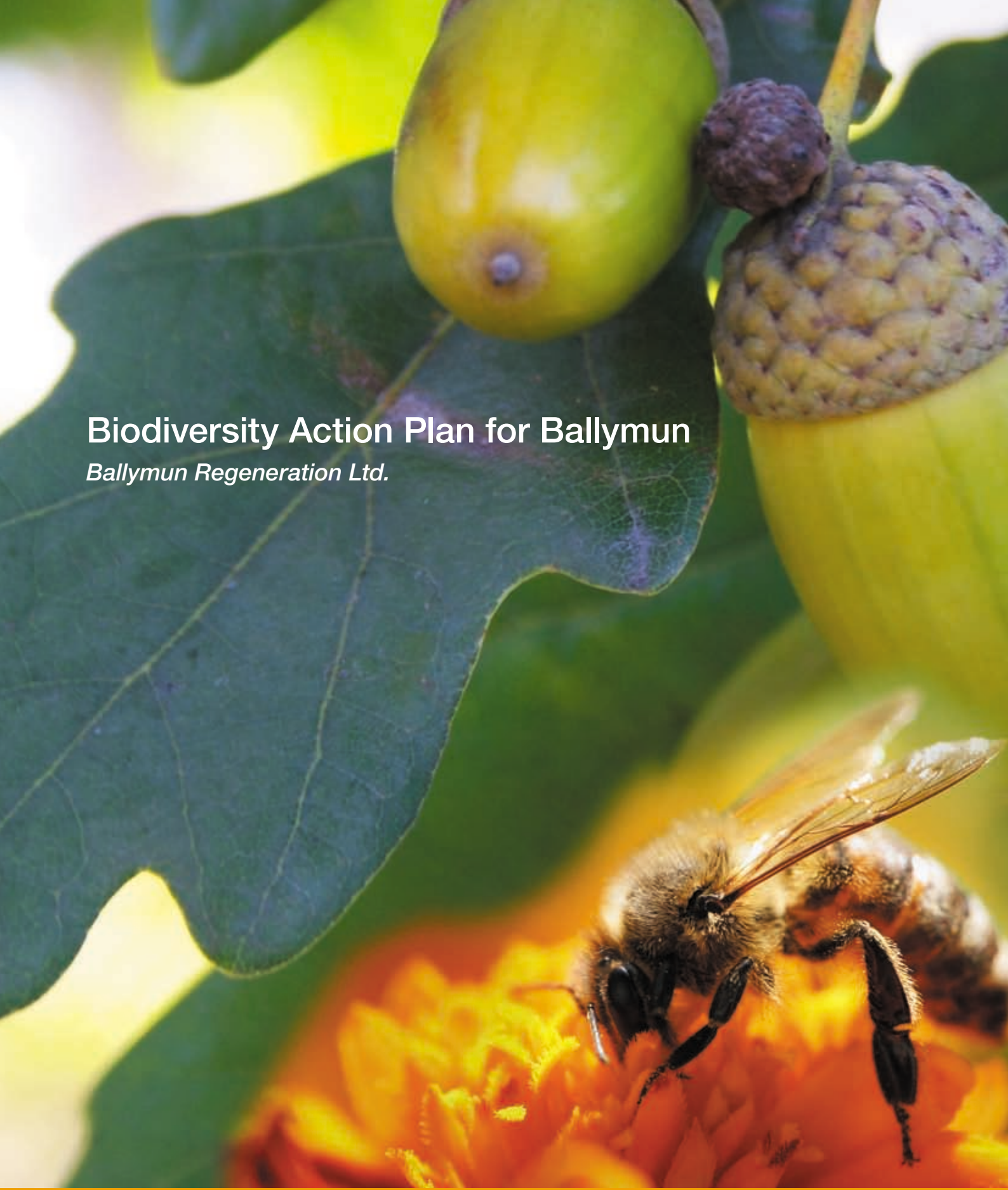

Biodiversity Action Plan for Ballymun

Ballymun Regeneration Ltd.

Mary Tubridy and Associates April 2008

Dublin City
Baile Átha Cliath

image
TRANSFORMING NEIGHBOURHOODS
IMPROVING CITIES

BALLYMUN
REGENERATION

Biodiversity Action Plan for Ballymun

The blue tit is a common visitor to bird tables

Vision statement

To create homes for all wild species and sources of enjoyment and interest for the community

Image Courtesy of Anthony Woods

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Foreword Ciaran Murray

Ballymun's new Biodiversity Action Plan reflects, within Dublin and beyond, a shift towards creating healthy and vibrant environments for all creatures.

The people of Ballymun should be very proud of the fact that this Biodiversity Action Plan is the first sub-county plan of its kind prepared in Ireland, which will not only help benefit this community, but also provide guidance to other communities around the country.

As the new Ballymun continues to take form the need to integrate buildings into the natural environment and create new habitats and eco systems become more apparent.

Biodiversity provides the basic ingredients for life – our food and our clothing, our health and our relaxation. Like us, animals and plants need homes and particular conditions for their survival. Nature is not just in the countryside – it's all around. These quality of life issues need to be fostered and encouraged.

Dublin City Council have recently launched its own city-wide Biodiversity Action Plan, so our locally specific Biodiversity Action Plan is perfectly timed to compliment other activities within our City.

Not only does the Ballymun Biodiversity Action Plan provide detailed surveys and analysis of the current status of biodiversity in Ballymun, but it also provides us with a five year action strategy to promote and enhance biodiversity in the area.

This Biodiversity Action Plan will help Ballymun Regeneration and Dublin City Council achieve the objectives of the Dublin City Development Plan relating to quality of life, greenspace and amenity provision together with the protection of natural heritage in the City. The plan will also compliment and set the context for all the terrific work which has been done with residents in recent years through the gardening and tree planting initiatives.

Similar to the activities of the Ballymun Tidy Town's initiative, there is a role for everyone to play in promoting and enhancing biodiversity within a healthy and vibrant environment.

There are plenty of actions for everyone, so get out there and enjoy it.

Ciaran Murray
Managing Director
Ballymun Regeneration Ltd.

Foreword Mairead Stack

As Biodiversity Officer for Dublin City, I am delighted that Ballymun has taken the initiative to be the first sub-county in Ireland to produce its own Biodiversity Action Plan. Ballymun has seen many huge changes in recent years and the enacting of this Biodiversity Plan will lead to a greener, more natural side to a town which in the past has been identified by built structures.

The Dublin City Biodiversity Action Plan was launched in February 2008 and lists many actions to be completed over its five-year lifespan. It opens the door to revealing the wonderful resource that we are lucky to have as well as listing the necessary actions needed to protect this resource. The Ballymun Biodiversity Plan fits well into the overall Plan for the city by bringing the many actions and targets of the larger Plan to a local level and it sets a precedent for other towns and villages within the broader city.

Many people will ask if there is any biodiversity in Ballymun and what is the point of producing such a Plan. As part of the process of compiling this report, it was found that the redevelopment of the town has started attracting wildlife such as the planting of street trees, the growth of wildflowers in the wetlands of Balcurris and Coultry Parks and the use by birds of the lovely hawthorn hedgerow in Poppintree Park. The aim is to build on this, to add to the character of the town by landscaping in a way that is attractive to the public, provides essential amenity areas and at the same time provides habitat and feeding areas for wildlife such as song birds, bats and the insects that they feed on.

The actions in this Biodiversity Action Plan for Ballymun greatly emphasise community involvement. This is a great strength of the Plan. Activities such as tree planting, butterfly counting, bird nestbox building and bat walks bring the community together and engage children in outdoor, healthy and fun activities. The presence of gardens in Ballymun and the organic gardening emphasis will add greatly to the biodiversity that will be attracted to the town. A study of the biodiversity of Dublin City gardens showed that they are teeming with song birds, ladybirds, water beetles and some even have foxes and bats.

I wish the people of Ballymun every good luck and enjoyment in putting into action the recommendations made in their Biodiversity Action Plan.

Mairead Stack

Mairead Stack

Biodiversity Officer
Dublin City Council

Acknowledgements

Particular thanks are offered to the following individuals and organisations who assisted with the study:

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Mairead Stack, Biodiversity Officer, Dublin City Council.

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Yellowstone Communications Design.

Summary

The preparation of this plan commenced in late 2007 and involved fieldwork, consultations and desk research to characterise local biodiversity, set objectives for management and develop actions. While several counties, including Dublin City, have recently prepared Biodiversity Action Plans, the Ballymun Plan is the first sub-county plan prepared in Ireland.

The baseline study revealed that the majority of habitats in Ballymun are common in the city. Some small areas of valuable habitat remain, such as remnant hedgerows and wet grassland. Native plant and bird species diversity are low. Ballymun had been considered a “no fly zone” for birds. This study showed that birds are present in Ballymun. However they are present in low numbers due to the low cover of suitable habitat, such as shrubberies.

The unique feature of biodiversity in Ballymun is the institutional support provided for a variety of greening measures to improve local biodiversity. Significant improvements have already resulted from the community based tree planting programme, the development of biodiversity areas in parks and support provided by GAP Ballymun to schools, householders and the community.

This plan sets objectives based on a detailed audit of the current status of biodiversity and a review of on-going and planned initiatives. The principal objective must be to generate greater awareness of the biodiversity which is closest to the community, in parks, schools, gardens and how it can be enhanced.

The plan lists a range of actions which should take place over the next five years to achieve these objectives. These will require the support and active involvement of householders, schools, managers of large institutional grounds and developers.

Among numerous tasks they include a“Bioblitz”(a mass invasion of Ballymun to record the maximum number of species in a limited time). The plan emphasises the importance of growing appropriate plants in gardens, parks and streets. A single plant in a park or garden may not attract a bird or butterfly. However if this is carried out by the entire community it will bring about a significant improvement in local biodiversity.

1 Introduction

1.1 The brief

The brief required the preparation of a five year strategic plan to maximise the potential for biodiversity management.

1.2 What is biodiversity?

Biodiversity or biological diversity describes the total variety of all living things. It includes all plants and animals and the places where they live.

Information which is available on certain plant and animal groups provides an indication of the range of that diversity in Ireland and its vulnerability to development (Table 1).

Plate 1

Blackbirds will feed on insects and earthworms. Neither will be present without vegetation and soil.

Table 1 Diversity and vulnerability of native plants and large animals which breed in Ireland

Type of biodiversity	Number	% vulnerable
Native plants	815	18
Mammals (excluding dolphins and whales)	31	13
Birds (breeding)	168	21
Reptile (lizard) and Amphibians (frog, toad, newt)	4	25
Fish	27	35

Information from Curtis and McGough (1988) for plants and Whilde (1993) for animals.

Figures for the total number of smaller animals such as dragonflies (22); book lice (45): butterflies and moths (821); beetles (2,100+) and true flies (2,350+) (Dept of Heritage, Gaeltacht and Islands, 1988) show that "mini beasts" are important components of the natural world. Fuelled by energy from the sun, plants provide food for small and large animals which in turn are consumed by other species.

Habitats, places where plants and animals have been found, have been defined for Ireland.

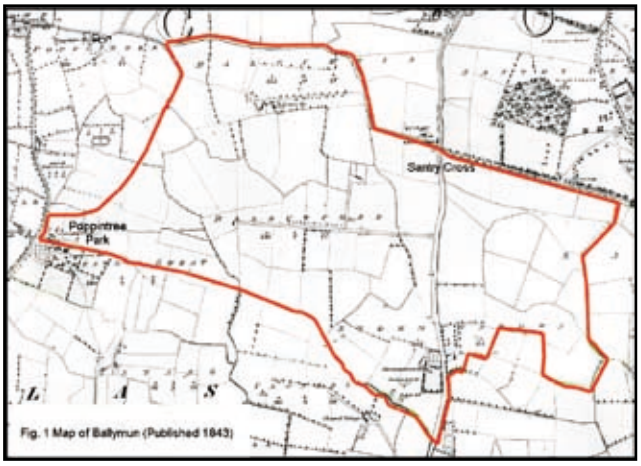
In terrestrial areas a total of seventy three habitats have been identified (Fossitt, 2000). By mapping habitats information can be gathered about the plants and animals, common or rare, which are found in any area.

Preliminary surveys of habitats in Dublin City administrative area revealed the presence of thirty five habitats (Compass and Tubridy, 2002). The commonest habitat types, roads (30%) and buildings (15%) have low species diversity.

Gardens occupy 25% of the city and larger green spaces with mown grassland cover 20%. The remaining habitats include old grasslands (such as those in the Phoenix Park) and planted woodlands (St Anne's Park) and Bushy Park.

The cover of wetland type habitats is very rare. Development has had a major impact on habitat and species diversity. The land in Ballymun was covered in woodland habitats before the arrival of farmers c. 8,000 years ago. Before the construction of housing the land was laid out in old wet and dry grasslands separated by hedgerows (Fig. 1)

Fig. 1 Ballymun c.1843



Biodiversity is of value for its own intrinsic worth and for the services it provides to humanity. Efforts to tackle global warming recognise the important role vegetation plays in trapping greenhouse gases as plant growth absorbs carbon dioxide. A keen US gardener calculated that his 17,000 sq ft garden fixed nineteen tons of carbon

over ten years. (www.grist.org/comments/citizen/2000/11/06/how/). Particular species can be used as indicators of environmental conditions e.g. lichens for air quality. Wetlands clean polluted waters and absorb floodwaters. People are attracted to a landscape where biodiversity contributes significantly to its character. The natural world provides an example of sustainable development. There is no waste as, one species' waste is another species' food.

1.3 Legislation and policies for biodiversity

Current legislation and policies highlight both rare and common aspects of general biodiversity. Greater legal protection is offered to rare features. Within each geographic area there is particular regard for rare habitats and native species of plants and animals (which arrived naturally and have been present for thousands of years), as native species are best suited to climate, soils and are best integrated into the web of life. Native species which spend their lives in an area are more important than casual users. In general, birds which nest and feed in an area are more important than those which only come to feed.

Under the Wildlife (Amendment) Act 2000, the woodlands in Santry Demesne have been proposed for designation as a nationally important biodiversity area, or Natural Heritage Area No. 000178. Throughout Santry Demesne Tree Protection Orders were made by Dublin County Council in the 1980's.

Plate 2
Santry Demesne (BRL)

1.4 Local Biodiversity Action Plans

As there is increasing global awareness and concern with the decline of all forms of biodiversity, more recent policies emphasise the importance of mobilising all sectors of society to halt and reverse this decline in all places, not just in areas of known high value. This approach is particularly appropriate to urban areas where the vast majority of the Irish population resides and where few rare features of biodiversity have survived. The policies are based on many of the principles which underpin Agenda 21 and the aspiration of sustainable development as they were first articulated through the Convention on Biodiversity which was developed at Rio in 1992. They emphasise:

- Collection of better information on biodiversity in all areas and its more effective dissemination to the public.
- Reduction of pressures on biodiversity through economic/financial interventions.
- Provision of a variety of responses to the management of biodiversity.
- Integration of biodiversity with all types of land and water use.
- More effective spatial planning.
- Support for individual and locally based actions.
- Use of indicators to track progress.

The first Irish National Biodiversity Plan (2002) stressed the need for local authorities to prepare Local Biodiversity Plans as a first step to mobilising local action. A mid term review by Comhar (2004) concluded that little progress has been made and recommended the establishment of a Biodiversity Fund.

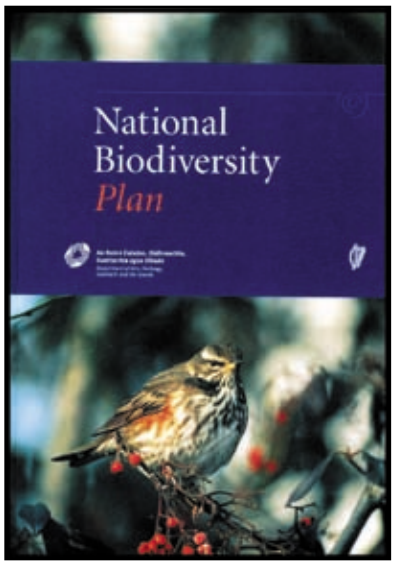


Plate 3
Plan and summary available at www.botanicgardens.ie/gspc/nbp.htm.

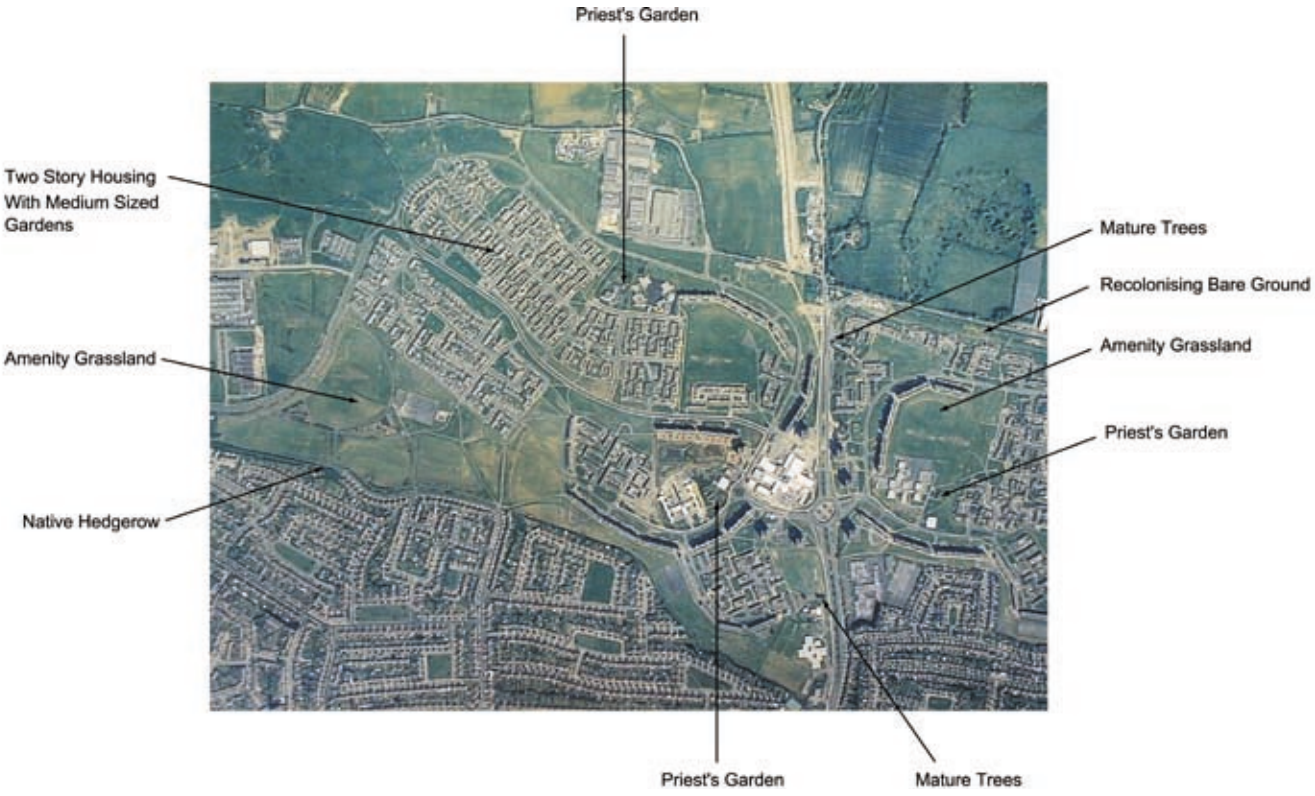
Guidelines for the preparation of plans suggest that the process should involve the collation of existing information, identification of gaps in data and assembly of a stakeholders group to agree on priorities for action (DOEHLG, 2005). Several local authorities have produced local biodiversity action plans. The Dublin City Biodiversity Action Plan was launched in February 2008 (www.dublincity.ie/waterwasteenvironment/biodiversity).

Support for the preparation of county plans is provided by Biodiversity Officers within local authorities whose salaries are supported by the Heritage Council which also administers a Biodiversity Fund (€1m) for projects.

The preparation of the Ballymun Biodiversity Action Plan will be the first sub-county plan prepared in southern Ireland. It will assist in the implementation of the Dublin City Biodiversity Action Plan and support the sustainability agenda within the regeneration process.

Before the regeneration process started the landscape of Ballymun was dominated by tall buildings and mown grassland of low biodiversity value (Fig. 2).

Fig. 2 Features of Biodiversity Interest (1997 Aerial Photo)



The regeneration programme will provide Ballymun with 6,856 dwellings (of which c. 4,400 will have gardens) and several designed parks. The biodiversity plan should enhance particular initiatives which are promoted under its environmental programme such as wildlife friendly gardening in those new households and schools, the successful introduction of hundreds of street trees in a previously barren landscape, dubbed a “no fly zone” for birds and the creation of biodiversity areas in redesigned parks. Trinity College has a bird list of just over sixty species of which thirteen species nest regularly (mallard, swift, robin, wren, dunnock, blue tit, blackbird, mistle thrush, song thrush, chaffinch, starling, magpie, hooded crow). If this site in the heart of Dublin can have this richness of bird diversity there is no reason why it cannot happen in Ballymun.

Plate 4

The “AMAPTOCARE” project led to successful establishment of 700 trees.

1.5 How the plan was produced

The plan was developed through fieldwork, consultations and desk research. The research team included Tom Cooney, an ornithologist with particular expertise in suburban habitats and gardening; Dr Betsy Hickey, plant ecologist who has worked in the horticulture industry and Dr Mary Tubridy, ecologist with experience of sustainable development/community mobilisation. Mary Tubridy co-ordinated the study and produced this report.

Fieldwork was carried out in September-December 2007 within a study area covering 277ha. This sought to:

1). identify habitats (following Fossitt, 2000);

2). compile lists of typical plants in parks, school grounds, priests gardens, selection of private gardens and any semi-natural areas.

3). produce notes on features of interest in rarer habitats;

4). list birds and take notes on their distribution.

All open spaces, schools grounds and larger (priests) gardens were examined directly. Plant Latin names follow Webb et al, (1996) and common names are according to Scannell and Synott (1987). A reconnaissance visit was made to woodlands within Santry Demesne facilitated by Fingal County Council's Park's Department and David Hackett, groundsman Trinity College Dublin Sports Grounds. Large scale hard copy mapping (1:1,000) produced by BRL informed habitat mapping. Aerial photography provided by Dublin City Council (2000) was used to check some habitat categories. Habitats were mapped digitally and a hard copy map produced using the coding system developed by the Heritage Council (Draft Habitat Mapping Guidelines 2005).

As winter is not ideal for fieldwork many plant and bird species were missed. Fossitts classification system was modified for Ballymun following conventions used by surveyors for other urban areas. Notes are provided in Appendix 1.

Desk research involved an examination of historical maps for the area accessed in Trinity College Map Library; ecological reports produced for the Ballymun Masterplan (Natura 1998); Santry Demesne (Goodwillie, 1997); crushing plant north (Biosphere Environmental Services, 2000); Ikea (Robertson and Associates, 2006); and industrial units in Santry Demesne (RPS Mc Hugh 2003). The NPWS file on Santry Demesne was inspected. Ecological assessments of institutional lands (Z12's and Z15's) within and adjacent to Ballymun were re-examined (Compass and Tubridy, 2006). The Dublin City Natura Data Base was searched for details of relevant studies including the location of rare plants within Ballymun. Sweeney, (2000) provided an account of the Wad river which now flows underground to the south of the old comprehensive school.

Consultations were held with Dublin Naturalists Field Club (Gerry Sharkey, Finglas) to discover if any areas of known biodiversity interest occurred in Ballymun. Consultations took place with officials from BRL (planning, architecture, environment and landscape design sections); staff associated with the planning and management of public parks; staff of Global Action Plan (Garden Action Teams, Schools Projects and management) sometimes outdoors. Informal consultations occurred with staff in schools and householders during fieldwork.

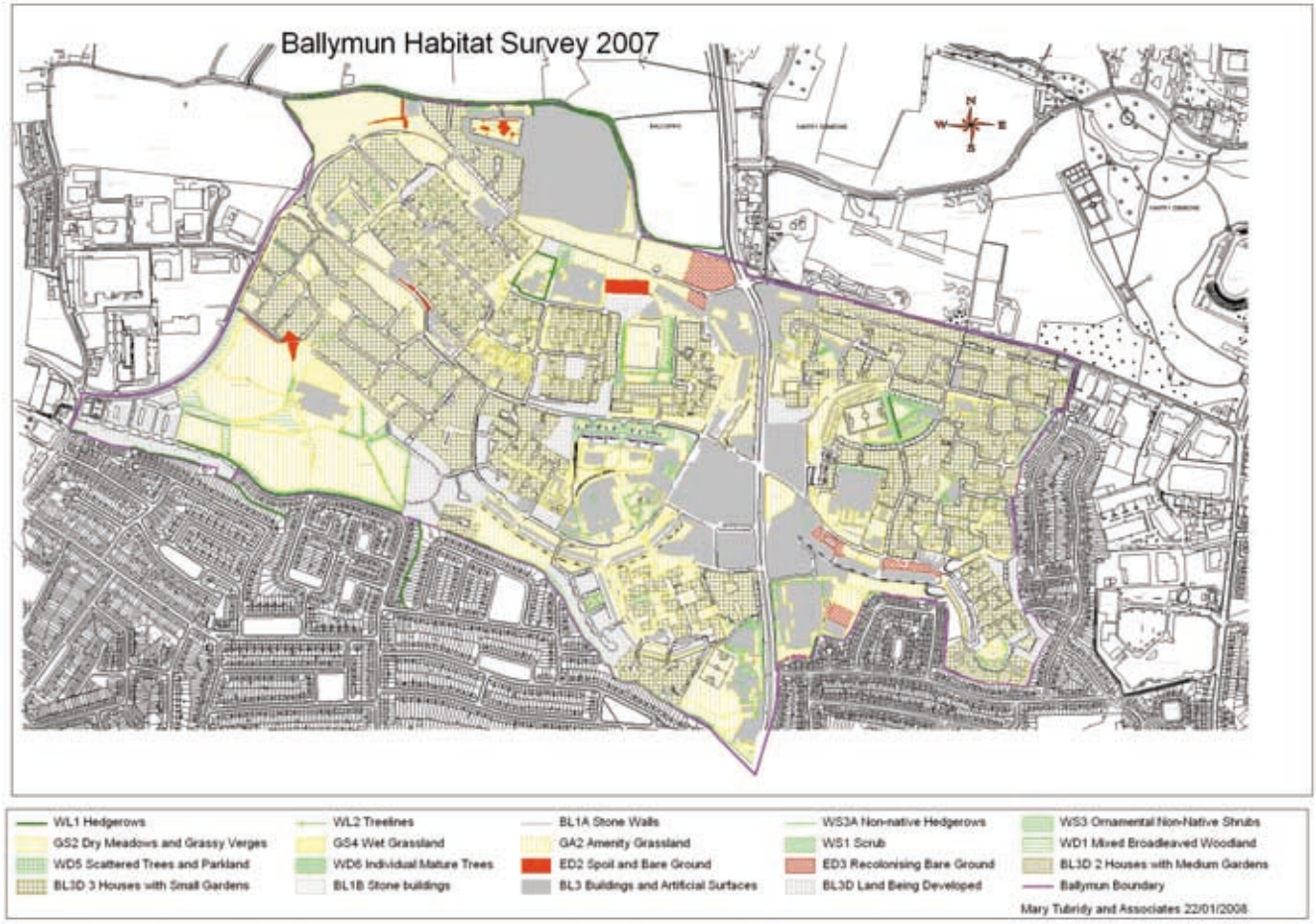
2 Biodiversity

2.1 Habitat diversity in Ballymun

Table 2 (below) provides information on the type of habitats which have been mapped on Fig. 3. (See Appendix 1)

Habitat (Code according to Fossitt, 2000)	Length (km)/ area occupied (ha)
Houses and small gardens (BL3/3)	54.580ha
Mown grass in parks (GA2)	47.312ha
Large buildings, roads and other artificial surfaces (BL3)	41.173ha
Land being developed (housing, parks) (BL3D)	10.434ha
Uncut grass in field and parks (GS2)	6.683ha
Grassland in wet areas (GS4)	0.615ha
Old and new hedgerows (WL1)	4.191km
Tree lines (WL2)	2.381 km
Broad leaved planted woodland (WD1)	1.820ha
Garden shrubberies (WS3)	1.370ha
Houses and medium gardens (BL3/2)	1.306ha
Leylandii hedgerow (WS3)	1.029km
Bare ground with little plant cover (ED2)	0. 0.917ha
Stone walls (BL1A)	0.381km
Scattered trees in parks (WD5)	0.369ha
Bare ground with some plants (ED3)	2.043ha
Rough scrub (WS1)	0.173ha
Buildings made of stone (BL3B)	0.030ha
Flower beds (BC4)	0.029ha
Horticultural land (BC2)	0.017ha

Fig. 3 Ballymun Habitat Survey 2007



Larger copies of this habitat map available from BRL on request

2.2 Biodiversity of buildings and hard surfaces (BL3)

Most of Ballymun is covered in this habitat (BL3) i.e. hard surfaces associated with buildings, car parks and school playgrounds. It (BL3) is of low value for wildlife with the exception of gulls, crows, sparrows, starlings, feral pigeons which are regularly seen feeding on discarded food on footpaths. Numbers of black-headed gulls, rooks and starlings rise in winter when they come into Ballymun from the nearby countryside for food.

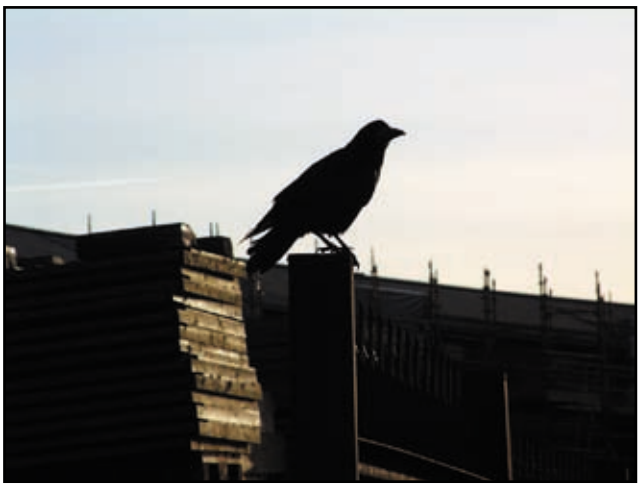


Plate 5

Rook (BRL photo)

2.3 Biodiversity of grasslands (GA and GS)

Closely mown grassland, technically known as “amenity grassland” (GA2) is the commonest type of wildlife habitat in Ballymun. It covers 47ha and is principally found in parks, school grounds and the edges of footpaths. It developed through seeding with lawn grasses or regular mowing of existing old grassland. It is dominated by grass species (rye grass, Yorkshire fog, crested dog’s tail and annual meadow grass) but has some of the following broad leaved herbs; meadow buttercup, daisy, ribwort plantain and dandelion which are tolerant of mowing. Amenity grassland in Popintree Park is complemented by a type of poor quality semi-natural wet grassland (GS4) found between the tennis courts and northern boundary. This is characterised by the presence of a grass like plant, glaucous sedge and the grass species, creeping bent. Historical confirmation of the presence of wetlands is shown on the 1st ed Ordnance Survey map (1850’s) as a well (Jamestown Well) and watercourse (the Wad River) were shown. Water from the well and river is now culverted under the park and drains into a foul sewer at the south-east corner. Some of the water which drains from Ballymun reaches Dublin Bay opposite Clontarf Garda Station c. 8km downstream. According to Sweeny, (2000), a well existed in a private house near St Pappins Church below ground level and reached by a flight of steps. While closely mown grasslands have low plant diversity as few species can tolerate close mowing, and thus relatively low animal diversity, their soils have good populations of invertebrates or “mini beasts” as they have not been ploughed or disturbed. As a result the grasslands in Popintree Park are used occasionally in winter by small flocks of oystercatcher, gulls and blacktailed godwit which feed on the invertebrates which can be easily prised out of the soft soil. The birds are not present in high numbers and they are likely to return once park redevelopment is completed.

Uncut meadow type grassland (GS2 type) is found in an abandoned field on the north-west boundary of the study area and within Coultry and Balcurris Parks where it was established using a wildflower mix.

Plate 6

Tall uncut grass (habitat GS2) in field north of Balcurris Road.

It is characterised by the presence of taller vegetation, due to lack of regular mowing. The grassland in the derelict field is typical of that found in abandoned land or poorly managed land. It has a range of commonly occurring tall plant species, the grasses cock’s foot and false oat grass as well as nettle, creeping thistle, broad leaved dock, meadow vetchling and silverweed. Teasel is found in disturbed ground in the bare parts of the field. The swale in Coultry, also classified as uncut meadow type grass has been successful in enhancing plant biodiversity as it has the highest diversity of plant species (56 species) of any habitat in Ballymun.

Plate 7

Swale in Coultry Park (winter photo). Seed heads valuable as winter food.

Species diversity is low in the Balcurris attenuation area as rye grass dominates the swale. However reed (Phragmites australis) was seeded into the swale. Uncut meadow type grassland such as that found in the swale is more valuable than that found in the fields as it has a greater diversity of plant species. Due to the lack of cutting many plants (grasses, nettle and meadow vetchling) provide essential food for invertebrates including butterflies; seeds of plants such as thistle, dock, teasel are eaten by birds particularly finches in winter and the dead plant material is used for overwintering invertebrates.

Plate 8

Prizewinning garden in Balcurris Gardens with valuable nectar providing plants.

2.4 Woodlands and trees

A poor quality woodland is found in Poppintree (30 years old) and Balcurris Park (10 year old trees). In Poppintree trees were planted c. 30 years ago in several blocks probably near some of the old hedgerows or field boundaries which have now been obscured. The woodlands in Poppintree have some native trees and shrubs such as elder, ash, alder, sally, birch (Betula pubescens), oak (Quercus robur) and Scot's pine. The majority of trees are non-natives; mainly types of maples including sycamore as well as beech.

Plate 9

Woodland in Poppintree Park

The wood lacks shrub and herb layers. The shrub layer has been removed due to concerns with anti-social behaviour and only two specimens of woodland herbs were found (wood avens and wood violet). While this park also contains lines of trees, along which birds can commute, and many single trees (a habitat called trees and parkland (WD5) the absence of a shrub layer results in the lack of woodland birds. Survey work in 2007 revealed the following birds in the park; black-headed gulls, herring gulls, common gulls, magpies, hooded crows, rooks, jackdaws, woodpigeons, starlings and pied wagtails. While this diversity is impressive none of these are woodland specialists and all are found in other places in Ballymun. Two of these species, hooded crow and magpie nest in tall trees in Poppintree.

The four mature trees in Ballymun, two sycamore in front of Silver Stream Nursing Home and two horse chestnuts in Scoil on tSeachtar Laoch are important reservoirs for biodiversity as all are at least 150 years old. Therefore they provide a food source for a large number of invertebrates which either visit them to feed or live off them (Gilbert and Anderson, 2000).

The biodiversity value of roadsides in redeveloped areas has been improved by the planting of trees and associated ground cover in tree pits. The "amaptocare" arts project has introduced c. 700 trees to streets, small open spaces and parks. The high survival rates of the trees is accounted for by the sense of ownership which the project generated. Individuals were invited to sponsor trees and a tree planting ceremony occurred on each occasion. Each sponsored tree has a plaque at its base providing the reason for sponsorship and rationale for the choice of tree species.

Plate 10

"Amaptocare" trees in small green space. Plaques provide fascinating insights into Ballymun's social history.

While mainly non-native the range of trees includes cultivated varieties of the natives: whitebeam, ash, bird cherry and rowan. Ground cover has been less successful and has suffered from anti-social activity. The soil pits provide a habitat for invertebrates.

The value of these trees to biodiversity will improve. They currently provide roosting places for birds and lines of trees serve as their commuting routes. Species which produce fruits and seeds provide food in winter for birds. However they are unlikely to provide nesting places for smaller songbirds.

2.5 Scrub and hedgerows

Scrub type habitats (habitat composed of taller native plants c. 2m tall but not trees (WS1)) were found in two small areas; adjacent to Coultry Avenue (inside the wall) and at the northern end of Pinewood Drive. The scrub at Coultry Avenue is a remnant hedgerow and thus has abundant hawthorn and ivy. It is important for songbirds and provides an important linking corridor between Santry Woods and Ballymun. The latter site is much smaller and of more recent origin.

Old native hedgerows are still found at several locations in Ballymun. These field boundaries were established at least two hundred years ago by planting ash, blackthorn and hawthorn on banks of soil to create stock proof boundaries around fields. St Margaret's Road to the north of Ballymun has retained most of its marginal hedgerows. During fieldwork in 2007 rabbits were common in the banks. Species found were blackthorn, ivy, hawthorn, elder, ash (and seedlings), dog rose, bramble and white willow.

Plate 11
Ivy is particularly valuable for butterflies and birds.

The hedgerows at this location are poor examples of the hedgerow habitat but are important for their rarity in the city. An account of an adjacent hedgerow in the EIS for the crushing plant (BES, 2002) listed the presence of other typical and common woodland plants such as lord's and ladies and hart's tongue fern. A locally rare plant, spindle, which occurred in "Coultry Dump" in the 1980's may have also occupied hedgerows in Ballymun as it is a woodland/hedgerow plant. The extent of a remnant hedgerow cum planted woodland to the west of Ballymun is being reduced due to the construction of houses (Fig. 4). Walls and fences, at the request of adjacent householders in older estates, will enclose part of this habitat and thus ensure its survival.

More recently planted (c 30 year old) hedgerows with hawthorn only are found around Poppintree Park and within schools. If these hedgerows are managed appropriately they could become valuable habitats. Old native hedgerows near St Margaret's provide an important habitat for songbirds in Ballymun due to the presence of dense vegetation and abundant food (haws, elder berries, sloes) supplied by native plants. Species such as blackbird, robin, wren, and blue tit which are in low numbers throughout Ballymun are always found around hedgerows which are allowed to grow naturally. The surviving hedgerows in Ballymun have been much modified by the planting in of Leyland's cypress (hedgerow now categorised as the linear habitat WS3) to provide privacy for gardens overlooked by the tower blocks.

Plate 12
Leylandii is of little value to insects or birds.

Leyland's cypress is of low value for amenity. As it is evergreen and non-native it has led to the removal of hedgerow plants by shading. It is of low value for wildlife as few species eat it or nest in it. When grown as a hedge it soon becomes unsightly (c. 20 years), as it is difficult to prune. Owners are frequently surprised to find that its consequent removal is costly.

Planted shrubberies (c. 2m tall) (habitat WS3) are almost entirely absent from public spaces in Ballymun, as this habitat is perceived to be a risk to public safety. Patches, comprising c1.3ha are found in church grounds and schools, particularly Scoil an tSeachtar Laoch, St Joseph's NS and Church, in large gardens, such as those associated with the nursing home, priests gardens and in front of the enclosed blocks along Balbutcher Lane.

Plate 13
Planted shrubberies, such as those in Holy Spirit garden, are the most important man-made habitats for small songbirds. (BRL photo).

They are similar to hedgerows, as the height and density of vegetation provides cover and nesting sites. As many of the shrubberies in schools are adjacent to other natural type areas their value is increased. Hedgehogs and grey squirrels have been observed in the grounds of Scoil an tSeachtar Laoch.

2.6 Houses and gardens

Most of Ballymun is covered in the habitat type "houses and small gardens". These covers c. 56 ha and comprises traditional style 30 year old housing and more recently developed varied types. As all new householders are offered a selection of trees and shrubs to encourage an interest in gardening almost all new gardens have been planted. Further support and incentives are offered to these householders through Garden Action Teams and competitions. As a result, a good variety of shrubs and trees are found and a good standard of gardening is being promoted incorporating sustainability practises (organic gardening, composting and awareness of biodiversity).

Plate 14

Garden Action Team at work

Some gardens had particularly good shrubs such as lavender, hawthorn and pyracantha. During a survey of fifteen new households in Longdale Terrace, it was discovered that one house owner feeds birds regularly, could identify several species and provided a record of a grey squirrel in the garden. Gardens of older houses have more vegetation cover and are therefore of more biodiversity interest. Many native species were found in a survey of twenty-one older houses in the vicinity of Coultry Park and Shangan Park. Varieties of native species included hawthorn, willow, spindle, gorse, whitebeam and honeysuckle. Some older houses have walls near which dense shrubberies have been established or creepers have been trained. These areas are of value for birds particularly if the red-berried pyracantha is planted.

2.7 Other habitats; bare ground (ED3)

Bare ground (ED3) can be valuable for biodiversity if native plants are allowed to colonise and grow naturally without mowing or spraying. The plants which colonise bare soil reflect local soil conditions and seedbank. As they are mainly native they provide food for wildlife. A good example of this habitat is found beside Trinity Comprehensive at the back of the courts and all weather pitch. A fenced off area has c 14 plant species and is fast developing into a Buddleia scrub. This area could be managed to become more valuable or/and used as a teaching aid to explain the process of ecological succession.

Plate 15

Potentially high value biodiversity area in Ballymun Comprehensive. Site of old hedgerow now cleared of Leylandii.

2.8 Habitats and features of interest adjacent to the study area

Due to the designation of Santry, and the extent of the recent development information in the Demesne and around Ballymun some information is available on biodiversity in adjacent habitats. The woodland in Santry Demesne is a very old planted type (c. 200 years old) of mainly broad leaved trees. Although many are non-native the woodland has the following natives: pedunculate oak, ash, hazel, alder, hawthorn, blackthorn, elder and holly. It has a good shrub layer, thus enhancing its value to birds. Rare species are present such as badger (RPS Mc Hugh, 2003) and the plant Hairy St John's Wort (recorded in 1991) a plant species protected under the Wildlife Act. The value of the woodland habitat is increased by the presence of the Santry River and man made lake and its management by Fingal County Council which allows for appropriate management and public access. Records show that grey heron and mallard are found at the lake. Other features of biodiversity interest include fox, pygmy shrew, and many bat species: soprano pipistrelle, common pipistrelle, Leisler's Bat and brown long eared bat. To the north of Ballymun on the IKEA site badger activity has been recorded (Robertson and Associates, 2006).

Plate 16

Mute swan at lake in Santry.

2.9 Conclusions

The baseline study produced new information on land use, habitats and species in Ballymun.

- The habitat amenity grass (GA2) (which corresponds to public green open space) covers 20% of Ballymun.
- Rare habitats of local value cover 3.5%, significantly less than in the city overall. They include wet grassland in Poppintree, meadow areas, scrub, remnant hedgerows and swale in Coultry Park. With the exception of certain areas in Coultry Park (swale), Balcurris Park (willow and woodland) and Popintree (area allowed to colonise naturally by park manager) they are present as a by-product of local development. While none of these areas are important nationally or regionally they contribute to local diversity.
- Some native plants and birds are present throughout Ballymun. Their diversity is low because there are few suitable locations for them to establish. Ballymun is not a “no fly zone for birds”. A total of twenty species were found in late 2007. However birds are present in low numbers as there are few suitable nesting locations. Bird biodiversity is noticeably richer near remnant hedgerows and large shrubberies in the grounds of schools, large gardens and in some of the more established gardens in the older housing estates.
- Planting in of the swale in Coultry is responsible for much of the diversity of native herbs in Ballymun.
- Establishing street trees through roadside planting and the “amaptocare” arts project has significantly increased tree diversity.
- There is potential to create appropriate conditions in Ballymun to extend the range of species found currently in Santry Demesne. For example most bat species commute along lines of vegetation (scrub/hedgerows) to feeding areas which have dense populations of insects arising from the presence of native plants. Strong night lights are deterrents and the presence of a natural type wetland is an attraction. Badgers home range is 700m2 and they can disperse up to 10km. However they also commute preferentially through scrub or wood covered areas. Roads act as barriers to movement and well-drained lawns with dense populations of earthworks are an attraction (Hayden, 2001). If appropriate conditions are provided in public spaces, roads and gardens biodiversity will increase.

3 Biodiversity Action Plan SWOT

A SWOT (strengths, weaknesses, opportunities and threats) analysis provides a rationale for the action plan in Section Four.

Strengths

- Presence of small areas covered in habitats which are rare in Dublin city (wet grassland, remnant hedgerows, scrub).
- Support for community involvement in biodiversity management; tree planting which has increased tree diversity and raised awareness and appreciation of this aspect of biodiversity; organic gardening which follows sustainable practices among new householders and youth involvement through schools and youth services in wildlife gardening.
- Interest of BRL in developing areas of high biodiversity value in new parks.
- Presence of biodiversity area in Poppintree Park developed by park staff as a result of a personal commitment to biodiversity.
- Landscape planning which has integrated biodiversity with other functions i.e. swales and attenuation areas with waste water treatment.
- Absence of features and species of high rarity value, protected by legislation which allows for greater diversity of (less costly) initiatives to manage biodiversity.
- Proximity of Ballymun to Santry Demesne, one of the few inland areas of high biodiversity in the north of Dublin city.

Weaknesses

- Absence of specific protocols for managing biodiversity areas in new public parks.
- Lack of biodiversity expertise in planning for and managing biodiversity in Ballymun
- Low level of community awareness and appreciation of actions undertaken to green parks, resulting in lack of community support for further measures to increase biodiversity in parks.
- Lack of biodiversity management plans for schools/open spaces to ensure the sustainability of initiatives organised by GAP and their integration into school plans.
- Lack of network linking biodiversity/environmental education work in Ballymun, interests of national environmental NGO's and individuals and organisations promoting urban biodiversity in Dublin/Ireland.
- Lack of involvement of business sector/large scale development in measures to enhance biodiversity.
- No active support by GAP for wildlife gardening in older established households.

Opportunities

- To promote the value of existing biodiversity within Ballymun and nearby high values areas to the community (particularly schoolchildren and recreational walkers).
- To recognise and protect examples of rare habitats through spatial planning.
- To optimise the resources and commitment of GAP and BRL to provide a co-ordinated range of measures to protect, enhance and recreate good conditions for biodiversity in public spaces, school grounds and gardens in Ballymun, based on the policy of planting of (ideally) native plants and (always) wildlife friendly trees and shrubs and developing high value habitats.
- To provide a strategic direction to excellent work carried out by statutory and non statutory agencies and the community.
- To co-operate with Fingal County Council in providing opportunities for greater local usage of Santry Demesne by the community in Ballymun including school groups.
- To enhance "community" through co-ordinated actions. Small gardens can be enhanced to become reservoirs of biodiversity. While such small patches do not contribute much individually, collectively they can make a huge impact.
- Exploit the opportunity to present Ballymun as a new model for an urban area which promotes urban biodiversity.

Threats

- Socio/economic conditions which prevents the community from enjoying a high quality of life which features opportunities to enjoy nature.
- Anti-social activity in parks and open spaces which threatens public enjoyment of areas of biodiversity interest and prevents habitat creation (shrubberies) which would significantly enhance Ballymun for birds.
- Lack of resources to monitor anti-social activity in parks and green open spaces.

4 Action Plan

Theme One *To increase awareness and enjoyment*

Timescale	Action	Who should be involved?
Year 1	Bioblitz in Ballymun during Biodiversity Week (May). A “bioblitz” brings together “experts” and the public to record as many species as possible. Followed by talk on birds in Ballymun.	Organised by GAP/BRL Include specialists where relevant, i.e. plants, birds and invertabrates
	Invite school groups to Santry Woods and Demesne in summer term to take part in a fun/ learning/picnic event.	Biodiversity Officer, Fingal CC / local teachers & parents / GAP
	Introduce biodiversity theme in local arts programme (photographs, artwork, creative writing, technology) to produce local display in Years 3-5.	BRL / Axis / Breaking Ground / Tidy Towns
	Produce two guides ➤ 'Scavenger Hunt' for Coultry/Balcurris Parks and Santry Demesne. ➤ A neighbourhood based key to street trees.	BRL / Ecologist / GAP / neighbourhood fora / Tidy Towns
Years 2-5	Commence bird biodiversity programme in schools involving.	GAP / BRL
Years 3-5	Construction and erection of bird boxes/ feeders (following guidelines in Appendix 2). Bird monitoring programme, (see Birds in the Schoolyard Scheme birdwatchireland.ie). Web cam to monitor activity in a nest box (more likely for blue tits) or facing a bird feeder. The web cam should be fitted into rear/top of boxes prior to box being installed in its final location prior to prospecting for nesting. For blue tits this would have to be before mid-March and end February for robins. Promote “Young Scientists Projects” in secondary schools such as: ➤ Search for local hedgerows. ➤ Follow the buried river, the Wad. ➤ Measure the amount of carbon fixed in different gardens (can be estimated easily as it comprises half of all organic matter found in soil).	Secondary school teachers of science and geography, and transition year co-ordnators.
	Use new parks as outdoor learning areas facilitated by “scavenger hunt” type guides which will focus on high value areas. Distribute tree keys within neighbourhoods.	Schools / neigbourhood centres / BRYR / Aishling / GAP

Timescale	Action	Who should be involved?
Years 3-5	Promote butterfly recording within households. Chart available (€2.50) from Butterfly Ireland (http://www.butterflyireland.com)	Butterfly Ireland / DNFC / Tidy Towns
	Implement arts related programme with Axis.	Axis / Breaking Ground / BRYR
	Establish walking route which provides access to Santry Demesne and walking group which will explore local areas of biodiversity interest (Howth, Bull Island, Fingal coast, etc).	BRL / Tidy Towns
	Promote concept of greenways (integrated non motorised transport routes and biodiversity areas).	BRL
	Develop site in Ballymun Comprehensive as principal wildlife garden which will be managed for biodiversity.	BRL / schools / DCC Biodiversity Officer / GAP
	Allocate area for allotments.	GAP / BRL
On-going	GAP to continue to work in schools developing spaces for school gardens and wildlife areas (the latter with native trees and shrubs). GAP to continue selling suitable equipment and plants in local outdoor market and Ecoshop.	GAP

Theme Two *To carefully manage areas of high biodiversity value*

Timescale	Actions	Who should be responsible?
Year 1	Display areas of high biodiversity in local plans.	BRL / DCC
	Communicate their significance to parks managers and the local community via information sessions and local newsletter.	BRL / Tidy Towns / DCC Parks
	Invite naturalists to examine and report on the biodiversity of these features at Bioblitz and through supporting fieldwork by providing maps.	BRL / Dublin Naturalists Field Club (or other NGO's)
Years 2-3	Implement guidelines to maintain and enhance biodiversity in Coultry, Balcurris and Popintree parks and all smaller green open spaces (in Appendix 4).	BRL / DCC
Years 3-5	Make Tree Protection Orders for all mature trees. This will result in a license being required if trees are pruned or removed.	BRL / community / landowners / Tidy Towns

Theme Three *To enhance biodiversity in public spaces and institutional lands (schools, churches, etc)*

Timescale	Actions	Who should be responsible?
Year 1	Agree policies regarding establishing native plants of certified origin in biodiversity areas in public spaces (see Appendix 5 for list of native trees and shrubs); ➤ planting of specimens in biodiversity areas which have been propagated from native local trees/shrubs removed as a result of development. ➤ developing suitable shrubberies which will provide nesting places for birds, in locations which are not vulnerable to anti-social behaviour.	BRL / DCC / Tidy Towns
Years 2-5	Continue work on Hanging Gardens (Ballymun Green Roofs) project.	BRL
Years 3-5	Erect bird boxes made in local schools on suitable sites eg. Silverstream Nursing Home.	GAP / schools / Tidy Towns
	Develop a design for a redeveloped woodland in Balcurris Park to include different types of woodland reflecting impacts of climate change since last Ice Age.	BRL
Years 3-5	Enhance habitats along key commuting routes by planting treelines with native trees (along roads), building small ponds and landscaping with insect attracting plants and seed producing plants in adjacent private gardens.	BRL / GAP / Tidy Towns
	Carry out feasibility study to examine the development of the walled garden in Santry Demesne as a native wildflower/shrubbery/tree nursery or/ site for allotments or community garden.	GAP / BRL / Fingal CC
On-going	Continue to promote materials and plants which enhance biodiversity.	GAP / BRL / Tidy Towns / Market Steering Group

Theme Four *To encourage and support all developers, householders and gardeners to take small actions to enhance biodiversity*

Timescale	Actions	Who should be responsible?
Year 1-2	Expand the gardening competition to reward biodiversity enhancements in gardens, and introduce a new competition for gardening "tree pits" (restricted to <12 year olds).	BRL / GAP / Tidy Towns
	Offer biodiversity friendly species listed in Appendix 6 to occupants of new houses.	BRL / GAP
	Arrange sale of these species through local market/shop. Demonstrate and sell appropriately planted window boxes, bird tables, food, nesting boxes (made locally) and bird baths.	GAP / Market Steering Group
	Provide resources to allow GAP recruit more householders (including those in older housing in Ballymun) and employ an ecologist/horticulturist to support GAP's activities.	BRL / DCC
	Develop simple brochure outlining measures which could be taken by developers to support biodiversity i.e. using green roofs, providing nesting platforms, water source on balconies, bat roosting sites and appropriate landscaping.	BRL / GAP / DCC
Year 2	Publicise useful web sites (listed in Appendix 7)	DCC / BRL / GAP / Tidy Towns
	Expand Ballymun newsletter to feature an account of seasonal influences on biodiversity.	BRL / Tidy Towns
	Localise recommendations to enhance commuting routes and dispersal of native plants and animals from areas of high biodiversity interest.	GAP / Neighbourhood fora / Tidy Towns
Years 3-5	Develop a reward system to recognise efforts made by local businesses and developers to enhance biodiversity.	BRL / DCC / IBEC / Botanic Gardens / Tidy Towns / Business community
On-going	GAP to continue to provide training courses, advice and materials to support biodiversity friendly gardening involving organic practises, non use of peat, water butts and composting.	BRL / GAP

Theme Five *To monitor the successful implementation of the plan and improvements in biodiversity*

Timescale	Actions	Who should be responsible?
Year 1	Agree indicators of local biodiversity, set targets and arrange monitoring programme. Suggestions are: ➤ The extent and condition of the following habitats; GS2, WL1 and WD1. ➤ Number of Garden Action Teams. ➤ Access to ecological expertise. ➤ Number of bird species. ➤ Area in parks (%) managed for biodiversity. ➤ Number and extent of wildlife areas managed communally. ➤ Entries in biodiversity section of gardening competition.	BRL / GAP / DCC / Community fora
Years 2-5	Carry out monitoring exercises some of which can be partly implemented by local volunteers or schools.	DCC / BRL / GAP / Tidy Towns
	Bird diversity could be assessed by repeatedly walking a predetermined course at regular intervals (e.g. twice each spring/early summer) and noting the number and type of birds seen/heard in that habitat i.e road, shrubbery or garden.	DCC / BRL / GAP / Tidy Towns
	Repeated over several years it should be possible to observe the spread of resident species into new areas.	DCC / BRL / GAP / Tidy Towns
	Householders or schools could record success of bird feeders (hanging peanut feeders) in winter to see what is likely to occur. This would give an indication of range of species and seasonal movements in and out of Ballymun.	DCC / BRL / GAP / Tidy Towns
Year 5	Organise a “Bioblitz” in 2013 using similar approach as in 2008.	Tidy Towns

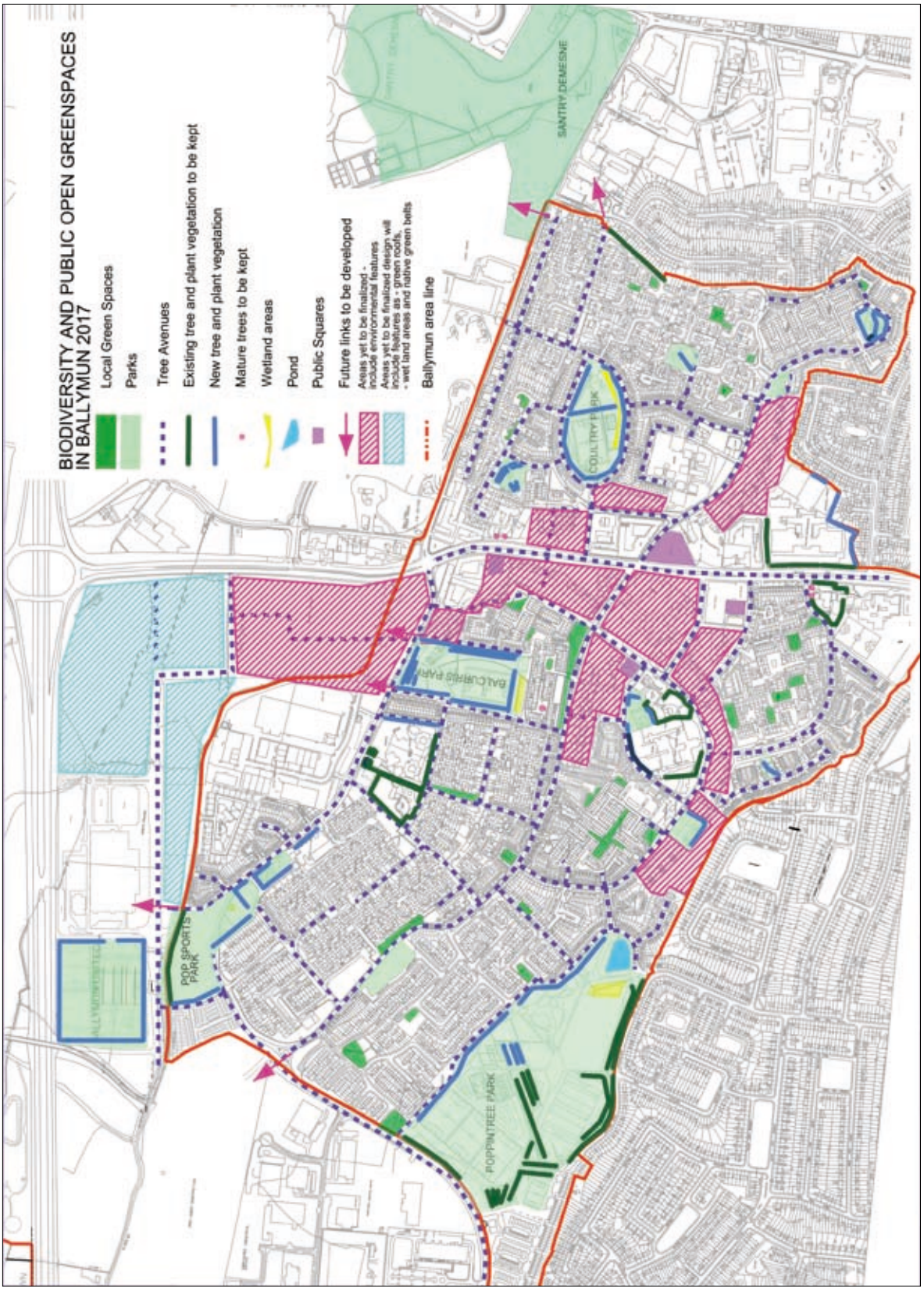
Theme Six *To disseminate results of biodiversity actions to other communities*

Timescale	Actions	Who should be responsible?
Year 1	Circulate Biodiversity Action Plan to individuals and organisations.	BRL / Tidy Towns
On-going	Continue to enter all competitions (Tidy Towns, etc) and start to apply for grants (Heritage Council, etc) to support biodiversity work and local development.	BRL / GAP / Tidy Towns
	Invite Dublin Naturalists Field Club, Irish Wildlife Trust and BirdWatch Ireland to run field excursions in early summer to examine high biodiversity value areas and comment on management.	BRL / Tidy Towns

Conclusions

Fig. 4 provides an overview of a range of "greening" actions both planned and proposed for Ballymun by 2017. If successfully implemented the aims of the biodiversity action plan should be achieved.

Fig. 4 Biodiversity and Public Open Greenspaces in Ballymun 2017 (Planned and Proposed)



April 2008: Please note that all greenspaces are marked and some developments are not included due to ongoing design changes.

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Appendix 1

Notes on level 4 habitat mapping Fig. 3.

With the exception of the following habitats (which are sub categories of Level 4 types) all others follow Fossitt (2000).

BL1 A Stone walls (such as those near St Pappin's Church).

BLI B Stone buildings in use (Silverstream Nursing Home).

BL3 2 Medium sized gardens < between 250 and 500 m2.

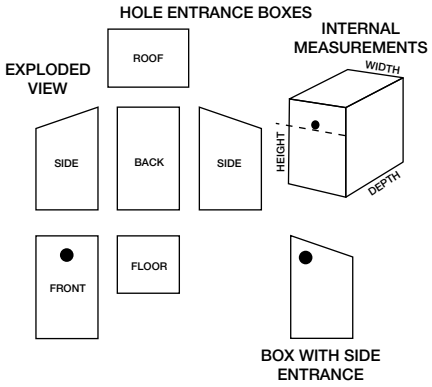
BL3 3 Small gardens <250 m2).

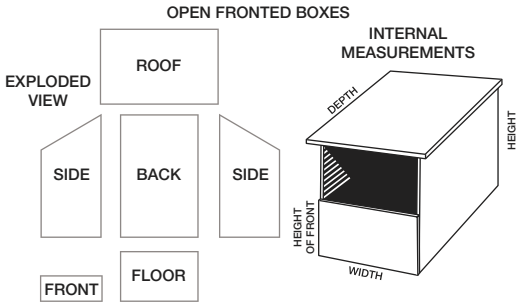
This convention has been used in habitat mapping exercises in urban parts of Kildare and Laois (Tubridy and Associates, 2004, 2005, 2006).

BL3 D Land that is currently being developed, as survey took place.

WS3 A This is a linear feature composed of a non-native shrub/tree such as leylandii.

Appendix 2





Bird boxes and feeders

1 Bird boxes

Robin, Blue Tit and possibly Great Tit are the species most likely to use artificial nest sites (nest boxes). Boxes should be installed to final locations before the birds start to prospect for suitable nesting sites. Boxes should be in place before mid-March for tits and by end of February for Robins.

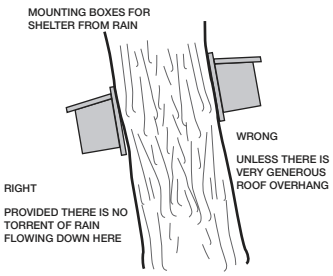
Two different nest box designs are required, hole-entrance and open-fronted. Robins will use boxes with open-fronts and blue tits and great tits use the boxes with a hole entrance. The size of the entrance is critical for each species.

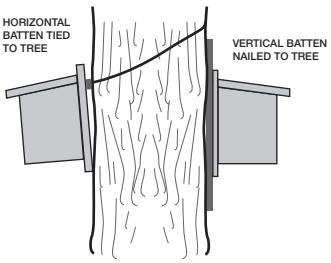
General specifications for the boxes are as follows but a good idea would be to get two of the nest box types from a supplier and copy the construction.

Blue tit and great tit

Hole-fronted entrance box. Base should be 100mm x 100mm. The back of the box should be c.150mm in height. Hole entrance placed high on the front of the box. Entrance size for blue tit is 25mm diameter and 28mm diameter for great tit.

Blue tit boxes should be placed in locations that are more open e.g. a small woodland with little undergrowth or a well planted garden (e.g. the immature woodlands in Poppintree Park or in the school grounds). Blue tits require a clear approach to perches near the nest





site. The diameter of the hole entrance should be 25mm. The same size nest box can be used by great tits but the entrance diameter needs to be 28mm.

Robin

Open fronted entrance box. The base should be 100mm x 100mm. The back of the box should be c.150mm in height. The entrance opening should be c.50mm in height. Possible locations might be within the grounds of St Joseph's National School, Holy Spirit National School etc). Boxes should be placed c.1.5m to 5m off the ground. Robins will require a site where the nest box is camouflaged by vegetation, preferably thorny shrubs.

General positioning of nest boxes

Place nest boxes on trees (or walls) facing away from the prevailing wind, rain and strong sunlight i.e. generally from north through east to southeast is probably best. In woodlands, the slope of the trees will override the importance of direction of the nest box.

Avoid placing nest boxes on wet sides of tree trunks. For correct positioning of boxes see below).

2 Feeders

Make bird tables. Simply an upright supporting pole with flat piece of wood fixed to the top to place the food. Height should be about 1m off the ground and close to tree/shrubbery.

Wire bird feeders can be bought very cheaply from suppliers.

Bottle bird feeders can be made from old mineral bottles (see photos). All that is required is an empty plastic bottle. Drill holes through the bottle and place stick through to form a perch. Drill feeding hole above the perch. The feeding hole should be large enough for peanuts to pass through. Place unsalted peanuts/seeds into the bottle via the neck of the bottle. Screw cap on bottle and invert. Hang in the open from an overhanging branch of tree or shrub etc.

Appendix 3

Impacts of habitat improvements on birds

If suitable habitats with berry bearing and seed bearing shrubs and trees are created then it is very likely that some or all of the following will eventually become established.

In most areas all year round:

- Robin
- Wren
- Dunnock
- Blue tit
- Blackbird

Mature, larger parks like Poppintree might also attract:

- Collared doves
- Song thrush
- Mistle thrush
- Great tit
- Greenfinch
- Chaffinch
- Mallard (if ponds with small islands planted with reeds/native scrub)
- Moorhen (if ponds with small islands planted with reeds/native scrub)

Winter : no effort will be required regarding habitat creation. All will feed on open playing fields.

- Fieldfare – feed in open fields but may use trees/shrubberies as refuge.
- Redwing – feed in open fields but may use trees/shrubberies as refuge.
- Black-tailed godwit – feeding in open playing fields.
- Oystercatcher – reported to feed in Poppintree Park.
- Goldfinch – would require rough patches with thistles and seed bearing plants.
- Goldcrest – would be likely to use new shrubberies/trees for feeding in winter.
- Long-tailed tit – would be likely to use new shrubberies/trees for feeding in winter.
- Grey Herons – used ponds and wet fields to feed for invertebrates.

Summer

It is very difficult to envisage summer visitors nesting at the new parks as they require very specific habitats. However it is likely that if Poppintree is planted with reeds or other suitable vegetation it will attract swallow to feed on insects but mostly to drink fresh water.

Occasional visiting species throughout the year:

- Grey wagtail – to ponds
- Grey herons – to ponds
- Sparrowhawk – to hunt small birds

Appendix 4

Guidelines for Parks

1 Poppintree Park; guidelines for redevelopment

1.1 Best features of existing park

Hawthorn boundary hedgerow. Food and shelter for invertebrates and birds.

Small areas with dense shrubbery. Cover for nesting birds.

Wet grassland (GS4) and wet pitches which feed small numbers of migratory birds in winter and have particular grassland species.

Native trees and shrubs throughout the park particularly in old woodlands. Good source of food for invertebrates (compared to non-natives).

Area which has been left recolonise naturally to benefit native plants inside northwest boundary of park.

1.2 Recommendations to maintain and enhance biodiversity in new boundaries, avenue, woodlands and pond

Retain hawthorn boundary hedgerow. Extend it to all other locations where linear vegetation formed by shrubs is required. This will improve habitat, provide shelter and improve the value of the existing hedgerow as a linking feature/ecological corridor.

Near the existing hedgerow on the southern side (proposal woodland ground cover), plant in native trees and shrubs near the hedgerow to create three discrete blocks of dense shrubbery, a safe distance from proposed paths. This type of vegetation will maximise the

value of that part of the park for birds. Planting could include the trees ash, oak (Quercus robur), wild cherry, whitebeam, crab apple and the shrubs hazel, hawthorn, holly, dog rose and spindle. All of these are typically associated with the native woodland which was found at this site. As holly is shade tolerant it can be planted nearer the hedgerow or under trees. The object is to achieve an A shape with trees in the centre (eventually unpruned) surrounded by a fairly dense shrubbery merging into the hedgerow. To discourage anti-social activity a prickly dense ornamental Berberis could be planted outside the band of native shrubbery. Elsewhere in this area (where there is a proposal to retain woodland) ground cover should be enhanced by introducing native woodland herbs such as primrose, violet, native bluebells (not Spanish bluebells) and ramsons (Allium ursinum) under existing trees.

The avenue tree should be a tree which produces flowers and fruits. While a native is preferable (i.e. birch, oak) some non-natives, (i.e. horsechestnut, beech) also fulfill these criteria.

Wetland/pond development. The island edges should be uneven. This will maximize the extent of the marginal wetland areas which are the most important habitats for emergent plants and insects. The potential of this island to benefit wetland ecology can be further maximised by 1) bordering it by water of different depths. This will allow for different types of wetland plants to be established at different sides; marginal types vs. emergents 2) establishing an appropriate type of vegetation on the island to provide food and cover for fauna. Depending on size the following tree species could be planted: Scots pine (in centre driest area), sally, salix fragilis and alder for appearance and biodiversity. Shrubby type willows (Salix cinerea and aurita), guelder rose, bramble. In addition, gorse would be good around these trees, meadowsweet nearer the water. Allow some long grass between these species and water. (During construction, excavate around this island to improve its prospects as a habitat. Wetland plants should be sourced locally (with permission from NPWS and Fingal CC. in Santry Demesne) as those which come from garden centres usually bring undesirables. Useful species are bulrush (Typha latifolia), bur reed (Sparganium erectum) and reed (Phragmites australis) in deeper water, and a wide range of types of semi-wet habitats (including flowering types such as meadowsweet, water mint and horsetails, sedges, rushes, etc) in shallow water and damp ground. Suitability of plants in aquatic habitats depends on water quality, depth, etc.

2 Coultry Park

2.2 Biodiversity assessment

Features of biodiversity importance are:

- Swale seeded with a wildflower mix and cut to allow flowering and fruiting of a diverse range of native plants.
- Holly shrubbery bordering eastern side of formal thoroughfare. The holly is by far the best shrub/tree planted in the park as it will provide thick cover and protection for birds as well as flowers for butterflies (holly blue from March to June and August) and berries for thrushes in winter (usually from mid-November onwards).
- Single specimens of native trees.
- Wood pigeon attempting to nest in 10yr old evergreen oak! (Quercus ilex).
- Presence of the following bird species: jackdaw, magpie, rook, starling, feral pigeons, pied wagtails, grey wagtails, mistle thrush, blue tit and long-tailed tit.
- Covered in area for educational activities.

Some of the grassland bordering the swale (mapped on landscape design map) is of potential biodiversity interest as it was seeded with a wildflower mix. However it has been managed as a lawn since establishment. While shrubberies are of potentially greater value than amenity grassland, almost all the shrubberies are of poor value for wildlife as the optimum range of plants was not selected.

Comparisons between proposed (as set out in Landscape Management Plan) and actual planting in November 2007 revealed differences in plant composition in certain areas. The original design (see 4.5 of Management Plan for the holly hedge) suggested that guelder rose and honeysuckle would be planted. No trace was found of these species in the hedgerow. Plant recording in the swale revealed a different community of plants to that specified in section 4.7 (Management Plan).

2.3 Recommendations for future management

2.3.1 Grasslands

Swale

Continue to cut to height of 100mm in April/May (or when growth commences) and remove cuttings. This will slow down the growth of grass species and enhance the growth of colourful herbs.

Cut half the swale in September/October (to 100mm) after all species have flowered and set seed. In the cut area leave cuttings on ground for a few days to allow seeds/insects to fall into soil. When raking up cuttings after a few days scarify the soil to provide bare areas for these seeds to germinate. Leave the other half uncut to provide seeds for birds over the winter and overwintering sites for insects.

Vary the uncut sections from year to year.

Follow this programe until such time as grass cover >50% due to nutrient build up. If this occurs reseed each side with Irish sourced wildflower mix, suitable for wet and dry conditions after removing 70-80mm topsoil. To establish a new swale regularly during year one, scarify with the final cut in the autumn, before adopting the cutting regime specified above.

Area seeded with wildflower mix (mapped as 6).

Consideration should be given to improving diversity of part of this grassland by following the mowing regime recommended for the swale, possibly in the area between swale and multi use games area.

Signage

Signage should be erected explaining why grass is allowed to grow long in the swale and its vicinity. A large stone sculpted with the words “wildflower area” should be placed nearby.

2.3.3 Shrubberies

Holly hedgerow

As specified in the park landscape plan (page 25) holly hedge should be allowed to reach planned height of 2.5m in an A shape. The A could be achieved by allowing some hollies become tall trees. If managed successfully this hedge could be used by nesting birds. As there is a possibility that birds will nest it would be important to adopt the practise of pruning only during period allowed by Wildlife Act (beginning of September to end of February).

Medium height shrubberies

If opportunities arise to rejuvenate medium height shrubberies (as in north-east corner) use the following species; native spindle (Euonymous europaeus) with native ivy (Hedera helix) as ground cover or/and the non-natives; barbary (Berberis darwinii), escallonia (Escallonia macrantha or E. ‘Apple Blossom’), butterfly bush (Buddleia alternifolia or Buddleia davidii varieties e.g. ‘Royal Red’, ‘Empire Blue’, ‘White Cloud’ etc.) and lavender (Lavandula spica varieties). All of these plants would be of value for insects and birds. Native spindle is the only rare native plant associated with Ballymun and was recorded growing near the park.

If replanting the low shrubbery along the metal fence to south east side of playground a low hawthorn (Crataegus monogyna) hedgerow c.2m height should be established by planting in hawthorn quicks. Its presence will add significantly to the biodiversity value of the swale area.

Low shrubberies

If opportunities arise to rejuvenate low shrubberies c.300mm and where amenity values are important use the following more wildlife friendly non-native species: Cotoneaster adpressus, Lavandula spica, Hebe varieties such as H. ‘Carl Teschner’ and Rose of Sharon (Hypericum calycinum).

New shrubberies

In areas where security is not an issue i.e. beside walls and at a distance from paths, a combination of trees/shrubs should be established to create nesting habitats for birds. The following native trees should be planted; ash (Fraximus excelsior); hazel (Corylus avellana) and crab apple (Malus sylvestris) surrounded by native hawthorns (Crataegus monogyna or the cultivars Crataegus oxyacantha ‘Paul’s Scarlet’ or Crataegus oxyacantha ‘Rosea Floreo Pleno’). Outside these should be planted those shrubs listed above to provide for amenity values. Trees within these shrubberies could be allowed retain some lower branches.

The maximum amount of shrub cover should be retained throughout the park. If shrubs are removed they should be replaced. School children have planted bulbs organised by GAP. Their involvement could extend to shrub planting.

2.3.4 Trees

Future planting should involve native trees such as 1) ash (Fraximus excelsior), oak (Quercus robur); whitebeam (Sorbus aria) or crab apple (Malus sylvestris). Hawthorns (native Crataegus monogyna or the cultivars of the native Crataegus oxyacantha ‘Paul’s Scarlet’ or Crataegus oxyacantha ‘Rosea Floreo Pleno’) are excellent for wildlife and have interesting shapes.

2.3.5 Conclusions

To guide managers a simple annotated map of the park should be produced showing operations required at different times in different parts of the park and areas with potential for improvement. The rationale behind the different mowing regime in the swale should be explained to all staff involved in management and the public.

3 Balcurris Park

3.1 Features of plant biodiversity interest

Attenuation area planted with grass mix which is not cut regularly and has thus allowed for the growth of a range of herbs.

Presence of reeds planted into swale.

Woodland area with some native trees and long grass.

Very little bird habitat. Only rooks and starlings.

The Park is unfinished, willows which were planted in attenuation area have failed and woodland area will be re-aligned to facilitate development.

3.2 Recommendations for management

3.2.1 Re-establishment of a willow bed in attenuation area

The willow bed in the attenuation area should be re-established as a wildlife habitat and source of willows for basketmaking using willow species which grow in the wild in Ireland. As there is a fence around this site, paths should be removed from it and most of the willows should be cut each year. This habitat should not become a problem for anti-social activity.

Species to be planted for basket making include: Salix viminalis, Salix triandra and Salix purpurea. Other families used in smaller quantities include Salix alba. A cross of S. purpurea and S. viminalis is known as S. rubra and is a very useful willow. Salix viminalis was formerly planted extensively in this country and was used for making creels and other large baskets. Varieties include 683, a bio-mass type with good growth and colour.

Salix purpurea and Salix rubra are the best group of willows for the small-scale and/or the organic grower as S. purpurea willows are less prone to diseases than most other willows. The willows belonging to Salix alba are useful for colour.

Willows are planted using cuttings or rods. They are available from Joe Hogan, basket maker, Lough na Fooey, near Finny, Clonbur, Co Galway.

Rods are pieces of willow cut from the lower part of the rod and about 1ft in length.

To prepare the site for planting, plastic or mulch should be put down on the grass. Lines should then be marked out for the rows of rods. A spacing of 2ft between the rows and 1ft between the rods in the rows is required.

Planting is simply a case of pushing the cuttings into the ground at the required spacing by hand using a glove. The rods must be planted with buds facing upwards. If cuttings are around for a few weeks without an opportunity to plant them then they should be heeled in or covered with long grass until planting time. Whole rods left in long grass in late winter will still be fresh enough to make cuttings in spring.

Use of the bed should be offered to a group in Ballymun who will sponsor visits by local basketmaker to teach basket making within the community, willow sculpture, etc.

3.2.2 Replanting woodland

When replanting woodland an opportunity should be taken to maximise the biodiversity/environmental education value of this habitat. It is recommended that a series of different woodlands are established reflecting the types of woodland which covered Ballymun since the last Ice Age c. 12,000 years ago (Mitchell, 1990).. These include 1) Juniper woodland, 2) birch woodland, 3) hazel/pine woodland 4), hazel/pine/oak/elm woodland 5) a hazel/oak/elm/alder woodland. The final woodland type should be planted up with typical woodland ground flora.

3.2.3 Swale

Hydrological conditions need to be improved in the swale as reed appears to be dying out. Further sources of water must be directed into this area, or else the swale should be reseeded with a native certified wildflower mix suitable for dry conditions.

Appendix 5

List of trees and shrubs considered native in Ireland

- Alder Alnus glutinosa
- Arbutus, the Strawberry Tree Arbutus unedo
- Silver Birch Betula pendula
- Downy Birch Betula pubescens
- Hazel Corylus avellana
- Hawthorn Crataegus monogyna
- Broom Cytisus scoparius
- Spindle Euonymous europaeus
- Alder Buckthorn Frangula alnus
- Ash Fraxinus excelsior
- Ivy Hedera helix
- Holly Ilex aquifolium
- Juniper Juniperus communis
- Privet Ligustrum vulgare
- Honeysuckle Lonicera periclymenum
- Crab Apple Malus sylvestris
- Sessile Oak Quercus petraea
- Pedunculate Oak Quercus robur
- Scots Pine Pinus sylvestris
- Aspen Populus tremula
- Bird Cherry Prunus padus
- Wild Cherry Prunus avium
- Sloe, Blackthorn Prunus spinosa
- Purging Buckthorn Rhamnus cathartica
- Dog Rose Rosa canina
- Burnet rose Rosa pimpinellifolia
- Bramble Rubus fructicosus
- Willow spp. Salix spp.

- Elder Sambucus nigra
- Rowan or Mountain Ash Sorbus aucuparia
- Whitebeam spp. Sorbus aria
- S. rupicola
- S. devoniensis
- S. latifolia,
- S. anglica
- S. hibernica.
- Yew Taxus baccata
- Common (or European) Gorse Ulex europeaus
- Western (or Mountain) Gorse Ulex gallii
- Wych Elm Ulmus glabra
- Guelder Rose Viburnum opulus

Appendix 6

Plants (non-native) which will enhance local biodiversity

Shrubs for insects & birds:

- Thorny shrubs
- Berberis darwinii
- B. julianae
- B. thunbergii
- Pyrnettya mucronata
- Without thorns
- Ribes sanguineum, R. speciosum etc.
- Escallonia varieties e.g. E. macrantha; E. 'Apple Blossom'.
- Cotoneaster varieties e.g. C. simonsii; C. salicifolius etc.
- Smaller shrubs for parks and private gardens for butterlfies
- Buddleia davidii varieties e.g. 'Royal red'; 'Empire Blue' etc.
- Hebe varieties e.g. H. salicifolia; H. Midsummer Beauty'.
- Lavandula spica varieties e.g. L. s. 'Hidcote'

Shrubs to be offered to new households:

- Ilex aqulfolium. Do not use variegated varieties. Ilex is dioceous therefore ensure male and female plants are provided. This is one of the best native small trees for insects and birds.
- Crataegus monogyna or its varieties e.g. C.m. Paul Scarlet'.
- Skimmia japonica as it's known to be attractive for insects and birds.
- Hebe varieties for butterflies and insects.
- Cotoneaster horizontalis for walls. Cotoneaster dammeri for ground cover.
- Buddelia davidii 'Royal Red' or a weeping specimen type like B. alternifolia.
- Berberis darwinii . Although a non-native it is attractive to insects and when mature is usually dense enough for birds like robin to nest.
- Lavandula spica varieties. Excellent for butterflies and other insects.
- Hedera helix 'Glacier' Good climber, showy and provides habitat for insects which in turn attracts birds. Non-variegated types are best.
- Hedera helix 'Ripple'. Same as above.
- Ground cover
- Centranthus rubber Colourful perennial that's attractive to butterflies & insects.
- Lychnis (Campion) varieties e.g. Lychnis chalcedonica. Attractive to butterflies & insects.
- Lythrum salicaria varieties. Attractive to butterflies & insects.
- Sedum spectabile varieties are excellent for attracting butterflies.
- Stachy's lanata is very good for most insects including butterflies.

Species should be designated as suitable for particular sized gardens. Each plant in itself will not attract birds/butterflies etc but collectively the neighbourhood will become a mosaic of plants that should eventually increase biodiversity.

Appendix 7

Useful web sites on biodiversity, gardening, birds and local volunteering

Dublin City
Dublin City Council www.dublincity.ie information on wildlife gardening, city wildlife, etc.

It has a link to a site which contains excellent photos of native plants and trees on www.dublin.ie

BirdWatch Ireland
Informative website which can be accessed at www.birdwatchireland.ie. There are numerous projects and quiz's which can be downloaded. There are sections for schools titled The Migration Website and Working with Birds Around your School and for householders who can become involved in a garden bird survey.

RSPB
The principal bird NGO in UK has more elaborate information on gardening on their web site: www.rspb.org. Be careful only to plant trees and shrubs which are native to Ireland (Appendix 5).

BBC
Good information for gardening on www.bbc.co.uk/breathingplaces/

Conservation Volunteers Northern Ireland
www.cvni.org

www.gardenorganic.org.uk

The nature conservation service in Northern Ireland has fact sheets on wildlife gardening at www.ehsni.gov.uk

Conservation Volunteers Fingal
Organise conservation work principally in the Fingal area, but not exclusively see web: www.cvf.ie. Volunteers recruited through the web site.

ENFO
www.enfo.ie has a good leaflet on wildlife gardening.

Irish Wildlife Trust
www.iwt.ie
Very good site providing an introduction to wildlife species other than birds. HQ near Ballymun.

The Organic Centre, Co Leitrim
www.theorganiccentre.ie
Good for courses which might be of interest to adults. Currently preparing an account of a major cross border organic gardening project to promote community development.

www.biology.ie and www.dublin.ie/environment/biodiversity both contain useful suggestions for wildlife gardening and links to web sites showing pictures of native trees and shrubs.

www.butterflyireland.com will provide access to cheap butterfly chart and garden recording scheme.

Notice Nature
www.noticenature.ie

Ireland's National Platform for Biodiversity Research
www.biodiversityresearch.ie

National Parks and Wildlife Service
www.npws.ie

National Botanic Gardens of Ireland
www.botanicgardens.ie

Global Action Plan
www.globalactionplan.ie

Notes

Notes

Dublin City
Baile Átha Cliath

image
TRANSFORMING NEIGHBOURHOODS
IMPROVING CITIES

BALLYMUN
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