th July 2023 which is an optimal time of year to undertake such a survey.

Weather Conditions

- 3.13 The first survey visit was undertaken during a heat wave with no rainfall within the preceding few weeks. The vegetation was found to be extremely parched. The detailed quadrat recording was therefore delayed until following several weeks of showery weather when the vegetation had recovered. Weather conditions during the survey were otherwise reasonable, with no appreciable rain or wind affecting survey.

Personnel

- 3.14 All survey works were carried out by Principal Ecologist Ms L. Redgrave MA (Oxon), MSc, CEnv, CEcol, MCIEEM, a FISC Level 5 botanist, long standing member of the Botanical Society of Britain and Ireland (BSBI), member of the Bradford Botany Group and former member of the Somerset Rare Plants Group. Ms L. Redgrave has also undertaken large scale neutral and calcareous grassland NVC surveys for English Nature (since superseded by Natural England) and undertook her MSc dissertation on the ecology of the dune helleborine at Newborough Warren dune system on Anglesey. She has attended several botanical field meetings on the Sefton Coast in recent years.

Limitations

- 3.15 There was no rain during the month of May and consequently the vegetation at the time of the initial site visit was extremely parched. It is likely that some of the early flowering annuals in particular will have been missed (although it was possible to still confirm the presence of some from their remains). Surveys only provide a snapshot of habitats and species that are there at that time. Further surveys at other times of the year are likely to find additional species. Species lists for the site with DAFOR scores were compiled in June 2014 during the Local Plan consultation and again in August 2018 to update the earlier studies. These species lists have been reviewed along with the current survey's data, therefore, the dry weather experienced early in 2023 is not considered a significant constraint to the assessment.

4.0 Results and Evaluation

Desktop Study

Statutory Designated Sites

- 4.1 The desktop study found the following European / nationally / locally designated sites within 1 km of the proposed development site:
- Sefton Coast SAC, immediately adjacent to the site.
 - Ribble and Alt Estuaries Ramsar site, immediately adjacent to the site.
 - Sefton Coast SSSI, immediately adjacent to the site.
 - Ainsdale and Birkdale Sandhills LNR, immediately adjacent to the site.
 - Ainsdale Sand Dunes NNR, approximately 1.65km south west of the site.
- 4.2 The SAC is principally designated for important sand dune and coastal habitats. Important habitats present within the Ramsar site include extensive sand and mudflats, saltmarsh and dunes with internationally important vegetation communities occurring in the sand dune habitats.
- 4.3 The Sefton Coast SSSI is notified for intertidal mud and sandflats, embryonic shifting dunes, mobile dunes, dunes with creeping willow (*Salix repens*), humid dune slacks, fixed dunes, dune grasslands and dune heath. Small areas of saltmarsh are also present. Its assemblages

of vascular and non-vascular plants, in particular the nationally rare grey hair grass (*Corynephorus canescens*), nationally scarce liverwort (*Petalophyllum ralfsii*) and nationally rare moss (*Bryum neodamense*), are also of special interest.

- 4.4 The site is also of special interest for its populations of internationally important wintering waterfowl and its nationally and, in some cases, internationally important populations of individual waders. Its populations of sand lizard (*Lacerta agilis*), natterjack toad (*Bufo calamita*) and great-crested newt (*Triturus cristatus*) are also of special interest, along with the populations of the Red Data Book species, sandhill rustic moth (*Luperina nickerlii gueneei*).

- 4.5 The NNR and LNR are designated for the coastal sand dunes rich flora.

Natural England Impact Risk Zones (IRZs)

- 4.6 The ecological desktop study search found the site to be within a Natural England (NE) SSSI Impact Risk Zone (IRZs) associated with the above statutorily protected site(s).

Non-Statutory Designated Sites

- 4.7 The ecological desktop study identified the following records of non-statutory protected sites within close proximity to the proposed development:

- Hillside Golf Club, immediately adjacent to the north of the site.
- Birkdale Hills LNR, Weld Road to Shore Road including green beach immediately adjacent to the west of the site.
- Railway – Hillside Station to Birkdale Station, on the opposite side of the road to the east of the site.
- Southport and Ainsdale Golf Club, c. 20m to the east of the site.

- 4.8 These sites are all designated for the habitats they support (grasslands, dunes and standing water), flora and fauna.

- 4.9 The following additional non-statutory protected sites are present within 2km of the proposed development.

- Railway – Ainsdale Station to Hillside Station.
- Railway – Coastal Road to Ainsdale Station.
- Kenilworth Road Dunes, Embankment and verges, Ainsdale.
- Ainsdale NNR.
- Ainsdale Hills LNR.
- Falklands Way Dunes.

- 4.10 The desktop study found several non-statutory designated Local Wildlife Sites (LWS) within 2km of the site, including land to the immediate east, north and west of the site, indicating that the development site is located relatively close to areas of high biological diversity, particularly relating to botanical species. A large proportion of the LWS are also covered by the statutory designations. There will be no direct impacts to these sites as a result of potential residential development of the site.

Habitats of Principal Importance (NERC)

- 4.11 The desktop study identified no Habitats of Principal Importance within the proposed development, however, the Habitats of Principal Importance Coastal sand dunes and Lowland mixed deciduous woodland are located immediately adjacent to the site.

Local Biodiversity Action Plan (LBAP)

- 4.12 Habitats listed within the North Merseyside BAP which the site may be classified under are Coastal Sand Dunes.
- 4.13 The species of local concern which might potentially use the site, based upon information gathered from the sources listed in Table 1 are identified in Table 2 below.

Protected Plant Species/ Species of Principal Importance (NERC)/ LBAP Species

- 4.14 The desktop study identified the following records of notable plant species within the proposed development site:

Table 2: Desktop Study Species Results

Common name	Scientific name	Date	Status
Maiden pink	<i>Dianthus deltoides</i>	2014 & 2018	GB Red List Lower risk (Near Threatened)/ Nationally Scarce
Narrow-lipped helleborine	<i>Epipactis leptochila</i>	2014	GB Red List Data Deficient/ Nationally Scarce

- 4.15 Previous surveys of the site in 2013, 2014 and 2018 found maiden pink at four locations within the site. This plant is Near threatened in Britain (Cheffings and Farrell, 2005), vulnerable in England (Stroh et. al 2014), Nationally Scarce² and a Species of Conservation Importance in Northwest England (SCINW) (Regional Biodiversity Steering Group, 1999). These are thought to be the only native colonies of maiden pink in the South Lancashire vice-county. The Nationally Rare³ dune helleborine (*Epipactis dunensis*) has also been previously recorded from the site with 17 recorded under hybrid black poplar (*Populus x canadensis*) trees near the western boundary. The record for dune helleborine appears to have been entered as narrow-lipped helleborine in the Merseyside BioBank records, the record being identical in all other aspects. Other SCINW recorded during the previous surveys of the site were pyramidal orchid (*Anacamptis pyramidalis*, 10 in 2018), yellow oat-grass (*Trisetum flavescens*), lesser centaury (*Centaurea pulchellum*), knotted clover (*Trifolium striatum*), changing forget-me-not (*Myosotis discolor*), slender trefoil (*Trifolium micranthum*) and spring vetch (*Vicia lathyroides*). 12 spikes of bee orchid (*Ophrys apifera*) were also found in 2018. It is unknown where most of these species were located.

Phase 2 Habitat Survey

- 4.16 Descriptions of each vegetation community identified during the Phase 2 habitat survey are presented in the following sections with species lists in Appendix 1 and photographs in Appendix 2. The vegetation communities, quadrat locations and notable plant locations are shown on Figure 1, NVC Plan.
- 4.17 The majority of the site supports relatively species-poor grassland comprising abundant to dominant red fescue (*Festuca rubra*) with occasional ribwort plantain (*Plantago lanceolata*) and common bent (*Agrostis capillaris*, locally frequent). Sweet vernal-grass (*Anthoxanthum odoratum*), cock's-foot (*Dactylis glomerata*), Yorkshire-fog (*Holcus lanatus*), meadow buttercup (*Ranunculus acris*), creeping buttercup (*Ranunculus repens*), common ragwort (*Jacobaea vulgaris*), dandelion (*Taraxacum* agg.) and goat's-beard (*Tragopogon pratensis*) were rare to occasional. Species that were rare in the habitat included yarrow (*Achillea millefolium*), meadow foxtail (*Alopecurus pratensis*), hairy sedge (*Carex hirta*), lady's bedstraw (*Galium verum*, locally occasional), common bird's-foot trefoil (*Lotus corniculatus*), Timothy (*Phleum pratense*) and mouse-ear hawkweed (*Pilosella officinarum*). False oat-

² Occurring in 16-100 hectads (10x10km squares) in Great Britain

³ Occurring in 15 or fewer hectads (10x10km squares) in Great Britain

grass (*Arrhenatherum elatius*) and common couch (*Elymus repens*) were locally abundant, field horse-tail (*Equisetum arvense*), locally frequent and common mouse-ear (*Cerastium fontanum*), smooth hawk's-beard (*Crepis capillaris*), bulbous buttercup (*Ranunculus bulbosus*), common sorrel (*Rumex acetosa*), hairy tare (*Vicia hirsuta*) and common cat's-ear (*Hypochaeris radicata*), locally occasional.

- 4.18 Two quadrats were taken in this vegetation community (Quadrats 7 and 8). This vegetation does not conform well to the NVC probably reflecting its origin from regularly mown amenity grassland. The best fit vegetation type running the data through TABLEFIT (Hill, 2015) for both quadrats is SM16d *Festuca rubra* salt-marsh community, *Festuca rubra* sub-community (poor fit, 57%), however, the community constant species saltmarsh rush (*Juncus gerardii*), sea milkwort (*Lysimachia maritima*), sea plantain (*Plantago maritima*) and creeping bent were all absent and the habitat clearly is not saltmarsh. Other possible vegetation types output by TABLEFIT were SD7 *Ammophila arenaria* (marram grass)-*Festuca rubra* semi-fixed dune community, MC8a *Festuca rubra*-*Armeria maritima* (thrift) maritime grassland, typical sub-community, SD8a *Festuca rubra*-*Galium verum* fixed dune grassland, typical sub-community (all 52% fit) and SD7a Other possible vegetation types output by TABLEFIT were SD7 *Ammophila arenaria*-*Festuca rubra* semi-fixed dune community, typical sub-community (48% fit). Marram grass, a community constant species for SD7 was, however, absent. The vegetation also lacks the community constant species thrift to classify as MC8. A species-poor form of SD8 is possible, however, this is generally species-rich with very frequent but usually moribund marram grass, although limited management of the site may be limiting the species diversity. Where a c. 2m wide track has generally been regularly mown around the perimeter of the former playing fields, the vegetation is locally more diverse with locally abundant yellow rattle (*Rhinanthus minor*) plus kidney vetch (*Anthyllis vulneraria*), common restharrow (*Ononis repens*) and hare's-foot clover (*Trifolium arvense*). A single bee orchid was recorded on the path in the north-west of the site (SD31155 13097). Yellow rattle occurs in both MG5 and SD8, however, kidney vetch and common restharrow typically occur in SD8. Hare's-foot clover and bee orchid are associated with more open habitats.
- 4.19 False oat-grass was locally dominant, with very few other associated species, mainly in the east and along the southern boundary of the former playing fields equating to a species-poor MG1 *Arrhenatherum elatius* grassland. This grassland was not considered of botanical value and no quadrats were taken however it is considered that it would most closely match the *Festuca rubra* sub-community although frequency of red fescue was very low.
- 4.20 There were also small areas dominated by common couch with few other associated species. This vegetation community does not seem to be covered by the NVC, the only common couch dominated vegetation is SM28 *Elymus repens* salt-marsh, however the site is clearly not saltmarsh. Common couch can occur in MG1 *Arrhenatherum elatius* grassland, generally at low frequency, but with a Domin cover of up to 8 (51-75%).
- 4.21 The ground in the northernmost corner rises up to the surrounding dune vegetation with abundant red fescue, occasional ribwort plantain and scattered dewberry (*Rubus caesius*). Some marram was present and a single pyramidal orchid.
- 4.22 In the north-eastern corner of the site are areas of common bent dominated grassland amongst MG1 false oat-grass dominated grassland with occasional (locally abundant hairy sedge, Yorkshire fog and oak (*Quercus* sp.) seedlings. Red fescue was locally abundant, creeping thistle (*Cirsium arvense*), creeping soft-grass (*Holcus mollis*), cat's-ear, common sorrel and common couch were locally frequent, yarrow was locally occasional/ frequent and meadow foxtail (*Alopecurus pratensis*), pyramidal orchid, common mouse-ear, ribwort plantain, bramble, curled dock (*Rumex crispus*), dandelion, hairy tare and common vetch, locally occasional. Cock's-foot, common ragwort, goat's-beard and creeping buttercup were rare to occasional; sweet vernal grass, cleavers (*Galium aparine*), lady's bedstraw, field

woodrush (*Luzula campestre*), creeping cinquefoil (*Potentilla reptans*) and field horse-tail were rare. This vegetation does not conform well with the NVC, potentially a species-poor form of MG5 *Cynosurus cristatus* (crested dog's-tail)-*Centaurea nigra* (common knapweed) grassland although neither crested dog's-tail nor common knapweed were recorded or MG6 *Lolium perenne* (perennial rye-grass)-*Cynosurus cristatus* grassland although neither perennial rye-grass nor crested dog's-tail were recorded.

- 4.23 The usually frequently mown lawn areas to the south, east and north of the buildings, generally supported more diverse grassland than the majority of the former playing fields as described above. Red fescue was frequent to abundant with frequent common bent and springy turf-moss (*Rhytidiadelphus squarrosus*, locally abundant), occasional to frequent sweet vernal-grass, common bird's-foot trefoil and ribwort plantain plus occasional yarrow (locally frequent), buck's-horn plantain (*Plantago coronopus*), smooth meadow-grass (*Poa pratensis*), field wood-rush and common ragwort. Rough hawkbit (*Leontodon hispidus*) was locally frequent to abundant; creeping bent (*Agrostis capillaris*), lady's bedstraw, cat's-ear, mouse-ear hawkweed and self-heal (*Prunella vulgaris*) were locally frequent; white clover (*Trifolium repens*) locally occasional to frequent; daisy (*Bellis perennis*), smooth hawk's-beard (*Crepis capillaris*), lesser hawkbit (*Leontodon saxatilis*) and ox-eye daisy (*Leucanthemum vulgare*) locally occasional; and hairy sedge, cock's-foot, Yorkshire fog, perennial rye-grass (locally frequent), black medic (*Medicago lupulina*), common restharrow, greater plantain (*Plantago major*), sheep's-sorrel (*Rumex acetosella*, locally frequent), hare's-foot clover, common centaury (*Centaureum erythraea*) and red clover (*Trifolium pratense*) rare. Common centaury was locally occasional and creeping willow (*Salix repens*) rare to the west of the buildings. Squirreltail fescue (*Vulpia bromoides*) and early hair-grass (*Aira praecox*) were recorded adjacent to the car park to the north east.
- 4.24 Four quadrats were taken in the lawn areas, quadrats 9 in 10 in more diverse areas and 11 & 12 in less diverse areas. Running the data for the two quadrats within the less diverse areas through TABLEFIT resulted in a best match of U4b *Festuca ovina*-*Agrostis capillaris*-*Galium saxatile* (heath bedstraw) grassland, *Holcus lanatus*-*Trifolium repens* sub-community (poor to fair fit, 59-63% fit), however the community constant species sheep's fescue, tormentil (*Potentilla erecta*) and heath bedstraw are absent, plus U4 grassland is typically a sub-montane grassland. The only community output by TABLEFIT with a fit of more than 50% was U1f *Festuca ovina*-*Agrostis capillaris*-*Rumex acetosella* grassland, *Hypochaeris radicata* sub-community for quadrat 12 (61% fit, 49% for Q11), however the community constant species sheep's fescue was not recorded, although sheep's sorrel was present in Q11. Other possible vegetation types suggested by TABLEFIT were MC9/9c *Festuca rubra*-*Holcus lanatus* maritime grassland/ *Achillea millefolium* sub-community (41-48% fit), MG5/5b *Cynosurus cristatus*-*Centaurea nigra* grassland/ *Galium verum* sub-community (44/43% fit, Q12 only) and SD8d *Festuca rubra*-*Galium verum* fixed dune grassland, *Bellis perennis*-*Ranunculus acris* sub-community (41% fit, Q11 only). Thrift, a constant species of MC9 was absent. The MG5 constants crested dog's-tail, bird's-foot trefoil, sweet vernal-grass, red clover and knapweed were not recorded and the SD8 constants lady's bedstraw, bird's-foot trefoil and white clover were also not recorded. Buck's-horn plantain (Q12) and sheep's sorrel (Q11) were recorded and these species are associated with SD8 only. It is therefore considered that the grassland most closely matches a species-poor form of SD8.
- 4.25 Quadrats 9 and 10 in the more diverse areas of mown lawn both had sand sedge present indicating this is SD8 *Festuca rubra*-*Galium verum* fixed dune grassland although marram grass would also typically be present in this community. The usual regular mowing of this grassland as lawn will affect its species composition. Field woodrush was fairly frequent and mosses quite prominent which may indicate the *Luzula campestre* sub-community b although marram is usually more prominent in this sub-community than the typical sub-community. This correlates with the best fit vegetation type using TABLEFIT for Q9 (poor fit, 59%, with SD8d, 57%, SD8b, 56% and SD8a, 55%), however the best fit for Q10 was U1f (poor fit,

56%) with SD8b (53%) and SD8 (45%). The U1 community constant species sheep's fescue was absent, although sheep's sorrel was present in Q10. The only other possible vegetation type output by TABLEFIT was MC9c for Q9 and Q10 (poor fit, 55% and 52% respectively), however the community constant species thrift was absent.

- 4.26 There was a small area east of the covered car park area with frequent ribwort plantain and lesser hawkbit, occasional (locally frequent) sand sedge, occasional common bird's-foot trefoil and common bent. Blue fleabane (*Erigeron acris*) was rare to occasional and biting stonecrop (*Sedum acre*), white stonecrop (*S. album*), *Cladonia* lichen, buck's-horn plantain and yarrow, rare. Moss species including springy turf-moss were locally dominant, mouse-ear hawkweed, locally abundant and cat's-ear locally occasional. While this vegetation was more open with locally dominant springy turf-moss, this is also considered to be a modified form of SD8 *Festuca rubra*-*Galium verum* fixed dune grassland lacking marram grass.
- 4.27 There were two areas in the north and west of the site with a more open vegetation with sand sedge (*Carex arenaria*). The area to the west comprised frequent to abundant red fescue, frequent sand sedge, occasional cat's-ear and ribwort plantain and rare to occasional common mouse-ear, rough hawkbit and smooth hawk's-beard. Sheep's sorrel was locally abundant, tufted vetch, locally frequent and *Usnea* lichen, locally occasional. Silver hair-grass (*Aira caryophylla*), sweet vernal-grass, parsley-piert, evening primrose, buttercup sp. (young leaves) and dog lichen were rare.
- 4.28 Two quadrats were recorded in this area (Quadrats 1 and 2). This vegetation does not seem to fit the NVC very well. The best fit vegetation type allocated by TABLEFIT was SD10b for Q1 (poor fit, 51%) and SD10a for Q2 (fair fit, 60%). Q1 also was a very poor fit to SD10/10a (49%) and Q2 a poor fit (54%) to SD10. All other possible vegetation types suggested by TABLEFIT were very poor fit. SD10, however, is generally species-poor and often open vegetation of more mobile sand on foredunes and dunes. Sand sedge is the most abundant species with hardly any contribution from mosses and lichens. While sand sedge was constant and prominent in the vegetation, there are additional species present which are not typically associated with SD10 but occur in SD8 and/ or SD12. More additional species associated with SD8 were present than additional species associated with SD12. The SD8 community constant species lady's bedstraw, white clover and smooth meadow-grass were not recorded (although some young clover leaves were recorded in Q1) and the SD12 community constant species smooth meadow-grass and marram grass were also not recorded. Marram grass is generally frequent but usually moribund and exceeded in cover by red fescue in SD8. Sand sedge is not a community constant of SD8 but can be present with a frequency of III and Domin cover ranging from 1-9. This vegetation is considered to most closely fit SD8, maybe transitioning from SD10, however the location is atypical for SD10 being not associated with foredunes or dunes.
- 4.29 The area to the north comprised frequent red/sheep's fescue with occasional to frequent common mouse-ear and sand sedge, occasional (locally frequent) sweet vernal-grass and biting stonecrop and rare to occasional Yorkshire fog, cat's-ear and common ragwort. Silver hair-grass was locally frequent, evening primrose (*Oenothera* sp.) and white stonecrop locally occasional and common stork's-bill (*Erodium cicutarium*), hairy hawkbit, cut-leaved crane's-bill (*Geranium dissectum*), common milkwort (*Polygala vulgaris*), buttercup sp. (young leaves), sheep's-sorrel, yellow oat-grass, common vetch (*Vicia sativa*) and early hair-grass (*Aira praecox*), rare.
- 4.30 Two quadrats were recorded in this area (Quadrats 3 & 4). All the possible vegetation types output by TABLEFIT for these quadrats are very poor fit, the best fit for Q3 being MG3b *Anthoxanthum odoratum*-*Geranium sylvaticum* (wood crane's-bill) grassland, *Briza media* (quaking grass) sub-community (43%) and for Q4 U1c (39%). All but one of the vegetation types for Q4 were U1 and its sub-communities (35-39% fit). MG3 is an upland meadow

grassland confined to areas where traditional hay meadow management has been applied in a harsh sub-montane climate and the MG3 community constant species wood crane's-bill, pignut (*Conopodium majus*), smooth lady's mantle (*Alchemilla glabra*) and great burnet (*Sanguisorba officinalis*) were absent. The U1 community constant species sheep's sorrel was absent from both quadrats; sheep's sorrel was recorded in this vegetation outside the quadrats but as rare. As with Quadrats 1 and 2 above, the prominence of sand sedge is suggestive of SD10, however, there are a number of additional species present not typically associated with this vegetation community and the location is atypical for SD10 being not associated with foredunes or dunes. The same community constant species for SD8 and SD12 as for Quadrats 1 and 2 were again not recorded. There were more additional species associated with SD8 present than additional species associated with SD12, but the vegetation was not as diverse as SD8 typically is. Marram grass was again not recorded and sand sedge more frequent than typical for SD8. This vegetation is also considered to most closely fit SD8, possibly transitioning from SD10.

- 4.31 In the north of the site there was an area of closed vegetation with frequent sand sedge and red fescue. Ribwort plantain was occasional and false oat grass was locally frequent. Species of low abundance included rare to occasional lady's bedstraw and common ragwort; rare yarrow, cock's-foot, maiden pink, Yorkshire fog, sheep's sorrel, biting stonecrop, dandelion, hairy tare and dog lichen (*Peltigera* sp.); and locally occasional common mouse-ear, smooth hawk's-beard, oak sp., buttercup sp. (young leaves), white stonecrop, yellow oat-grass and common vetch.
- 4.32 Two quadrats were recorded in this area (Quadrats 5 & 6). Although often an open vegetation and associated with more mobile sand on foredunes and dunes, this vegetation most closely fits SD10 *Carex arenaria* dune community. Although sheep's fescue was not recorded, the species composition most closely matches the *Festuca ovina* sub community b. This is consistent with the best fit vegetation type output by TABLEFIT which was SD10b for Q5 (poor fit, 54%) and SD10a, *Festuca rubra* sub-community for Q6 (very good fit, 82%). Q5 also had poor fit for SD10a (53%) and Q6 a good fit for SD10b (72%). SD10 is typically a pioneer vegetation of freshly-deposited sands. Whereas the vegetation represented by Q1-4 was open with areas of bare sand, the vegetation represented by Q5 and 6 was closed and dense.

Notable Plants

- 4.33 Maiden pink was relocated at one of its previous known locations (see Figure 1). The former location in the east of the site noted as having over 100 plants had been cut on both sides of the boundary fence. Other SCINW recorded were pyramidal orchid (5 spikes) and yellow oat-grass. A single specimen of bee orchid was also found.

Evaluation

- 4.34 A total of 86 vascular plant species were recorded during the survey. This compares with a total of 165 species previously recorded during surveys undertaken in 2013, 2014 and 2018. The aim of the current survey, however, was not to compile a site wide species list, but to focus on the grassland vegetation and the NVC communities present. The survey did not record trees or scrub unless as part of the grassland. There are also a number of non-native or introduced species previously recorded (a total of 48), notably along the south-western boundary of the site which were not recorded unless present within the homogenous grassland vegetation communities identified on site. Seven additional vascular plant species were recorded which had not been recorded in the previous surveys in 2013, 2014 and 2018.
- 4.35 The survey found the site to contain the following vegetation communities:
- Red fescue dominated vegetation SD8 – poor fit
 - Species-poor lawn SD8 – poor fit

- Species-rich lawn SD8 – poor fit
 - SD8/ 10 (open) – very poor to fair fit
 - SD10 (closed) – poor-very good fit
- 4.36 Small areas of MG1 and MG5/6 were also recorded, which are not considered to be particularly valuable habitats.
- 4.37 With the exception of Quadrat 6 (very good fit) and Quadrat Q2 (fair fit), all of the quadrats were poor or very poor fit. It is likely that the playing field and lawn areas were originally seeded and the grassland communities present have developed from this which probably explains the poor fit. None of the grassland was considered to comprise good quality MG5, the previous 2018 surveys having stated that the eastern section had similarities to MG5. The majority of grassland was found to be species-poor, rank, red-fescue dominated grassland. It was noted in 2018 that only the edges of the playing field had been mown and that the build up of dead material suggested that most of the grassland had not been mown in 2017. A lot of thatch was present across the former playing field area in 2023 with small areas of coarse false-oat-grass and common couch dominated grassland suggesting that limited management has occurred for a number of years. It is considered likely that species diversity has declined due to lack of management. The most species-rich grassland was associated with the mown track around the perimeter of the former playing field and some of the mown lawn areas.
- 4.38 The majority of the grassland has affinities to SD8 with areas of SD8/10 and SD10. The rising ground to the north-west which was described in 2018 as supporting a more open sward closer to SD12 *Carex arenaria-Festuca ovina-Agrostis capillaris* dune grassland, was found to support a more closed sward with scattered dewberry, considered to be closer to SD8 now. This is the only place where a small amount of marram was found.
- 4.39 SD8 is one of the NVC communities which is considered to correspond with The Habitats Directive (Council Directive 92/43/EEC) Annex 1 priority habitat 'Fixed dunes with herbaceous vegetation ('grey dunes')'. Priority habitats listed in Annex 1 are those in danger of disappearance and whose natural range mainly falls within the territory of the European Union. Coastal sand dunes are also a habitat of principal importance under the NERC Act 2006 and North Merseyside LBAP habitat. The most diverse and ecologically valuable habitats are considered to be those along the western and northern boundaries adjoining the designated site and the more diverse lawn areas.
- 4.40 No plant species protected under schedule 5 of the Conservation of Habitats and Species Regulations 2017 (as amended) or schedule 8 of the Wildlife and Countryside Act 1981 (as amended), plants of principal importance or local BAP species were recorded. Maiden pink is Near threatened in Britain (Cheffings and Farrell, 2005), vulnerable in England (Stroh et. al 2014), Nationally scarce in Great Britain and a Species of Conservation Importance in Northwest England (SCINW) (Regional Biodiversity Steering Group, 1999). These are thought to be the only native colonies of maiden pink in the South Lancashire vice-county.
- 4.41 The nationally rare and LBAP species dune helleborine has also been previously recorded from the site in 2014 with 17 recorded under hybrid black poplar trees near the western boundary. Other SCINW recorded were pyramidal orchid (5 spikes, 10 in 2018) and yellow oat-grass. Other previously recorded SCINW which were not recorded in 2023 were lesser centaury, knotted clover, changing forget-me-not, slender trefoil and spring vetch. The limited management and rank red fescue and build up of thatch may have resulted in the apparent loss of notable species from the site. Seed of these species may still be present in the seed bank and could germinate with introduction of appropriate management.

5.0 Impacts and Recommendations

- 5.1 In brief the National Planning Policy Framework (NPPF, 2023) asks the Local Planning Authority to conserve and enhance biodiversity and that any new developments should minimise impacts on biodiversity and provide measurable net gains.

[REDACTED]

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6.0 Conclusion

- 6.1 This report presents the findings of the NVC survey undertaken at the site. The survey has been undertaken by a suitably qualified ecologist (FISC Level 5) at an appropriate time of year.
- 6.2 The majority of grassland was found to be species-poor, rank, red-fescue dominated grassland. A lot of thatch was present across the former playing field area in 2023 with small areas of coarse false-oat-grass and common couch dominated grassland suggesting that limited management has occurred for a number of years. It is considered likely that species

diversity has declined due to lack of management. The most species-rich grassland was associated with the mown track around the perimeter of the former playing field and some of the mown lawn areas.

6.3 The survey found the site to contain the following vegetation communities:

- Red fescue dominated vegetation SD8 – poor fit
- Species-poor lawn SD8 – poor fit
- Species-rich lawn SD8 – poor fit
- SD10 (open) – very poor to fair fit
- SD10 (closed) – poor-very good fit

6.4 Small areas of MG1 and MG5/6 were also recorded, which are not considered to be particularly valuable habitats.

6.5 The majority of the quadrats were poor or very poor fit. It is likely that the playing field and lawn areas were originally seeded and the grassland communities present have developed from this which probably explains the poor fit.

6.6 Maiden pink (Near threatened in Britain, vulnerable in England, Nationally scarce in Great Britain and a Species of Conservation Importance in Northwest England (SCINW)) was recorded and is thought to be the only site for maiden pink in the South Lancashire vice-county. Other SCINW recorded were pyramidal orchid and yellow oat-grass.



7.0 References

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Figure 1:
NVC Survey Plan

Appendix 1: Quadrat and Vegetation Community Data

Scientific Name	English Name	Q1	Q2	Com	Q3	Q4	Com	Q5	Q6	Com	Q7	Q8	Com	MG5/ 6	Q9	Q10	Q11	Q12	Lawns
<i>Achillea millefolium</i>	Yarrow									R			R	LO/F	5	1	5	5	O/LF
<i>Agrostis capillaris</i>	Common Bent	4	2		2	2					1	4	O/LF	LA		6	5	6	F
<i>Agrostis stolonifera</i>	Creeping Bent																		LF
<i>Aira caryophylla</i>	Silver Hair-grass					2	LF												
<i>Aira praecox</i>	Early Hair-grass			R			R												R
<i>Alopecurus pratensis</i>	Meadow Foxtail												R	LO					
<i>Ammophila arenaria</i>	Marram												R						
<i>Anacamptis pyramidalis</i>	Pyramidal Orchid												R	LO					
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass			R	4		O/LF	2					R/O	R					O/F
<i>Anthyllis vulneraria</i>	Kidney-vetch						R												
<i>Aphanes arvensis</i>	Parsley-piert			R				1											
<i>Arenaria serpyllifolia</i>	Thyme-leaved sandwort					1													
<i>Arrhenatherum elatius</i>	False Oat-grass								1	LF			LA	LD					
<i>Asparagus officinalis*</i>	Garden Asparagus												R						
<i>Bellis perennis</i>	Daisy																		LO
<i>Bromus hordeaceus</i>	Soft-brome															1			R
<i>Carex arenaria</i>	Sand Sedge	7	7	F	3	2	O/F	8	9	F	1			✓	2	2			
<i>Carex hirta</i>	Hairy Sedge												R	O/LA	1		3	3	R
<i>Centaurea erythraea</i>	Common Centaury																		LO
<i>Cerastium fontanum</i>	Common Mouse-ear	2		R/O		4	O/F	2		LO			LO	LO					
<i>Cirsium arvense</i>	Creeping Thistle													LF					R/O
<i>Crepis capillaris</i>	Smooth hawk's-beard	1		R/O						LO			LO				2		F/LA
<i>Dactylis glomerata</i>	Cock's-foot									R			R/O	R/O					R
<i>Danthonia decumbens</i>	Heath grass	1																	
<i>Dianthus deltoides</i>	Maiden Pink									R									
<i>Elytrigia repens</i>	Common Couch		4					3						LF		1			R
<i>Equisetum arvense</i>	Field Horsetail										1	1	LF	R	1				R
<i>Erigeron acris</i>	Blue fleabane																		R
<i>Erodium cicutarium</i>	Common Stork's-bill				3		R						R						
<i>Festuca ovina</i>	Sheep's Fescue	2				5													
<i>Festuca rubra</i>	Red Fescue	6	8	F/A	4			4	2	R	10	10	A/D	LA	5	6	5	5	F/A
<i>Festuca sp.</i>	Fescue (red / sheep's)						F												
<i>Galium aparine</i>	Cleavers													R					
<i>Galium verum</i>	Lady's Bedstraw									R/O			R/LO	R					LF
<i>Geranium molle</i>	Dove's-foot Crane's-bill	✓			2	1													
<i>Geranium dissectum</i>	Cut leaved crane's-bill						R												

Scientific Name	English Name	Q1	Q2	Com	Q3	Q4	Com	Q5	Q6	Com	Q7	Q8	Com	MG5/ 6	Q9	Q10	Q11	Q12	Lawns
<i>Holcus lanatus</i>	Yorkshire-fog				1		R/O	1		R			R/O	O	3		2	3	R
<i>Holcus mollis</i>	Wood Soft-grass													LF			2	1	R
<i>Hypochaeris radicata</i>	Cat's-ear	2		O	3	2	R/O						LO	LF		4		4	LF
<i>Jacobaea vulgaris</i>	Common Ragwort	3	1	O			R/O	1	1	R/O	1		R/O	R/O					O
<i>Leontodon hispidus</i>	Rough hawkbit	1		R/O	1	3	R												LF/A
<i>Leontodon saxatilis</i>	Lesser Hawkbit															1			LO
<i>Leontodon sp.</i>	Hawkbit sp.														1				R
<i>Leucanthemum vulgare</i>	Oxeye Daisy																		LO
<i>Lolium perenne</i>	Perennial Rye-grass																1		R/LF
<i>Lotus corniculatus</i>	Bird's-foot-trefoil												R		5	7			O/F
<i>Luzula campestris</i>	Field Woodrush													R	1	3		3	O
<i>Medicago lupulina</i>	Black Medick																		R
<i>Oenothera sp.</i>	Evening primrose sp.			R			LO												
<i>Ononis repens</i>	Common Restharrow																		R
<i>Ophrys apifera</i>	Bee Orchid												R						
<i>Phleum pratense</i>	Timothy												R						
<i>Pilosella officinarum</i>	Mouse-ear Hawkweed												R						LF
<i>Plantago coronopus</i>	Buck's-horn Plantain			O											1		1		O
<i>Plantago lanceolata</i>	Ribwort Plantain	4	4		3	3	LO	2	1	O	1	2	O	LO	3	3	5	4	O/F
<i>Plantago major</i>	Greater Plantain																		R
<i>Poa pratensis</i>	Smooth Meadow-grass								1		2	3			2		1	1	O
<i>Polygala vulgaris</i>	Common Milkwort						R												
<i>Potentilla reptans</i>	Creeping cinquefoil													R					
<i>Prunella vulgaris</i>	Selfheal																		LF
<i>Quercus sp.</i>	Oak									LO				O					
<i>Ranunculus acris</i>	Meadow Buttercup												R/O						
<i>Ranunculus bulbosus</i>	Bulbous Buttercup	2	1		1	1		1				1	LO						
<i>Ranunculus repens</i>	Creeping Buttercup												R/O	R/O					R/O
<i>Ranunculus sp.</i>	Buttercup sp. (young leaves)	1		R			R			LO				R					
<i>Raphanus raphanistrum</i> <i>ssp. raphanistrum</i>	Wild Radish																		R
<i>Raphanus raphanistrum</i> <i>ssp. maritima</i>	Sea Radish												R						
<i>Rhinanthus minor</i>	Yellow-rattle													R					
<i>Rubus caesius</i>	Dewberry													R					
<i>Rubus fruticosus</i> agg.	Bramble													LO					
<i>Rumex acetosa</i>	Common Sorrel												LO	LF					R/LF
<i>Rumex acetosella</i>	Sheep's-sorrel			LA			R	3		R						3	4		LO
<i>Rumex crispus</i>	Curled Dock													LO					

Scientific Name	English Name	Q1	Q2	Com	Q3	Q4	Com	Q5	Q6	Com	Q7	Q8	Com	MG5/ 6	Q9	Q10	Q11	Q12	Lawns
<i>Salix repens</i>	Creeping willow																		R
<i>Sedum acre</i>	Biting Stonecrop				2	4	O			R									
<i>Sedum album</i> *	White Stonecrop						LO			LO									
<i>Taraxacum</i> agg.	Dandelion		✓							R			R/O	LO				1	R/O
<i>Tragopogon pratensis</i>	Goat's-beard		1										R/O	R/O					
<i>Trifolium arvense</i>	Hare's-foot Clover																		R
<i>Trifolium dubium</i>	Lesser trefoil																		R
<i>Trifolium pratense</i>	Red Clover																		R
<i>Trifolium repens</i>	White Clover														3				LO/F
<i>Trifolium</i> sp.	Clover sp. (young leaves)	✓			2	1													
<i>Trisetum flavescens</i>	Yellow Oat-grass						R			LO									
<i>Vicia cracca</i>	Tufted Vetch			LF										R					
<i>Vicia hirsuta</i>	Hairy Tare							1		R			LO	LO					
<i>Vicia sativa</i>	Common Vetch						R			LO				LO					
<i>Vulpia bromoides</i>	Squirreltail Fescue																		R
<i>Pseudoscleropodium purum</i>	Neat Feather-moss				7			4											
<i>Polytrichum juniperinum</i>	Juniper haircap moss				2														
<i>Rhytidiadelphus squarrosus</i>	Springy turf-moss							4							6	7	5		
<i>Peltigera</i> sp.	Dog lichen	✓		LO		1				R									
<i>Cladonia</i> sp.				LO															
Thatch		8	6		4	5		5	3		6	7			3			3	
Bare ground						1					1								

Com = community species list (DAFOR)

* = non-native species/ introduced native taxa

Species in **bold** are species not recorded in previous surveys

Appendix 2: Photographs

	
Quadrat 1 - SD10 (open) (poor fit)	Quadrat 2 - SD10 (open) (fair fit)
	
Quadrat 3 - SD10 (open) (very poor fit)	Quadrat 4 - SD10 (open) (very poor fit)
	
Quadrat 5 - SD10 (closed) (poor fit)	Quadrat 6 - SD10 (closed) (very good fit)

	
Quadrat 7 - Red fescue dominated vegetation SD8 (poor fit)	Quadrat 8 - Red fescue dominated vegetation SD8 (poor fit)
	
Quadrat 9 - Species-rich lawn SD8 (poor fit)	Quadrat 10 - Species-rich lawn SD8 (poor fit)
	
Quadrat 11 - Species-poor lawn SD8 (poor fit)	Quadrat 12 - Species-poor lawn SD8 (poor fit)



View across the former playing fields from the north east.



View across the former playing fields from raised ground in the northern corner.



Raised area in the northern corner with a closed sward with abundant red fescue, occasional ribwort plantain and scattered dewberry.



One of the more diverse areas in the east of the site.