Poole Park Life Tree Strategy

Prepared by Borough of Poole
February 2017

Issue 1

Executive Summary

The Poole Park Life project has provided the opportunity to strategically assess Poole Park's trees, our management of them and how we should provide for them in the future.

This document is Issue 1 and as such a draft whilst two significant pieces of work are finalised:

1. **The Poole Park Life Development Phase submission to the Heritage Lottery Fund (HLF)**
2. **A planning application in support of the above project.**

Even when these two documents are submitted in March 2017, further work is required in order to fully assess and determine the future tree strategy for Poole Park, namely:

- **Additional tree surveys, there have already been over 280 individual surveys**
- **Arboricultural assessments by compartment areas based on the surveys**
- **Linking of strategic policies, namely the Conservation plan (CP) and Management and Maintenance Plan (MMP).**
- **The impact of the proposed development within the Poole Park Life project and the evolution of these plans through the Delivery Phase.**

This information will be collated and brought in to the strategy. Conclusions and policy will then be set that determines how BoP manages Poole Park's trees for the next 50 years, the period 2020 – 2070.

Contents

1 Overview

In many ways Poole Park is now defined by its trees and they are what make the public value the space so highly.

Extensive screening of the boundaries by mature trees and shrubs help to provide an enclosed feel, transporting the visitor away from the town centre location. A large range of mature specimens, the avenue of Horse Chestnuts, trees in clumps and a copse provide a diversity and range of interest similar to a country park but found in this busy, urban green space.

The Conservation Plan cites the Distribution of trees as of *High Significance*.

Conservation Management Plan Policy BUIL 2:
Poole Park's trees shall be maintained as an evolving landscape that adapts to climate change and modern user pressures whilst ensuring that the overall structure of planting laid out by Elford is retained.

Action: Develop and implement a replanting strategy for the tree avenue that ensures a high quality landscape feature in the future.

It also states there is an ageing tree population that is affected by a number of pressures:

- UK wide spread of tree diseases affecting Horse Chestnuts, Oak and Ash
- Rising water table affecting tree health
- Climate change causing rise in temperature with periods of extreme weather; and
- Surface compaction due to the rise in visitor numbers and change in use
- Phytophera ramorum disease

1.1 Designations

Poole Park is in a Conservation Area, (map 1, next page) the general advice for which states:

Tree work in a Conservation Area
Work to trees with diameters of more than 75 mm (at 1.5 from the ground) is generally not permitted in Conservation Areas without the permission of the council.

The Poole Park Conservation Area Supplementary planning guidance, adopted in 1995, states:

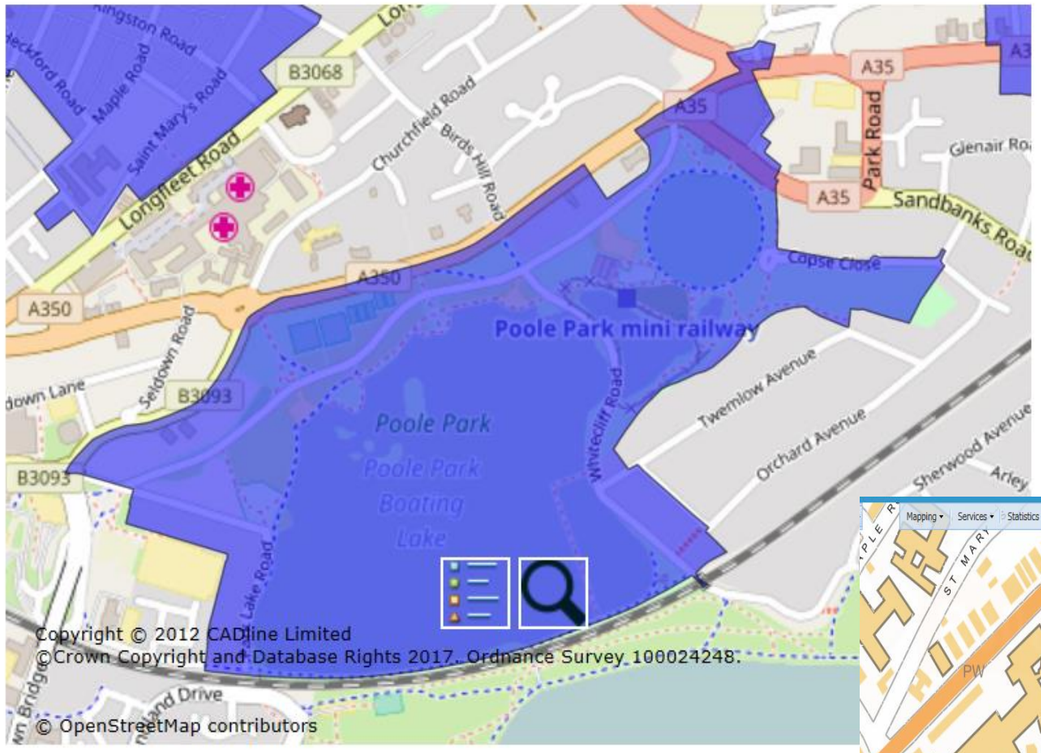
"…an avenue of horse chestnuts from Norton's Gate form one of the most important landscape features in the park

Perimeter tree planting should be undertaken to provide extra screening to the large buildings facing the park from Parkstone Road"

In addition to the Conservation area, tree belts along northern & eastern boundaries are protected by tree preservation orders (TPO's) and neighbouring residential areas have varying forms of preservation, as shown on map (map 2, next page).

Map 1, Top left: Conservation area

Map 2, Bottom right, TPO’s



1.2 Scope, limitations and methodology

The tree strategy will focus on the areas of Poole Park that shall be developed as part of the bid to the HLF, whilst in time also providing a longer term vision and strategy for the whole park.

Character areas will be used to summarise issues, constraints and define future management of the tree stock, in keeping with the CP and MMP assessments.

The plan has been written with primary contributions from:

Martin Whitchurch, Project Manager for Poole Park Life. 15 years open spaces project management and site management experience, including numerous landscaping projects, specifying tree planting, tree and woodland management.

Barbara Uphoff, Landscape Architect. Author of the Conservation Plan that sits alongside the tree strategy.

Andy Osborne, Tree Officer with 20 years of experience of working in Poole Park managing the tree stock.

Jez Martin, Biodiversity Officer with 25 years experience of habitat management across Poole.

Limitations of Issue 1 are an incomplete survey base, although approximately 2/3rds of the parks trees have been assessed. The Delivery Phase will provide the opportunity to complete the survey and include all of the park in the full strategy.

1.3 Public interest

When discussing development proposals with the public there is a high level of interest in the impact on trees. The most high profile of these is the proposal to remove and replace the Horse Chestnuts from Seldown Lodge entrance. People are understandably reluctant to see these trees removed, many memories of the park linked to the conkers they produce but also their importance in the landscape from the entrance.

Generally members of the public have been reassured once they know the specification of semi-mature replacements, large-volume tree pits, re-designed drainage solutions and retention of the historical layout of path - grass verge - road.

The most iconic and talked-about trees are the leaning Corsican Pines located near to the war memorial, many generations have hung, climbed and jumped from these unusual specimens.

Whilst Holm Oaks are considered to be, by some, a weed they do provide a hardy answer to the salt winds and crucial screening for other less-tolerant species.

It is helpful to explain the process of assessment to the public when defining choices of removal or replanting.

The summary of proposed removal and replanting within the Delivery Phase of Poole Park Life is:

- **295 trees individually surveyed (as of Feb 2017)**
- **40 avenue trees to be felled**
- **67 avenue trees to be planted**
- **A minimum of 10 other trees planted in the wider parkland**
- **Specific tree planting scheme at the freshwater Lakes**
- **Approx. 24 trees remaining in the avenue along the carriage drive from the original early 1900's planting**

Extensive public consultation has taken place in the Development Phase and positive communications shall continue in the Delivery Phase to ensure the public are well informed of the plans and reasons behind the changes.

1.4 Biodiversity and habitat considerations

A Phase 1 habitat survey has been undertaken as part of the Poole Park Life project, this has helped to inform new thinking of how biodiversity can be improved, and this necessarily includes the tree stock.

There are 5 bat species with European protection status and these may be added to with a more complete survey.

Including tree species that provide habitat for bats and their principle food source of moths will be embedded in future species selection choices.

Poole Park contains four Section 41 priority habitats of Principal Importance in England as per Natural Environment and Rural Communities Act 2006 (NERC), of which the Lowland deciduous woodland of Copse Close is relevant here.

Copse Close is identified as having potential to be improved and extended in size.

The Freshwater Lakes compartment is another area of high biodiversity value, providing a mixed woodland for a range of invertebrates, birds and bats.

Isolated clumps of trees, the boundary screens and the avenue all provide significant collective habitat resource.

2. Tree Survey

The PPL Development phase has seen the surveying of over 290 individual trees and groups in order to provide the best possible evidence base for decision making.

The appendices are:

2.6 01 Tree Planting plans

2.6 02 Tree survey plans

2.6 03 Tree survey schedule (Feb 17)

2.6 04 BS 5837 Tree quality assessment

The survey has been undertaken in conjunction with the production of the development plans, the two pieces of work informing each other, for example trees informing material choices, the tree survey identifying removals that can allow for greater redesign.

The survey information for each tree is extensive and has been produced in conjunction with BS 5837:2012. Trees have been individually numbered with small aluminium tags and key characteristics recorded:

- Species
- Height recorded with a laser measuring device
- Stem diameter at 1.5m
- Canopy spread
- First branch direction
- Canopy height above ground
- Age class
- Structural condition
- Physical condition
- Preliminary recommendations (Crown lift, fell and replace, deadwood, prune etc)
- Useful remaining life expectancy
- BS 5837 category (A, B, C / 1, 2, 3)
- Root protection area – radius
- Root protection area - square metres

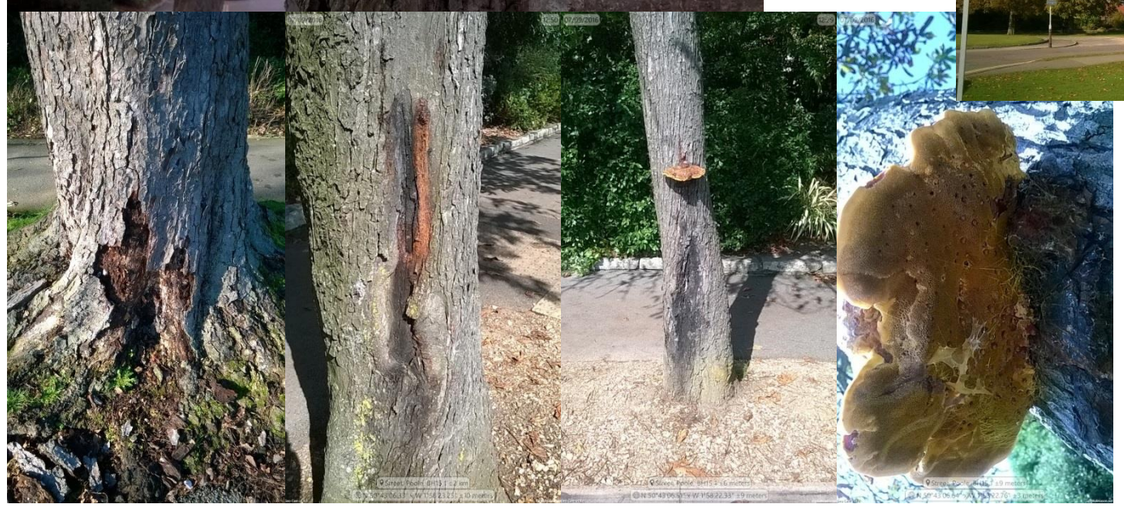
Photographs of interesting features, tree form or groups have been captured.

Along the Carriageway Drive the number of trees that are primarily to be removed on arboriculture grounds (restricted growth, low vigour, disease, cavities etc.). has been assessed.

The need for replacements to ensure the long-term integrity of the avenue has then been added to the replanting plan.

Finally, any removals or works to trees due to the proposed development has been assessed and included on these plans, to inform mitigation (type of surfacing chosen, protective fencing during works etc.) and replanting plans.

This builds the overall development strategy for the drive and ensures the long-term future and survival of the avenue through positive management and an impressive scale of replanting.



3. Future strategy

Poole Park has been divided in to its main compartments, as used in the CP and MMP, with relevant development in the PPL project, its impact and decision making summarised in each.

Future management and maintenance of Poole Park's tree stock will refer to this guide.

On completion of the delivery phase this section will be updated, identifying gaps in structural planting, further likely removals and replanting plans to ensure the structure of the planting is retained and enhanced in the future.

The tree strategy is heavily referenced in the Action plan and should become an integral document for park managers.

Map 3: Compartment map

3.1 Baseline and principles

The strategy is a new starting point for the trees in Poole Park. A survey and consideration of the future needs has not knowingly been undertaken since the original plantings in late 1800's and early 1900's as part of the park's creation.

Current Council Arboriculture officers have a detailed knowledge and understanding of the more significant trees and have overseen removals and replanting in the last 20 years. This is recorded on the EasyTreev software.

There has not been a defined strategy for this work though and in conjunction with the maintenance regime that also has no defined plan or prescription, it can be assumed there is a certain amount of ad hoc tree management.

The CP has identified park significance, an action plan and priorities for the future of Poole Park. From those the following **principles for future management** have been identified:

1. Broaden the selection of species to respond to change in environmental conditions and create a park wide arboretum, within the historic character of the park.
2. Protect important views which can be obtained outward from the park and within
3. Conserve and enhance biodiversity through appropriate management
4. Rejuvenation of the existing avenue, using a selection of species to add robustness
5. The distribution of parkland trees shall be appropriate to their character areas
6. Belts of boundary trees shall be managed to ensure succession planting and long-term screening remains
7. Ecological enhancement of the Copse Close area
8. Secure new planting of appropriate species that retains or enhances the heritage character
9. Plant only where there is suitable space to enable proper establishment

CP Policy

BUIL2 Trees, grassland and horticultural display:

Tree survey

The existing tree survey will be updated to include all the trees within Poole Park, their species, location and condition along with any health and safety concerns. This is to be recorded in a computerised baseline map and tables (Ezytreev) and updated by the in-house arboricultural team.

Tree strategy.

The findings of the tree survey will be considered against historical data/views to form the basis for the development of a planting and conservation strategy. In particular this should address the rejuvenation of the existing avenue, distribution of parkland trees, belts of boundary trees, the ecological enhancement of Copse Close. All trees, including gifted and sponsored trees, shall be planted in accordance with this strategy.

ENV1: Environment.

Habitats. Trees: The current trees shall be managed to create structural and species diversity. The longevity of individual specimens shall be encouraged and, where possible, areas of dead wood will be left in situ to benefit invertebrate communities.

MMP Policy

MMP 5.1 Wildlife:

Embed in the action Plan (by compartment) the principles of wildlife conservation and best practice (e.g. Leaving dead wood where appropriate, use of pollinating plant species, maintenance of bird/bat boxes, changes to mowing regimes).

Use the Phase 1 survey and biodiversity report (App 1.7 06) to guide future survey work and practical improvements.

3.2 Tree planting

The compartment guide to the future strategy includes species for consideration. At this stage of the strategy the avenue has been prioritised for species selection, namely:

Quercus robur in areas that can accommodate a large crown and there is a chance for roots into adjacent lawn areas; and wet areas. (Below, left,)

Tilia cordata 'Greenspire' this tree has a smaller pyramidal crown so can be used in places where there is crown competition from other trees. 'Greenspire' has fewer problems with aphids and as parking is restricted the use is acceptable to use in these areas. (Below, middle)

Carpinus betulus where there is space for a larger canopy and areas that are likely to be dry (Below, right).

4. Compartment Based Assessments

4.1 The Park Drive

The Park Drive is the most important and extensive feature of tree planting in Poole Park. Owing to the number of trees the drive has been further split in to five sections for ease of assessment.

Compartment:
The Park Drive 1
Seldown Lodge to the crazy golf course

Assessment:

23 Horse chestnut trees located in the gravel verge stretching from Seldown Lodge to the Crazy Golf facility have been surveyed and assessed:

No trees were recorded in Category A.
Category B and C Trees (Trees considered for retention)
The recorded trees form an important component in a single avenue, which is a historic landscape feature in the Park. The survey identified the following issues resulting in trees being down graded in their assessment from Cat A to Cat B and Cat C:

- Fair/poor structural/physical condition due to disease (Horse Chestnut Leaf Miner, Gugniardia Leaf Blotch, Bacterial Canker), stunted growth caused by exposed and poor growing conditions, vehicle damage (parking), competition due to proximity to adjacent tree belt along the northern boundary.
- Low visual amenity because of the above
- Estimated remaining life expectancy of at least 20 years for Cat B trees and 10 years for Cat C trees. Unlikely for suitable retention for beyond 40 years.

The single avenue of horse chestnuts from the west gate entrance were planted in narrow verges and may have grown reasonably well in the early phase of their lives. As time passed and new features were introduced, such as carriageway and footpath hard surfacing, more environmental pressure was applied.

In the last three or four decades, as the perimeter screening trees to the north (not under hard surfacing) have become more established and have become dominant in the northern border, their overarching canopies have led to suppression of the horse chestnuts in places throughout the avenue. This, coupled with their assimilation of the available rooting zone has proved challenging for the growth rates of the horse chestnuts which have become less vigorous. This effect may be seen at various locations with diminutive trees compared to those further away from the competition.

To add to this pressure on the avenue trees, many are affected by pests and diseases, especially as their vigour decreases. **Bacterial canker** (Pseudomonas syringae pv. aesculi) is evident on many of the tree stems and lower main branch structures with typical symptoms of tarry exudate (some dried from infection in previous years), bark splitting and bark death. In some cases, recovery growth may be seen where the tree is attempting to reform cambium over bare wood to produce new bark.

With lowered vigour and internal resources being utilised for repairing damaged bark, the trees are susceptible to secondary damage from **Guignardia leaf blotch** (Guignardia aesculi) and **Horse chestnut leaf miner** (HCLM)(Cameraria ohridella) which began to come into the park around 2008.

Leaves are almost completely dysfunctional by the end of July and photosynthates are not produced when the leaves are either mined or blotched. **The physiological effect is cumulative and the overall vigour of the tree gradually declines. Leaves are smaller and fruit production has all but ceased**.

Some of the affected trees are now dying, two are dead. This trend is likely to continue despite reasonable horticultural practice such as removing fallen leaves from around the trees to prevent overwintering of the HCLM larvae and production of their next generation.

Adjacent trees in the verge to the north and in the gardens to the south have also been surveyed where appropriate.

Principles of development

The proposal is to remove the line of trees from Seldown lodge to the crazy golf facility and provide a higher quality environment for replanting within a new road layout and parking arrangements.

Strategy

Removal of 23 trees in the verge.

Management of tree screen to the north with selective thinning and replanting of shrub layer and trees where suitable.

Options

Set out new planting with Park Drive development works.

Replant the avenue with mix of three species (Tilia cordata, Quercus robur and Carpinus betulus.

Timing: HLF Poole Park Life project. 2017-2021.

Priority: 1

Compartment:

The Park Drive 2
Norton's Gate

Assessment:

23 Horse chestnut trees have been surveyed and assessed; the trees are located in the gravel verge either side of Norton's gate.

The recorded trees form an important component in a single avenue, which is a historic landscape feature in the Park.

A small double avenue of mature horse chestnut trees leads from the stepped entrance in Parkstone Road and splays out to the south towards the fountain. Originally, these trees in small verges connected with the western single avenue but several of these trees have been lost through disease over time, leaving a gap in the line of trees outside the putting green.

This avenue has been more successful than Park Drive 1 with mature trees of roughly uniform size. This is likely to be due to the open areas of grass on either side of the trees to west and east with no competition from other trees nearby; the higher amenity grass to the west is irrigated and the trees to the east have some shelter from their companions to the west.

There is hard surfacing between the trees, used as *ad hoc* parking for visitors to the bowling green. At present vehicles park between the trees and tend to drive over the verges to achieve this. Inevitably, there is some damage to bark through direct contact from time to time.

Principles of development

Mitigate the proposed surfacing and landscaping in this area and retain the existing trees.

New surfacing to be porous and laid to no-dig specifications.

Strategy

Removal of 1 Horse Chestnut

Replant the gaps in the avenue

Retain all other trees and improve rooting conditions where possible.

Options

Timing: HLF Poole Park Life project. 2017-2021.

Priority: 1

Compartment:

The Park Drive 3
Norton's Gate to Middle Gate.

Assessment:

The avenue through this section is disjointed, to the west of the war memorial there are no trees planted in the verge, to the east significant Oaks to the south of the drive and horse chestnuts to the north.

Principles of development

Mitigate the proposed surfacing and landscaping in this area and retain the existing trees.

Strategy

Plant the gaps in the avenue to the east of the war memorial

Retain all other trees.

Options

Set out new planting with Park Drive development works, using three species (see above).

Timing: HLF Poole Park Life project. 2017-2021.

Priority: 1

Compartment:

The Park Drive 4
Middle Gate to East gate entrance

Assessment:

The avenue in Middle gate entrance has previously had gaps planted and does not feature in development work and so not currently assessed.

There are significant gaps in the avenue heading east and all trees in the verges and to the immediate surrounds have been assessed.

Principles of development

Mitigate the proposed surfacing and landscaping in this area, some trees to be removed owing to poor form and limited lifespan.

Certain horse chestnuts to be removed to aid landscaping development and extensive new replanting to reinstate the avenue.

Strategy

Removal of 4 Horse Chestnut trees.

Plant 6 trees in the south side of the avenue

Plant 20 trees to the north side of the avenue in the verge.

Options

Set out new planting with Park Drive development works, using three species (see above).

Timing: HLF Poole Park Life project. 2017-2021.

Priority: 1

Compartment:
The Park Drive 5
Middle Gate to Whitecliff gate

Assessment:

No assessments made in this area, the avenue runs east-west only.

Principles of development

New planting as part of landscape improvements near to the existing roundabout junction.

Strategy

Limited new planting

Options

Timing: HLF Poole Park Life project. 2017-2021.

Priority: 3

4.2 Compartment: Northern Park Boundary

Assessment:

Assessments were made of selected, significant trees in the tree screen near the crazy gold course, putting green and surrounding the avenue. Likewise trees that are near to the war memorial entrance and path ways have been included.

Principles of development

Mitigation of new areas of grass reinforcement at the north east of Norton's gate.

Strategy

Opportunities for landscape planting

Maintain boundary screening

Maintain open parkland south of bowls/cricket area.

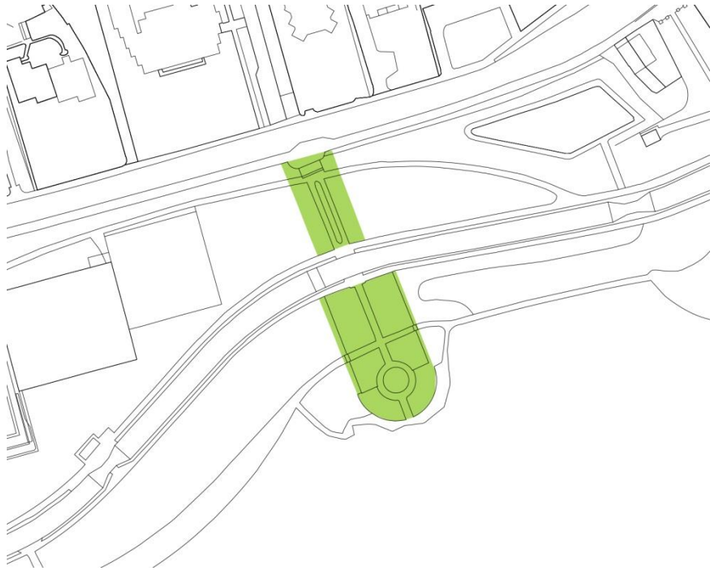
Options

Planting of Corsican Pines and other species to add to arboretum.

Timing: HLF Poole Park Life project. 2017-2021.

Priority: 2

4.3 Compartment: War memorials



Assessment:

Assessments were made of the mature trees to the side of the war memorial entrance from Parkstone Road.

Principles of development

Mitigation of new surfacing and access requirements within proposals.

Strategy

N/a

Options

Timing: HLF Poole Park Life project. 2017-2021.

Priority: 2

4.4 Compartment: Boating Lake and surrounds

Assessment:

Assessments were made to selected trees in the wider landscape and the important line of Oaks to the east of the war memorial.

Principles of development

Mitigation of new surfacing and access requirements within proposals.

Mitigation of play area improvements at Westfield

Strategy

Wildlife –friendly planting at the old swimming pool site and adjacent land.

Re-planting of promontories

Mulch beds under Oaks to east of war memorial

Options

Timing: HLF Poole Park Life project. 2017-2021.

Priority: 2

4.5 Compartment: Cricket Pitch and Cycle Track

Assessment:

Assessments were made to selected trees adjacent to the Park Drive

Principles of development

Mitigation of new surfacing and access requirements within proposals.

Removal of line of conifers (relic hedge to aviary/zoo) near car park

Strategy

Strengthen boundary planting to the north east of the cricket pitch

Options

Timing: HLF Poole Park Life project. 2017-2021.

Priority: 2

4.6 Compartment Freshwater Lakes

Assessment:

Assessments were made to trees, as groups and individuals, around the freshwater lakes, mostly on the northern side of the larger lake. Island trees were assessed without direct access.

Phytophora ramorum found in the dead Alders.

Principles of development

Significant landscaping along the northern bank of the larger lake requires some removals and re-planting.

Mitigation of large clumps of pine and Holm Oaks near the Ark car park.

Strategy

Re-planting of landscape between the lakes

Reinforcement of boundary screening to the east

Options

Timing: HLF Poole Park Life project. 2017-2021.

Priority: 2

4.7 Compartment Copse Close

Assessment:

Assessments were made of the area around Copse Close car park.

Principles of development

Mitigation of new surfacing and access requirements within proposal to improve Copse Close car park.

Strategy

Landscape planting to south of Copse Close car park

Improve biodiversity of the copse through new planting and management of understorey

Maintain open amenity grass area, tree planting restricted to the boundaries.

Options

Timing: HLF Poole Park Life project. 2017-2021.

Priority: 2

4.8 Compartment Nursery

Assessment:

No assessments made

Principles of development

N/a

Strategy

Options

Timing: HLF Poole Park Life project. 2017-2021.

Priority: 2