APPENDIX A: GROUNDS MAINTENANCE SCHEDULE

The maintenance schedule has been split into 3 sections: site wide, formal zone and informal zone.

Site Wide			
Item	**Details**	**When**	**Who**
Public Toilets	Toilets are cleaned daily, including the weekends.	Daily	Grounds
Bins	Emptied at least twice per day. Issues vary seasonally – additional checks during the summer months	Twice daily	Grounds
Dog Bins	Emptied daily	Daily	Grounds
Benches	Visual daily inspection, damage is reported and dealt with as necessary	Daily	Grounds
Bridges	Visual daily inspection, damage is reported and dealt with as necessary	Daily	Grounds
Fences	Visual daily inspection, damage is reported and dealt with as necessary	Daily	Grounds
Sluices	Visual daily inspection, damage is reported and dealt with as necessary Water level maintained at 3.4m (or as close as possible), this is checked and photographed daily and the photos are date stamped.	Daily	Grounds
Interpretation Boards/Signage	Visual Inspection. Check all fixings are secured correctly. Light clean of entire board – attention should be given during the grass cutting season to ensure all grass debris are removed. Steel – clean light debris using a non-abrasive hand cloth and mild detergent – DO NOT JETWASH.	Weekly Monthly Annual (Early Spring)	Grounds

	Vinyl Prints - clean light debris using a non-abrasive hand cloth and mild detergent – DO NOT JETWASH / DO NOT USE SPIRIT BASED CLEANERS.		
Invasive Species control: Japanese Knotweed (20)	Chemically treated in Autumn, do not remove Following treatment for 5 years should reduce/stop	Annually	Grounds

Formal Zone – shown in purple on the zone map			
Item	**Details**	**When**	**Who**
Car Park	Visual inspection Pot holes filled in and areas built up as and when required	Daily When required	Grounds
Canal Bridge from Frogmoor Lane	Canals and Rivers Trust responsibility	NA	NA
Trees Elm Avenue	Surveying: Surveyed every 18 months by a contractor and annually by the Tree Officers. Tree Maintenance: Crown lifting of trees to 4m for footpaths and other areas of public amenity Remove epicormic growth from trees near paths causing encroachment Fallen Trees: Trees are cleared and the brash is chipped and the logs are stacked. Surveying and maintenance as above Retain as a Historic Feature	Annually every 18 months On rotation As and when	Trees & Landscapes Contractor & Grounds / contractor Grounds / contractor
Woodland (between Elm Avenue and Bury Lake)	Thin woodland, prioritising good specimen trees, coppice hawthorn/willow and make some clearance to the scrub layer Clear nettles/bramble/other scrub 5m back from path edge or to the tree line.	Annually on multi-year rotation	Grounds / contractor
Flower beds and Shrubs	Maintained as and when necessary, major works conducted outside of bird nesting season. Light trim when necessary with major works taking place in winter.	Bi-annually	Grounds

Grass	Cut approximately every 2-4 weeks depending on growth. Amenity grass kept at: 50-75mm	Every 2 – 4 weeks during growing season	Grounds
Grounds Maintenance Compound	Annual maintenance checks and works to the whole compound area	Annually – during the winter months	Grounds
Play Areas	Visual inspection Routine Inspection Annual Inspection	Weekly Monthly Annual	Grounds Grounds External RPI Inspector
Sewage Pump	Alert water company if light begins to flash Formal inspection Yearly it is emptied and cleaned out	As and when Every 6 months/1 year Annually	Contractor
Substations	UK Power Networks responsibility	As and when required	UK Power Networks
Hedge (at the back of the dog-free area)	Maintenance before the Rickmansworth Festival: light trim to reduce encroachment	Annually	Grounds
Festival Field	Begin cutting at the end of April until the Rickmansworth Festival is complete. Then allow to grow until the end of the season to be cut and left. Enhance with spring wildflowers	Annually	Grounds
Wetland/Scrub area adjacent to BLYM	Currently no maintenance except cutting a 1m strip along path edges. This could be cleared periodically and encourage wetland species.	Bi-Annually	Grounds / contractor
Paths	All vegetation to be pushed back by 3m-5m on either side of path or to previous clearance point.	Annually	

	Areas beyond this could be flailed on rotation every 3 years		
Hawthorn Hedge (between BLYM and entrance gate)	Maintain Hawthorn along fence as a hedge to 1.5m.	Winter	Grounds

Informal Zone – shown in green on the zone map			
Item	**Details**	**When**	**Who**
Paths	On boundary with Affinity Water land only cut back encroachment to the TRDC boundary. Path along SW boundary is PROW (Public right of way) but managed by TRDC Cut and clear back from path by 2-3m (or as far as possible) and up to 3m in height.	Annually	Grounds
Woodland areas along lake banks	Select and establish viewpoints to be managed creating a view from the path over the lake. Viewpoints are then managed on a rotational coppice regime, where annually there is a minor trim and every 5 years 1 section is cut back thoroughly. Aim to retain some of the canopy. Areas to be mapped.	Annually & on 5 year rotation	Grounds
Wetland Areas	Coppice willows and establish reeds	As part of the Management Plan	Contractors
Swims	Visual inspection	Daily	Grounds
Grass	Grass to be left to grow and lifted when cut Swathes cut through to allow public access	Twice per grass cutting season As and when required	Grounds / Contractor Grounds
Paths	All vegetation to be pushed back by 3m on either side of path	Annually	

APPENDIX B: INDICATIVE SPECIFICATIONS

1. Establish wildflower meadow
   a. The work is to be carried out in September or October. The grass on all sites will have been cut by district grounds maintenance team prior to other preparations taking place.
   b. The areas should be mechanically scarified so that between 60% and 70% of the topsoil is exposed over a given area.
   c. The seed mix must be native, not include agricultural varieties and be similar to the suggestions below (a mixture of grasses and wildflowers) and sown as specified by the supplier. The contractor must provide evidence of where the seed mix will be purchased from in the quote and also include this in their method statement. Any changes must be confirmed by the Supervising Officer.
      i. EM2 - Standard General Purpose Meadow Mixture (85% grass, 15% wildflowers) Standard General Purpose Meadow Mixture EM2 - Emorsgate Seeds (wildseed.co.uk)
      ii. N1 – General purpose meadow mixture (80% grass, 20% wildflowers) N1 General Purpose Meadow Mixture | UK Delivery | Naturescape
   d. The area should then be rolled with a grooved or notched roller without additional cultivation to cover or incorporate the seed.
   e. During the first year the area will need mowing every 2 weeks. Cutting height should be between 40mm and 50mm. Cutting height should be higher than the usual amenity cutting height to allow wildflower species that grow in the first year to establish. This will help to reduce the presence of weed species (nettles and thistles). Cutting regularly in the first year will stop these species from establishing and producing seed. Arisings do not need to be collected in the first year.
   f. After the first year an annual cut and collect regime should be established. Yellow rattle seed may need to be added if this has been removed the previous year. The areas should be cut in July and arisings left for 2-3 days for seeds to drop and then arisings should be collected and removed. Arisings can be heaped up away from the meadow area to provide habitat for reptiles and small mammals.
   g. The areas should be cut again in October, when arisings do not need to be removed.
   h. It is important to monitor the species which are establishing within the meadow area. Some dominant species (such as common hogweed) can be controlled through pulling up individual plants or cutting seed heads off. This is a job that can be carried out by local volunteer groups.
2. Establish native seed mix for seasonally wet soils
   a. The work is to be carried out in September or October.

b. The area should be mechanically scarified so that between 60% and 70% of the topsoil is exposed over a given area.
c. The seed mix must be native, not include agricultural varieties and be similar to the suggestions below (a mixture of grasses and wildflowers) and sown as specified by the supplier. The contractor must provide evidence of where the seed mix will be purchased from in the quote and also include this in their method statement. Any changes must be confirmed by the Supervising Officer.
   i. Meadow Mixture for Wetlands EM8 - Emorsgate Seeds (wildseed.co.uk)
   ii. N7 Wetland Meadow Mixture | UK Delivery | Naturescape
d. The area should then be rolled with a grooved or notched roller without additional cultivation to cover or incorporate the seed.

3. Establish low-growing wildflower meadow
a. The work is to be carried out in September or October. The grass on all sites will have been cut by district grounds maintenance team prior to other preparations taking place.
b. The areas should be mechanically scarified so that between 60% and 70% of the topsoil is exposed over a given area.
c. The seed mix must be native, not include agricultural varieties and be similar to the suggestions below (a mixture of grasses and wildflowers) and sown as specified by the supplier. The contractor must provide evidence of where the seed mix will be purchased from in the quote and also include this in their method statement. Any changes must be confirmed by the Supervising Officer.
   i. Flowering Lawn Mixture EL1 - Emorsgate Seeds (wildseed.co.uk)
   ii. N14 Flowering Lawn Mixture | UK Delivery | Naturescape
d. The area should then be rolled with a grooved or notched roller without additional cultivation to cover or incorporate the seed.
e. During the first year the area will need mowing every 2 weeks. Cutting height should be between 40mm and 50mm. Cutting height should be higher than the usual amenity cutting height to allow wildflower species that grow in the first year to establish. This will help to reduce the presence of weed species (nettles and thistles). Cutting regularly in the first year will stop these species from establishing and producing seed. Arisings don't need to be collected in the first year.
f. After the first year establish an amended mowing regime which allows flowering in spring and late summer, with a period of amenity mowing around the time of the Rickmansworth Festival.

4. Create grass snake egg laying heaps
a. Select three locations for egg laying heaps, in full or partial sun, immediately adjacent to scrub or woodland and in areas less accessible to visitors.
b. Use grass cuttings to make a heap of at least $1m^3$, but ideally much larger.
c. Replenish every 1-2 years in October
d. Avoid disturbing the heap between July and September.

5. Bulb planting
a. Planting should favour native options, in particular snake's-head fritillary.

b. Plant between October and December, before the first frost.
c. Plant to a depth of approximately 12.5cm, or 3x the size of the bulb.
d. Areas of planting will be pre marked by the supervising officer before planting commences.
e. Taking a handful of bulbs, scatter along the line of planting. As a guide this could be approximately 20 bulbs per square metre.
f. Plant the bulbs where they land using a bulb planting tool or other suitable tool to remove a core of turf/soil. Place the bulbs in the hole with their roots pointing downwards.
g. Replace the turf/soil into the hole.
h. Firm down the turf/soil to ensure it meets the surrounding ground level, and to prevent squirrels removing the core and eating the bulbs.

6. River Colne habitat enhancement
   a. Undertake tree works in response to the tree survey and at key locations along the river corridor, maximising use of existing light tunnels and silt deposits/marginal vegetation growth, with the overall aim of increasing the ratio of light to shade towards a long-term objective of 50:50, and in coordination with tree works on Batchworth Lake.
   b. Locations for tree works to be agreed in collaboration with volunteers and HMWT. Trees to be individually marked.
   c. Review establishment of marginal vegetation after two years and consider protection from footfall and/or planting native marginal plants to accelerate establishment if necessary.
   d. Timber to be stacked on banks to provide deadwood habitat, or used as materials to deliver in-channel habitat enhancement if feasible.
   e. In-channel habitat enhancement can include flow deflectors or berms constructed of logs and brash from on-site trees. Locations to be agreed in collaboration with the Environment Agency prior to flood modelling.
7. Batchworth Lake habitat enhancement
   a. Undertake tree works at key locations around Batchworth Lake, maximising use of existing light tunnels and marginal vegetation growth, with the overall aim of increasing the ratio of light to shade to 30:70 and in coordination with tree works on the river Colne.
   b. Locations for tree works to be agreed in collaboration with volunteers and HMWT. Trees to be individually marked.
   c. Thin trees on two small islands in SW corner of lake by 50%. Coppice 90% of willows encroaching into sedge behind islands. Ensure that area is checked for presence of asbestos prior to any work taking place.
   d. For all tree works, timber to be stacked on banks to provide deadwood habitat where feasible, or otherwise removed from site. Brash to be chipped and removed from site.
   e. Remove all posts and chicken wire from previous marginal vegetation establishment work and dispose appropriately.

f. Recover failed floating island frameworks. Re-establish using coir pallets pre-established with native wetland plants such as those supplied by Salix: Coir Pallets - Salix Products (salixrw.com). Reinstall at appropriate locations linked to tree works, in collaboration with URACS, HMWT and Rickmansworth Water Ski Club.
g. Further marginal vegetation establishment work to be planned and delivered piecemeal on a small scale, linked to tree works. Location-specific designs will include consideration of wave direction and protection from erosion, and strengthened wildfowl protection.

8. Bury Lake habitat enhancement
   a. Pollard previously pollarded willows around north-east corner of Bury Lake. Trees to be individually marked.
   b. Undertake tree works at key locations on the north and west shores of Bury Lake, including coppicing and pollarding, maximising use of existing light tunnels and marginal vegetation growth, with the overall aim of increasing the ratio of light to shade. Trees to be individually marked.
   c. Coppice or uproot trees from sheltered corner close to kayak area. Establish reeds using coir rolls pre-established with common reed such as those supplied by Salix: Coir Rolls - Salix Products (salixrw.com). These should be secured with hazel stakes.
   d. At the east end of the BLYM compound and close to the radio yachting jetty, establish small areas of marginal vegetation using coir rolls pre-established with native wetland plants such as those supplied by Salix: Coir Rolls - Salix Products (salixrw.com). These should be secured with hazel stakes.
   e. All vegetation establishment should incorporate initial protection from wildfowl.
   f. For all tree works, timber to be stacked on banks to provide deadwood habitat where feasible, or otherwise removed from site. Brash to be chipped and removed from site.
9. Welcome and information signage
   a. Design of all signage to follow Aquadrome branding and incorporate Aquadrome and Three Rivers District Council logos.
   b. Design, produce and deliver 1 vehicle entrance sign.
   c. Design, produce and deliver site information signs to replace existing information signage at main entrance and around car park.
   d. Design, produce and deliver signs to encourage respectful shared use of the facilities of the Aquadrome by different user groups.
   e. Design, produce and deliver 3 no. bird feeding information signs for former bird feeding areas.
10. Orientation panels/maps
   a. Design, produce and deliver 6 identical (with the exception of ‘you are here’ markers) A1 orientation panels which welcome and provide information for visitors on the Aquadrome, and provide PDF version of the same.
   b. The design of these panels should follow Aquadrome branding and incorporate Aquadrome and Three Rivers District Council logos.

c. Update existing hand drawn 3D watercolour map as main feature of design, including a “welcome to” message.
d. To include a modern computer-generated map showing the Aquadrome and its setting within the Colne Valley Regional Park.
e. Text, logos and photographs to be provided by the client.
f. Provide two proof stages of full colour panel design in PDF format.
g. Design and supply 6 bespoke A1 lectern frames in a mix of hardwood and/or corten (weathered) steel or equivalent.

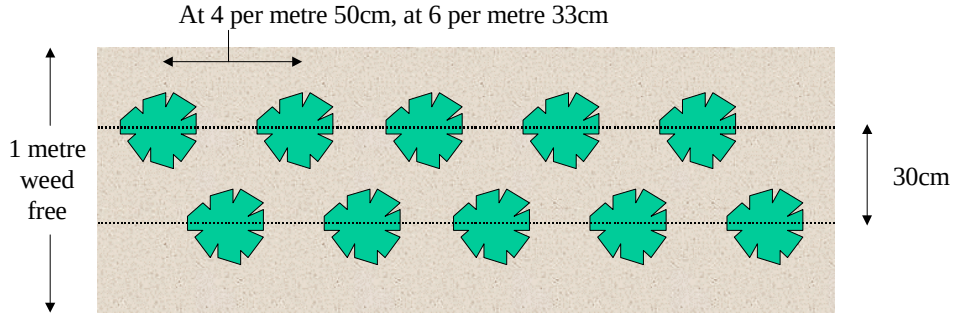
11. Habitat and heritage interpretation panels
    a. Design, produce and deliver 7 different A1 interpretation panels, and provide PDF versions of each. The panels will cover the following subjects:
        i. Lakes
        ii. Wet woodland
        iii. River Colne
        iv. Pinetum
        v. Orchard and community planting
        vi. Wildflower meadow creation
        vii. Heritage of the Aquadrome (one design)
    b. The design of these panels should follow Aquadrome branding and incorporate Aquadrome and Three Rivers District Council logos.
    c. The interpretation panels will each require a bespoke design, worked up in detail with the client.
    d. For each illustration, provide black and white artwork for review before colouring.
    e. Text, logos and photographs to be provided by the client.
    f. Provide two proof stages of full colour panel design in PDF format.
    g. Supply 7 A1 lectern frames in a mix of hardwood and/or corten (weathered) steel or equivalent.
12. Signage
    a. Fingerposts on site x 4 no. – bespoke design to match the materials used for the other signage and interpretation boards i.e. a mix of hardwood and/or corten (weathered) steel or equivalent.
    b. Design, produce and install Aquadrome sign to add to three existing fingerposts at Rickmansworth station, on the corner of Station Road and Northway (WD3 1QZ) and on the corner of High Street and Station Road (WD3 1AR). Signs should replicate design of other fingers.
    c. Design, produce and install 2 Aquadrome signs between Rickmansworth town centre and the Aquadrome, linking to the upgraded crossing on Riverside Drive. Install signs at the junctions between Wensum Way and Ebury Approach, and Ebury Road and Riverside Drive. Signs should follow standard blue pedestrian/cycle route design, incorporate Aquadrome logo, and be attached to existing posts.

d. Design, produce and install Aquadrome sign at the beginning of public footpath 065 on Uxbridge Road. Sign should follow standard blue pedestrian/cycle route design, incorporate Aquadrome logo, and be attached to existing posts.
e. Design, produce and install Aquadrome sign to add to existing fingerpost at Batchworth Lock Canal Centre. Sign should replicate design of other fingers and incorporate Aquadrome logo.

13. Entrance structures
    a. Pedestrian gates to be accessible, prevent motorbikes and other vehicles and with a feature to enable them to be locked.
    b. Full specification to be developed as part of the replacement programme.
14. Standard specification for asphalt surfacing, subject to the outcome of the hydrological survey and consultation with the Environment Agency.
    a. In order to maximise durability even in flood conditions, lay according to the following principles to prevent water ingress:
        i. Use impermeable rather than permeable asphalt for reliable performance, as the latter will be blocked by organic matter.
        ii. Machine lay when ground is dry.
        iii. Ensure a good bond coat between layers.
        iv. Ensure a well-sealed edge using an edge compactor and sealant.
    b. Subject to FRAP constraints, lay on existing path as a base course. Scrape back all organic and loose material.
    c. Where path is to be widened, excavate to 150mm depth. Supply, spread, grade and thoroughly compact to a dense, tight, even base course, a layer of crushed concrete aggregate 50mm to dust. The finished compacted depth to be 150mm. All organic material and excavated topsoil to be removed from site.
    d. Lay a binder course of 60mm thickness AC20 (asphalt concrete with 20mm stone size).
    e. Either:
        i. For maximum durability, lay a surface course of 40mm thickness HRA (hot rolled asphalt) 55/10 (high stone content).
        ii. For standard footway surfacing, lay a surface course of 20mm thickness AC10 (asphalt concrete with 10mm stone size).
    f. Path to have a final minimum camber or crossfall of 2.5%.
15. Standard specification for asphalt surfacing – edge repairs
    a. Cut edges in rectangular shape and for minimum 300mm beyond damaged section.
    b. Remove damaged section and dispose appropriately off-site.
    c. Follow standard specification for asphalt surfacing, laying base material if necessary to reinforce or widen the path base, such that the finished compacted depth of the base is 150mm.
    d. All joints with existing asphalt shall be tack coated.
16. Standard specification for crushed stone surfacing

a. Excavate agreed path footprint to 150mm depth, with all soft spots excavated back to firm ground, hollows filled and compacted with base material to ensure an even, firm base layer.
b. Supply and lay a permeable non-woven geotextile membrane to suppress weed growth, such as Terram 1500 or similar, to completely cover the formation level of the path.
c. Supply, spread, grade and thoroughly compact to a dense, tight, even base course, a layer of crushed concrete aggregate 50mm to dust. The finished compacted depth to be not less than 110mm.
d. Supply, spread, grade and thoroughly compact to a dense, tight, even surface, a layer of well graded granite aggregate 6mm to dust as surface dressing. The finished compacted depth to be not less than 40mm. Base course to be completely covered. The surface of the path to be level with the ground on either side.
e. Path to have a final minimum camber of 2.5% to allow surface water to drain to either side on flat ground, or a 2.5% cross-fall to the downward side.
f. Junctions with other paths and surfaces to be level. Changes in direction gradual with curved flare.
g. All excavated topsoil to be removed from site.

17. Laurel clearance
    a. Mechanically clear all cherry laurel close to path between Grand Union Canal and Riverside Drive.
    b. Mechanically clear 75% of cherry laurel from bank of river Colne along woodland walk, leaving selected bushes for natural play.
    c. Dispose of the cleared material by chipping all material directly into a trailer, removing and disposing of the chippings off site.
    d. Treat cherry laurel stumps with glyphosate immediately after felling.
18. Plant native hedgerow in Ebury play area
    a. Create a 1m wide weed free cultivated strip of bare ground approximately 1m inside the fence line of Ebury play area.
    b. Plant bare-rooted stock with the following approximate species mix: hawthorn (60%), field maple (10%), hornbeam (10%), guelder rose (10%), hazel (10%).
    c. Plant at five per metre in two staggered rows 30cm apart, as shown in the diagram below.



    d.
    e. Protect plants individually with spiral guards and canes, which should be removed after 3-5 years.

f. Lay wood chip mulch on the 1m weed free strip to a depth of 10cm.
g. In the two years following planting, monitor and remove weeds as necessary to ensure successful establishment.

19. Batchworth Lake viewing area and fishing platform replacement to be developed considering hard wood or recycled material where appropriate, with a non-slip surface. No softwood is to be used. Swims, where applicable may also have raised ends to prevent access into the water, but with an option for them to be opened for use for URACS.
20. Update site leaflet
    a. Design and produce a map-based site leaflet using a similar design and content to the orientation panel. Provide print and web ready and PDF versions of the same.
    b. The design should follow Aquadrome branding and incorporate Aquadrome and Three Rivers District Council logos.
    c. Text, logos and photographs to be provided by the client.
    d. To be double sided, full colour and A4 in size, folding to DL.
    e. Provide two proof stages of full colour design in PDF format.

APPENDIX C: NOT USED

APPENDIX D: WIDER CONTEXT: POLICIES AND STRATEGIES THAT RELATE TO THE AQUADROME

The following details are to be read in conjunction with the Aquadrome Greenspace Action Plan and all its Appendices to provide additional background information.

Council plans, policies and strategies
In common with other local councils, we produce a number of statutory and non-statutory plans and strategies, some of which are produced jointly with our partner organisations.

Listed below are the policies and strategies that relate directly as a whole or in part, to the management of the Aquadrome. Details of each document can be found or downloaded here: https://www.threerivers.gov.uk/egcl-page/council-policies-and-plans

Anti-Social Behaviour
Three Rivers District Council has an Anti-Social Behaviour Policy which sets out what types of anti-social behaviour (ASB) the Council can deal with and what response somebody can expect from Three Rivers District Council when making a report to us

Climate Emergency and Sustainability Strategy
The council's Climate Emergency and Sustainability Strategy sets out how the council can improve and lead by example in our own operations. It also sets out how we will work with and assist the residents, businesses, and other stakeholders in our area to reduce their impact on the environment, improve sustainability and also adapt to and build resilience to a changing climate.

Community Safety Strategy
Three Rivers Community Safety Partnership works together to prevent and reduce crime and disorder.

Community Strategy
Three Rivers Community Strategy 2018-2023: This Strategy has been developed by members of the Local Strategic Partnership in Three Rivers. It sets out how we are working together to improve the quality of life of people who live and work in the Three Rivers District.

Green Travel Plan
This Green Travel Plan sets actions to improve the green travel options available to TRDC staff and Members and to the Council's customers and visitors. The key aim of the plan is to help make a contribution towards the reduction of pollution and greenhouse gas emissions which currently lead towards global warming.

Local Plan
The current Local Plan for the district was published in 2014. Three Rivers District Council is preparing a new Local Plan that will set out a vision and policy framework for the future levels of growth within the district until 2038. These documents include policies which relate to nature conservation and therefore to the Local Nature Reserve.

Physical Activity Strategy 2018-21
Increasing the physical activity levels of the residents of Three Rivers is a strategic priority of the Council contributing to the health and wellbeing of the local population, and demands on public resources.

Safeguarding Children, Young People and Adults at Risk Policy
Three Rivers District Council takes seriously the issue of safeguarding children, young people and adults at risk. Within the course of providing our services, or contacting local residents, we have the opportunity to make positive impacts in improving children's lives and protecting them, and adults at risk from injury and abuse. The safeguarding policy lays out the Council's commitments to work collaboratively to safeguard children, young people and adults at risk.

Strategic Plan
Each year, Three Rivers District Council updates its Strategic Plan. This is a document that brings together our high level, medium- to long-term objectives which, following consultation and analysis of data, the Council considers to be its priorities for the District.

It focuses on those areas where the Council has a lead role or can play a key part in delivering or influencing the outcomes. Its purpose is to guide the Council in its annual consultation, planning, resource allocation and performance management process by articulating clearly a series of SMART targets (targets that are Specific, Measurable, Achievable, Resourced and Time-limited) by which we shall be able to track our progress towards delivering our long-term objectives. Corporate Framework (threerivers.gov.uk)

Tree strategy
The new Three Rivers District Council Tree Strategy identifies the actions to be taken over the next five years to protect and sustainably manage existing trees and woodlands. It also sets out the council's plans to increase the number of trees by planting new ones, while ensuring the right trees are planted in the right places and are properly maintained.

Walking and Cycling Strategy
Three Rivers District Council has developed and promoted its cycling strategy since 1981, with visible success in creating and improving the cycle routes it promotes across the district. The strategy and a proposed promoted cycle route network can be viewed here: Walking and Cycling (threerivers.gov.uk)

Woodland Management Plans
Three Rivers District Council owns over 240 hectares of woodland from large Local Nature Reserve sites such as Oxhey Woods to small pockets of woodland adjacent to residential areas. The Council currently manages these sites for wildlife, public access and recreation. Open Spaces Management Plans (threerivers.gov.uk)

Value for Money Strategy
The Strategic Plan states that "the Council seeks continuous improvement and value for money". By 'Value for Money' the Council means the optimum balance between economy, efficiency and effectiveness.

APPENDIX E: AQUADROME HIRE OF GROUNDS

HIRE OF A PARK, RECREATION GROUND OR OPEN SPACE EVENT APPLICATION FORM

Please refer to the terms and conditions of hire before completing this form.

This application is a request for use of a park, recreation ground or open space for an **event only** and completion of this application does not guarantee approval for use of council land.

The application and any additional documents requested must be submitted at least 20 working days in advance of the event date. Applications submitted within 20 working days may not be processed and authorised in time. For large events please submit your application as early as possible to ensure relevant authorities (Police, Fire etc) can advise on any additional measures required.

With reference to your application for hire of facilities, the Council is only able to allocate these as requested by you. If you wish to accept all the conditions for hire, please sign, date and return a copy, together with your cheque damage deposit (where applicable). The use of facilities will be in accordance with the terms and conditions of hire. This form should be retained and produced at the facility if requested as evidence of hire.

Additional notes:

Rickmansworth Aquadrome - Criteria for Hire Unlike most of our other sites, due to the local nature reserve status and current visitor numbers, Rickmansworth Aquadrome has restricted criteria for hire. Please read these only if you are looking to hire Rickmansworth Aquadrome.	
Activities allowed:	• Wildlife and nature activities • Mental Health & Wellbeing • Heritage/education
Date restrictions:	• Small scale events will be accepted on week days during term times. • No hires will be considered from July to August exclusively
Size of groups	No large scale activities, aside from Rickmansworth Festival, shall be allowed at the Aquadrome. As such, groups over the size of 50 will not be allowed
Standalone restrictions (in addition to those detailed under Conditions of Hire)	• The Aquadrome is not for hire for birthday parties, weddings, religious/faith festivals and politically driven protests (regardless of event size) • No Funfairs allowed, with the exception of the Rickmansworth Festival • The following are not allowed: Inflatables, Helium balloons, Chinese lanterns or anything that would be seen as not environmentally friendly e.g. use of a generator on land or

	water • Charitable events such as Walks/Runs will be assessed on a case by case basis and to be at Councillors discretion with officer recommendation. • Filming requests will be assessed on a case by case basis and to be at Councillors discretion with officer recommendations

RATES OF HIRE

1.1.1 **Charity / Not for profit / School fun runs** And small scale events * (Damage deposit not required)	**60.00**
1.1.2 **Charity / Not for profit / School fetes (per day)**	**179.00**
Non-charity event (per day)	**344.00**
Damage deposit for above	**687.00**
*1.1.2.1.1.1.1.1 Funfairs – Per operational day (including one day for set up and take down) **	**614.00**
Funfairs – Any additional non-operational days	**153.00**
Damage deposit for Funfairs	**1228.00**

* Small scale events will be roughly those that are 50 people or under and will be determined as a small scale event by the Council's administrator of events. All events will be charged a minimum of £56.00 to cover the maintenance and checking of the site prior to the event.

** Please note: only one set up and take down day is granted per booking regardless of the number of days booked although a maximum of seven days inclusive of entry and exit from site is allowed for fairgrounds (inclusive of one weekend)

Section 1: Contact Information (of applicant)

Name of Organisation / Charity	
Charity Registration Number (if applicable)	
Name of main contact	
Address	
Telephone number - landline	
Telephone number - mobile	
Email address	

Section 2: Event Description

Name of event		
Proposed location		
Brief description of proposed event		
Type of event (please mark one box only)	1.1.3	**1.1.**
	1.1.5	**1.1.**
Event Date and Time		
Date and Time required for pre-event setup		
Date and Time the site will be vacated after the event		
Total number of days on site		
Approximate number of people expected to attend the event (per day if applicable)		
Event website and/or social media		

Section 3: Event Details

Detailed Event Description	

Some activities may require a licence or permit.

If you answer yes to any question below please provide further details. You may need to apply for a license or permit before your event/activity can go ahead. Further information is given in the text boxes below.

You may be eligible for a Temporary Event Notice (TEN) if the event is under a certain size. Further details can be found at https://www.threerivers.gov.uk/egcl-page/temporary-events.

Will you be erecting temporary barriers / fencing?	Yes-No	
Will you be erecting a temporary stage?	Yes-No	
Will you be using a diesel powered generator?	Yes-No	
Does your event require security / stewarding?	Yes-No	
Will you be using a PA (tannoy) announcement system at your event?	Yes-No	
Will you be erecting a marquee or gazebo at your event?	Yes-No	
Will you have market stalls selling goods and/or services?	Yes-No	
Will you be playing live or pre-recorded music?	Yes-No	
Will your event include dancing or the performance of art / plays?	Yes-No	
Does your event include fireworks or pyrotechnics?	Yes-No	
Is your event for a carnival or procession?	Yes-No	
Will your event include bouncy castles or inflatables?	Yes-No	
Does your event include overnight camping?	Yes-No	
Does your event include the sale of alcohol?	Yes-No	
Does your event include the sale of food or drink?	Yes-No	
Will your event including collecting donations for charity?	Yes-No	
Does your event require power?	Yes-No	

Does your event require a water supply?	Yes- No	
Do you require additional bins for litter and refuse?	Yes- No	
Do you intend to provide toilet facilities?	Yes- No	
Will you require vehicle access at the event?	Yes- No	*For Aquadrome hirers only: Because of the weight restriction of 18 tonnes (fully loaded) on the access bridge, you are required to give the length and weight of any large, heavy vehicles above 10 tonnes.*
Will the event be accessible and open to all?	Yes- No	
Does your event require road or street closures / traffic diversions or car park closures?	Yes- No	

Section 4: Welfare and Risk Management

What first aid cover will be provided and who will provide it?	
How will you encourage people to travel sustainably?	
Approximately how many vehicles will be attending the event?	
Where will these vehicles park?	
How do you intend to manage the parking of these vehicles?	

You will need to provide an event and/or site specific risk assessment. The risk assessment should consider event specific issues and hazards. For example, these can include manual handling, vehicle movements, working at height, electrical and fire safety, slips and falls and money handling.

You can upload your own risk assessment or complete our risk assessment template below.

When completing the risk assessment template please consider the size of your event as smaller events may have less risks.

Hire forms will be subject to review by the Safety Advisory Group. Inadequate risk assessments may result in additional queries relating to your request and you may be asked to present to the SAG group before permission will be granted.

For advice on event safety, please see the Health and Safety Executive's Guidance on running events safely.

For risks associated with crowded places, please see guidance from the National Counter Terrorism Security Office.

What are the significant hazards?	Who is at risk from those significant hazards?	Are there controls in place? If yes, what are they?	What risks are not adequately controlled? What action is required?	Who is the responsible person?

Covid-19 Risk Assessment

Until otherwise advised all events must also complete a Covid specific risk assessment (or include in their existing risk assessment) detailing how your event can safely take place during the pandemic and the steps they have taken as event organisers to reduce and/or remove opportunities of transmission.

Things to consider are

- risk of transmission (fomite / droplet)
- social distancing measures
- track and trace methods
- PPE requirements
- additional hygiene measures being taken
- capacity levels

The risk assessment and steps taken should be appropriate to the government guidelines at the time of the event. For details please see www.gov.uk/coronavirus.

Section 5: Contingency Planning

Sometimes things do go wrong, even at small, well-managed events, so it is important to think about contingency plans as part of your event management plan. Please answer the following questions. It is best practice to include these elements as part of your risk assessment document.

	Method / Action / Named Person
Who and how will you contact the emergency services? (Police / Fire /	

Ambulance etc) Who will meet them when they arrive on site?	
Where are the access and exit routes for emergency services? Are there any potential obstacles (for example height barriers) that could be in their way?	
What is your Evacuation Plan (covering part evacuation, total evacuation and abandonment of the event)? How will you alert participants / public of an evacuation?	
(For large events) Where will your Incident Control Room be based?	

Section 6: Required Documents

You must forward **with your application** the following documents as listed below as well as listing and attaching any other relevant documents.

Any required documents not submitted with this application must be provided least 20 working days prior to the start of your event. Failure to comply may result in the council refusing to grant permission for your event.

Site Plan	Please provide a detailed site plan showing the position of your event and activities.	
Public Liability Insurance	Hirers of public open space are required to hold a current policy of insurance in respect of public liability or third party risks (including products liability where appropriate). The relevant limit of indemnity must be no less than £5 million and the Council reserves the right to require a higher limit if deemed necessary	
Risk Assessment	If submitting your own copy	
Food Hygiene	An up to date Food Hygiene Certificate, registered by your home council is expected for any person selling or supplying food	
First Aid	Please provide a copy of a first aid certificate for your designated lead	

Safeguarding	Please provide DBS (Disclosure and Barring Service; formally CRB) clearance reference number and date of issue (where applicable)	
Events licences	Please provide copies of any event notices and / or licenses	
Funfairs only	Copy of Showman's Guild and any other certification or legislation prevailing at the time of booking	
Event Management Plan (required for large events)	Provide an event management plan covering parking management	
Traffic Management Plan (required for large events)	Provide a traffic management plan covering parking management	

Section 7: Declaration

By returning this form, I confirm that I have read and accepted the Terms & Conditions of Hire.

I apply for permission to hold the event as described in this application form. I confirm that the information provided is correct and will inform Three Rivers District Council if the details change.

Signed	
Print name	
On behalf of (organisation)	
Date	

Hire of a Park or Open Space
Terms and Conditions

Please read the following booking conditions in full before submitting a hire of grounds application.

CONDITIONS OF HIRE

1. All applications for the hire must be made using the online application form obtainable from www.threerivers.gov.uk.

2. Applications for events will only be considered if submitted within a reasonable time of the proposed event relative to the size of the event i.e. not later than 3 months for major events and 20 working days for small events. The Hirer must submit full details of the proposed event at the time of application for approval. Details requested are laid out in the application forms.

3. The hirer means the person whose signature appears on the application form. The area means the area or park, recreation ground or open space under the management of Three Rivers District Council. The Council means Three Rivers District Council, and its Officers. The person signing the form must be eighteen years of age or over.

4. No part of the park or open space is to be used for any other purpose other than the Purpose of the Hire.

5. The Hirer hires the area indicated on the Hirer's site plan and agreed by the Council. The Hirer does not hire the whole park or site for the Hirer's exclusive use.

6. Vehicle access is permitted to all sites at the discretion of the authorised Council officer. All entrances must be kept clear at all times to allow access by emergency vehicles. For hirers using The Green, Croxley Green you will need to adhere to the site's parking plan.

7. The Council shall provide written notification of the permitted times of operation to the hirer once the application has been confirmed.

CHARGES AND CANCELLATIONS

8. The hire charge shall be the prevailing charge laid down by the Council and may be changed from time to time.

9. Hire may be subject to payment of a fee and/or deposit, as specified within the hire of grounds application form. The deposit must be received at least one month before the event is due to take place. The fee will be paid at the time of application.

10. The Council reserves the right, for any reason, to refuse or cancel any hiring by giving notice to the hirer at any time, but shall not be liable to the hirer for any loss sustained out of any such refusal or cancellation. The Council reserves the right not to refund.

11. The hirer must provide to the Council written notification of any cancellation at least a month in advance. In the event of cancellation, the hirer shall pay to the Council such charges as shall represent the cost of cancellation. All deposits and security will be non-refundable.

12. Fly posting is prohibited unless specifically authorised by the Council in accordance with the Town and County Planning (Control of Advertisements) Regulations 1992.

13. No posters, boards, signs, flags or other emblems or advertisements are to be displayed inside or outside any part of the Park without the previous consent of the Council.

14. The hirer will be responsible for any damages that occur either directly or indirectly as a result of the event. In the event of damage occurring, the Council will organise for a contractor to rectify the damage and the hirer will indemnify the Council for the full cost of this work inclusive of administration charges. These costs will be deducted from the damage deposit and the balance (if any) refunded to the hirer. In the event that the damage deposit is not sufficient to cover the charges incurred, a supplementary invoice will be sent to the hirer. The Council will make the decision on what constitutes damage.

INSURANCE AND CERTIFICATES

15. The hirer agrees to indemnify and keep indemnified the Council against all actions, claims, suits, costs, expenses, losses, injuries, damage and liability howsoever arising out of or by reason or in consequence of the agreement hereby granted. An appropriate insurance policy in respect of public and employers indemnity must be in force for all events. The minimum requirement for public liability insurance is an indemnity of £5million and copy certificates of insurance must be provided to the Council 1 month before the hire.

16. Fairground equipment must be covered by a current certificate issued by the Showman's Guild and any other certification or legislation prevailing at the time of booking. A copy of these certificates must be forwarded to the Leisure Services at least four weeks prior to the event.

17. Where events involve children, the hirer must provide The Council with the following:
    (i) Sight of DBS (Disclosure and barring service; formally CRB) clearance certificates for all individuals that come into contact with children during the event (the certificates must be less than 3 years old).
    (ii) A copy of the organisation's Child Protection Policy.
        - visit www.threerivers.gov.uk for information on Safeguarding Children or www.hertsdirect.org/safeguardingchildren for any Child Protection enquiries.

LICENSING

18. Please contact Licensing Services on 01923 776611 for advice on licensing your event. Types of licenses you may require include: Premises Licence, Temporary Event Licence or a Street Trading License. You are advised to allow a minimum of 10 weeks for a premises licence application and 4 weeks for a temporary events notice.

19. If your event is free to attend and you will be trading (selling any item including food, drink or any other item) or collecting, you will need to apply for a Street Trading Licence

20. No noise is to be made, whether by load speakers or musical instruments etc, after the hour of 10:00pm unless prior agreement has been obtained from the Council.

21. No public address system is to be used without the approval of the Council.

22. The playing of music during fitness sessions is not permitted without prior permission from the Council.

23. The hirer must provide a licence for events that will include sale/supply of alcohol, music, dancing, plays, films, public entertainment or late night refreshment, granted by the Council's licensing department (telephone 01923 776611) A copy of the licence(s)/authorisations must be submitted to the Leisure Services 14 days before the hire period. Please note that a Temporary Event Notice or Premises Licence may be required for such activities. For further information please refer to www.gov.uk/topic/business-enterprise/licensing and www.threerivers.gov.uk/egcl-page/alcohol-and-entertainment-licensing.

EMERGENCY SERVICES

24. The Hirer is requested to notify the police and other appropriate emergency services (Ambulance / Fire) of your proposed event particularly if more than 500 people are expected to attend or if your event activities are of an unusual nature

25. The Hirer is responsible for adequate fire precautions and for the maintenance of clear exists for emergency vehicles and for seeing that none of the footpaths are blocked.

HEALTH AND SAFETY

26. The Hirer's attention is drawn to the requirements of the Health & Safety at Work Act 1974 and other health & safety legislation including the Management of Health & Safety at Work Regulations 1999, Control of Substances Hazardous to Health Regulations 1999 and Electricity at Work Regulations 1989. It is the responsibility of the Hirer to comply with all relevant legislation. If appropriate, the Council will provide the Hirer with any information required by health & safety legislate.

27. Bouncy Castles and other inflatables. It is the responsibility of the Hirer to comply with all guidance and relevant legislation. http://www.hse.gov.uk/entertainment/fairgrounds/inflatables.htm

28. The Food Safety Act 1990 and a number of regulations and codes of practice govern the sale of food. These are enforced within the District by the Licensing Services. The regulations require any food outlets to be registered with their home authority. For details please contact the Licensing team https://www.threerivers.gov.uk/egcl-page/licensing.

RISK ASSESSMENT

29. The Hirer will need to provide a site specific risk assessment. The risk assessment should consider site specific issues/hazards. For example these can include manual handling, vehicle movements, working at height, electrical and fire safety, slips and falls and money handling.

30. A written copy of which must be lodged at the time of the application or at least four weeks before the date of the event. This document will be referred to in the event of any claim arising. The Council may review the risk assessment, however it cannot be held responsible for any errors or omissions.

31. The Hirer must ensure that first aid equipment is provided and all precautions taken against the risk of fire and electric shock, and inform the Council of the arrangements and for any other advice, which may be necessary.

32. In the event of a major or long term injury or a death at the event, the hirer must comply with RIDDOR (the Reporting of Injuries Diseases and Dangerous Occurrences Regulations 2013). For more information see the following website link: http://www.hse.gov.uk/riddor/ or call the Health and Safety Executives Incident Contact Centre (ICC) on 0845 300 9923.

SITE AND TRAFFIC MANAGEMENT PLANS

33. The Hirer is responsible at all times for the organisation and smooth running of the event.

34. The Hirer will need to provide a detailed site plan showing the position of your event and activities. The Hirer may also be asked to provide a traffic management plan covering parking management.

35. Vehicular access and parking is only permitted with the prior approval of the Council. All entrances must be kept clear at all times to allow access by emergency vehicles. For hirers using The Green, Croxley Green you will need to adhere to the site's parking plan.

36. The Hirer must ensure that adequate parking arrangements are made for vehicles. Parking is restricted to areas set aside within the site plan and with the prior approval of the Council. Any parking to highway areas is covered by traffic regulations and may result in parking fines as directed by law.

37. Larger events will require an Event Management Plan

SERVICES

38. The hirer is responsible for the removal of all rubbish and litter from the site. If at the end of the hire period there is any remaining rubbish, the Council shall instruct a contractor to undertake the clearance of the site and recharge the cost of this work to the hirer.

39. If the preparation and vacation of an event requires the services of the council outside the hours of 09.00 and 17.00 Monday to Friday a fee will be payable.

40. If your application is successful, we may issue you with an access key to the park/toilet facilities. No copies of this key should be made without prior consent of the Council. The loss of a key will result in a charge for replacement

ANIMALS

41. The Council will not take bookings for any events that show or otherwise exhibit animals.

42. The Council does not allow animals to be provided as prizes at events; this includes goldfish.

PARK PROTECTION

43. To protect the parks, fitness training is not to take place on or within 3 meters of marked sports pitches or areas that may be temporarily fenced off in preparation for an event.

44. To protect the parks infrastructure (fencing, goal posts, benches etc), are not to be used for your fitness sessions

GENERAL DATA PROTECTION REGULATION (GDPR)

45. Applications will be processed by Three Rivers District Council Leisure Services.

46. Personal data and company information will be kept on file for a period of up to three years and will not be shared with anyone or any other organisation outside of the Council. Risk assessments and public liability insurance information will remain on file.

47. Three Rivers District Council will use your information to administer events in Guildford's parks and will contact you for the following reasons:
    (i) To discuss, request further information, acknowledge and confirm your event.
    (ii) We may need to inform others of your events/activities if they are likely to impact on others. This does not include your personal information.

OTHER REQUIREMENTS AND CONDITIONS

48. The Hirer must comply with the direction of the Council at all times.

49. The property of the Hirer and Hirer's agents must be removed at the end of the period of hire. The Council accepts no responsibility for any property left on the venue before, during or after hire period.

50. The hirer must submit a plan of the event at least four weeks prior to the event. Plans must include entry and exit points and details of the layout. For hirers using The Green, Croxley Green you will need to adhere to the site's parking plan. Please see attached sheet with details.

51. The Council's byelaws affecting a park or open space will remain in force and shall be observed throughout the hiring. A copy of the byelaws can be obtained from the Council or on the Council website.

52. The Hirer must obtain all necessary clearances from and comply with all requirements of the Civil Aviation Authority and/or any other relevant body, as required.

53. Sky lanterns, the release of helium balloons and paramotors are prohibited from council land and applications for/including these will be refused.

54. Attendance figures must be submitted monthly to leisure@threerivers.gov.uk using the attendance record form provided. Failure to do so may result in the Council terminating the hire agreement.

55. In the case of difficulty during the hire period the hirer shall in the first instance contact Leisure Services on 01923 776611 during office hours (9.00am to 5.00pm) or report via our 'out of hours' service available through 01923 776611.

APPENDIX F: HEALTH AND SAFETY

1. Site Risk Assessment

THREE RIVERS DISTRICT COUNCIL

Risk Assessment

Name of Assessor	AL	**Time**		**Date of Assessment**	27/07/2022
Manager Approval	CG	**Date**	27/07/2022	**Next Review Due Date**	
Task being Assessed	Rickmansworth Aquadrome	**Work Area/Venue**			

What is the hazard?	Who might be harmed?	How might people be harmed?	Control measures	Risk rating L	M	H	Additional control measures (if required / after review)	New risk rating (if required) L	M	H	Action by whom/when? (if required)
Open Water	Site users / staff / Dogs	Fatality or serious illness / injury from drowning, or ingestion of water	'No swimming' signs displayed prominently across the site Water quality monitored for Blue-green algae		M		Marginal vegetation is maintained and encouraged along the water's edge wherever possible to prevent users accessing open water. Fishing swims and bird feeding areas are maintained in good condition to prevent accidental ingress to the water	L			Leisure & Landscapes / Grounds maintenance

What is the hazard?	Who might be harmed?	How might people be harmed?	Control measures	Risk rating L	M	H	Additional control measures (if required / after review)	New risk rating (if required) L	M	H	Action by whom/when? (if required)
Vehicle movements on-site	Site users / staff	Fatality or serious injury from a collision	Vehicle traffic on site confined to essential users. Speed limit imposed on access roads		M		Access revoked from non-essential users Speed limiters / chicanes installed, if necessary Review car parking layout and access to reduce vehicle use into the site	L			Leisure & Landscapes
Trees	Site users / staff	Fatality or serious injury resulting from a tree failure	Formal inspection on an 18 month cycle / Annual inspection of main footpaths as per the council's tree strategy		M		Additional inspections after high winds and following reports of unsafe trees	L			Trees & Landscapes
Extreme Weather events (flooding / high winds / heavy snowfall)	Site users	Fatality or serious injury from slips, trips or falls due to flood water or snow, or falling trees	The whole, or parts of the site will be closed to users during inclement weather	L			Site safety inspection prior to re-opening to the public	L			Grounds Maintenance / Trees & Landscapes

What is the hazard?	Who might be harmed?	How might people be harmed?	Control measures	Risk rating L	M	H	Additional control measures (if required / after review)	New risk rating (if required) L	M	H	Action by whom/when? (if required)
Anti-social behaviour (unruly dogs / threatening behaviour / conflict between user groups)	Site users / staff	Fatality or serious injury from dogs or other members of the public	Police alerted to incidents and a record or incidents kept and reviewed regularly Responsible dog ownership promoted and encouraged Public Space Protection Order in place for dogs on leads around the Café area along with responsible dog ownership across the site PSPO to be enforced when required Regular ASB in parks and open spaces meeting to discuss hot spots and update police Byelaws in place to prevent activity such as BBQs		M		Additional patrols by PCSO's and the council's animal welfare officer, if necessary	L			Leisure & Landscapes
Site infrastructure (play areas / benches / paths, buildings, bridges)	Site users	Fatality or serious injury, or injury from defective infrastructure	Regular safety inspection of site infrastructure and recorded on the Play Inspection App by trained staff. Defective infrastructure cordoned off where necessary until repaired Equipment adheres to BS EN 1176 and BS EN 1177 Online reporting mechanism for the public to report any issues or concerns and advised to contact 101 if outside of normal office hours. Site inspected following an extreme event e.g. site flooding in case of pathway erosion		M		Site users encourage to report dangerous infrastructure to the council	L			Leisure & Landscapes

What is the hazard?	Who might be harmed?	How might people be harmed?	Control measures	Risk rating L	M	H	Additional control measures (if required / after review)	New risk rating (if required) L	M	H	Action by whom/when? (if required)
			Property to inspect all building on a regular basis								
Stakeholders (Angling club / sailing club / water ski club, etc.)	Site users / stakeholders / staff	Fatality or serious injury resulting from stakeholder activities	Stakeholders to risk assess their activities and provide a copy to the Council on an annual basis		M		Safety issues discussed at the Aquadrome Forum and with individual stakeholder groups. Changes to activities agreed where appropriate	L			Leisure & Landscapes
Unsafe activities / hire of grounds by external organisations (Canal festival, etc.)	Site users / participants	Fatality or serious injury	Event organisers to risk assess their activities and provide a copy to the Council prior to the event		M		Any safety incidents occurring during events reviewed and changes made to future events	L			Leisure & Landscapes

What is the hazard?	Who might be harmed?	How might people be harmed?	Control measures	Risk rating L	M	H	Additional control measures (if required / after review)	New risk rating (if required) L	M	H	Action by whom/when? (if required)
Buried asbestos	Site users / staff	Fatality or serious illness	No excavations on site will take place without the necessary precautions	L			Any exposed asbestos will be removed and disposed of in line with current legislation	L			Grounds Maintenance
Pests & Diseases (Avian flu, Oak Processionary Moth)	Site users / staff	Serious illness	The council will monitor and comply with all Government legislation and guidance, such as plant health notices	L			The site will be closed or the pest or disease treated, if possible	L			Leisure & Landscapes
Grounds Maintenance activities	Site users / Staff	Fatality or serious injury	Risk assessments produced for GM activities and reviewed on a regular basis	L			The whole, or parts of the site will be closed to users during certain operations	L			Grounds Maintenance

Review date		Reviewer Name		Reviewer Signature	

Comments	

Review date		**Reviewer Name**		**Reviewer Signature**	
Comments					

Review date		**Reviewer Name**		**Reviewer Signature**	
Comments					

Likelihood ---------- Very Likely ----	**Low 4**	**High 8**	**Very High 12**	**Very High 16**
	Low 3	**Medium 6**	**High 9**	**Very High 12**

	Low **2**	**Low** **4**	**Medium** **6**	**High** **8**
	Low **1**	**Low** **2**	**Low** **3**	**Low** **4**
	Impact **Low ----------► Unacceptable**			

Impact Score	**Likelihood Score**
4 (Catastrophic)	4 (Very Likely (≥80%))
3 (Critical)	3 (Likely (21-79%))
2 (Significant)	2 (Unlikely (6-20%))
1 (Marginal)	1 (Remote (≤5%))

2. Health and Safety at Work Act 1974

The Grounds Maintenance contract states that the Contractor has to nominate a person to be responsible for health and safety matters (Section D19.3). Whilst on premises owned or occupied by the Authority, the Contractor shall ensure that its employees comply with the Authority's general statement of safety policy and with the lawful requirements of the Authority's Safety Officer.

Section D19.3 of the Grounds Maintenance contract also states that the Contractor shall provide its general statement of safety policy (having regard to the Authority's general statement of safety policy provided in accordance with this Condition D12) which shall be supplied to the Authorised Officer within seven days of the Commencement Date.

The Contract goes on to state that the Contractor shall provide adequate first aid provision in accordance with the statutory requirements and shall ensure that adequate and suitable fire extinguishers are provided and that sufficient staff are trained in first aid and safe utilisation of the firefighting equipment.

Furthermore, the Health and Safety at Work Act 1974 and associated Regulations require the Council to provide, as far as is practicable, a safe and healthy workplace. The Act also requires the Council, as an employer of more than five people, to provide a written Health and Safety Policy (available on request) to inform employees of the arrangements that have been made to ensure their health, safety and welfare whilst at work. The Health and Safety Executive is the enforcing authority for health and safety in local authorities. As such they will monitor the Council's arrangements for health and safety.

Three Rivers District Council takes a very proactive approach to health and safety. To this end, not only are all relevant posters and the like displayed clearly, but all staff also receive an updated copy of the Health and Safety Policy and an updated copy of all the relevant risk assessments, every year at the time of their annual appraisal. These documents have to be signed for twice, once when they receive them and a second time approximately two months later to say they have read and understood them.

TRDC has all relevant forms and information regarding reportable accidents, risk assessments, first aiders, stress and corporate manslaughter on file.

3. Control of Substances Hazardous to Health (COSHH)

The Council has a strong commitment to the environment and environmental sustainability and recognises the impacts its operations have on the environment. Three Rivers District Council's dedication to protect the environment is reflected in council policies, strategies, commitments and partnerships. Some relevant initiatives include:

- Peat will not be used on any of our sites.
- Pesticides will not be used unless there are no alternative means of control. Glyphosate will not be used in the district except for the control of Japanese knotweed.
- Only FSC timber is used across the district.
- All cleaning materials are phosphate free.

Pesticides are generally not used by TRDC. However, when it is necessary to use pesticides, they are not stored on site. Pesticides that are utilised are done so according to their specific requirements and in line with the Control of Substances Hazardous to Health (COSHH 1998) and the Control of Pesticides Regulations (1986) Acts. Non-residual pesticides are always preferred. TRDC holds all COSHH data cards and ensures staff is aware of the dangers and the procedures that need to be followed. All necessary assessments are carried out by an authorised officer who ensures measures are put in place to prevent/control the risks.

4. Reporting, reviewing and monitoring

TRDC has an in-house Health and Safety audit system which involves regular audits to check safety procedures are relevant and robust. The TRDC Accident and Incident Reporting system ensures accidents and major incidents are correctly reported.

5. Equipment Maintenance and Training

The Council's Environmental Protection Supervisor inspects and records any defects within the Local Nature Reserve on a weekly basis, or more frequently if required. A sample Grounds Inspection Sheet is shown in section 7 below.

The Ebury Play Area to the north-east of the Aquadrome and the natural play space in the Dog Free Picnic area are inspected three times per week during the summer and twice per week during the winter by a qualified, registered play inspector within the Grounds Maintenance team and recorded on the Play Inspection system. An independent annual inspection, carried out by an external Registered Play Inspector, provides a quality assessment of the play equipment and is in addition to in-house inspections.

Staff are equipped with the appropriate tools and protective clothing which, when not in use are stored securely in the on-site works compound or at the main depot. Safety equipment may range from safety boots and dust masks to ear defenders and chainsaw trousers.

Vehicles are serviced and maintained in accordance with the relevant legislation. Servicing of small equipment is usually carried out over winter. Service records are

maintained for all equipment. Faults are recorded in the default book and signed off once repaired.

Training is given for all relevant work. For example, staff members required to use a chainsaw have completed a training course. Other training includes Certificate of Competence in Tractor Driving and Related Operations, Level 2 (pre-use safety; tractor operation; hitch a trailer and three-point linkage implement to a tractor). Training is refreshed and updated at regular intervals to ensure staff is up-to-date with changing practices.

TRDC’s Manual Handling Assessment Checklist ensures all pertinent topics are covered. In addition to this staff complete a Health and Safety checklist during their first week of employment.

APPENDIX G: AQUADROME FORUM

1. Terms of Reference for the Aquadrome Forum

Overall Aim

To provide advice and feedback to Three Rivers District Council regarding the management of and future improvements to the Aquadrome.

Key Objectives

To act as a group of key representatives of Aquadrome users with which Three Rivers District Council can consult on the management of and future improvements to the Aquadrome.

To act as a consultative group in respect of the Aquadrome Management Plan and future reviews of the plan.

To provide feedback to the Council following completion of projects/initiatives at the Aquadrome.

To share information with other users of the Aquadrome and the Council on activities being promoted and developed by individual groups.

To support the Council in publicising activities, projects and schemes in the Aquadrome; for example, summer holiday schemes.

To work collaboratively to promote the Aquadrome as a safe venue for families, their friends and visitors.

Representation/Membership

Two representatives of the water based clubs.
Friends of Stockers Lake.
Rickmansworth Residents Association.
Fishing Club.
Café in the Park.
Waterways Trust.
Up to three representatives of general users of the Aquadrome, to include disability representation and young families.
Hertfordshire Constabulary.

Named substitutes may attend meetings in the absence of the usual representatives.

Administration

Formal meetings to be held twice a year and coordinated by TRDC.

Meetings to be chaired by a TRDC officer.

Technical support to be provided by Countryside Management Service.

All meetings to be formally minuted, agendas to be sent out five working days in advance.

APPENDIX H: SPECIES RECORDS

Table 1. Significant species recorded at the Aquadrome – data provided by Hertfordshire Environmental Records Centre, August 2021. Note that only records which can be confidently attributed to the Aquadrome have been included.

Common Name	Scientific Name	Taxon Group	Earliest Record	Latest Record	Number of Records	Status Designations
Serotine	*Eptesicus serotinus*	Terrestrial Mammals (Bats)	2007	2007	1	HSD4; WCA5/9.4b; RLGB.VU; Bern2;CMS_A2; HSCC
Daubenton's Bat	*Myotis daubentonii*	Terrestrial Mammals (Bats)	2007	2007	1	HSD4; WCA5/9.4b; Bern2;CMS_A2
Noctule Bat	*Nyctalus noctula*	Terrestrial Mammals (Bats)	2007	2007	1	HSD4; WCA5/9.4b; Sect.41; UKBAP; Bern2;CMS_A2
Common Pipistrelle	*Pipistrellus pipistrellus*	Terrestrial Mammals (Bats)	2007	2007	1	HSD4; WCA5/9.4b; CMS_A2
Soprano Pipistrelle	*Pipistrellus pygmaeus*	Terrestrial Mammals (Bats)	2007	2007	1	HSD4; WCA5/9.4b; Sect.41; UKBAP; Bern2;CMS_A2
Brown Long-eared Bat	*Plecotus auritus*	Terrestrial Mammals (Bats)	2007	2007	1	HSD4; WCA5/9.4b; Sect.41; UKBAP; Bern2;CMS_A2
Kingfisher	*Alcedo atthis*	Birds	2011	2018	113	WCA1i; BAmb; BD1;Bern2; HSCC
Pintail	*Anas acuta*	Birds	2013	2013	1	WCA1ii; BAmb; CMS_A2
Greylag Goose	*Anser anser*	Birds	2011	2017	75	WCA1ii; BAmb; CMS_A2
Scaup	*Aythya marila*	Birds	2011	2011	1	WCA1i; Sect.41; UKBAP; BRed; CMS_A2
Goldeneye	*Bucephala clangula*	Birds	2011	2018	116	WCA1ii; BAmb; CMS_A2
Cetti's Warbler	*Cettia cetti*	Birds	2011	2018	31	WCA1i; Herts HL;Herts HR
Black Tern	*Chlidonias niger*	Birds	2002	2002	1	WCA1i; BD1;Bern2
Hobby	*Falco subbuteo*	Birds	2011	2018	4	WCA1i; Bern2;CMS_A2; HSCC;HSCC.Resp

Common Name	Scientific Name	Taxon Group	Earliest Record	Latest Record	Number of Records	Status Designations
Red Kite	*Milvus milvus*	Birds	2011	2018	48	WCA1i; BD1;CMS_A2; WCA9
Grass Snake	*Natrix helvetica*	Reptiles	1991	1991	1	WCA5/9.1k/l; Sect.41; UKBAP
Western Osprey	*Pandion haliaetus*	Birds	2012	2012	1	WCA1i; BAmb; BD1;CMS_A2
Green Sandpiper	*Tringa ochropus*	Birds	2016	2016	1	WCA1i; BAmb; Bern2;CMS_A2; HSCC
Redwing	*Turdus iliacus*	Birds	2011	2018	68	WCA1i; BRed
Fieldfare	*Turdus pilaris*	Birds	2011	2017	17	WCA1i; BRed
Lesser Redpoll	*Acanthis cabaret*	Birds	2011	2017	4	Sect.41; UKBAP; BRed; HSCC
Cuckoo	*Cuculus canorus*	Birds	2011	2018	11	Sect.41; UKBAP; BRed; HSCC;Herts LD3
Common Reed Bunting	*Emberiza schoeniclus*	Birds	2011	2018	39	Sect.41; UKBAP; BAmb; Bern2
Grasshopper Warbler	*Locustella naevia*	Birds	2011	2011	1	Sect.41; UKBAP; BRed; Herts HR;HSCC;Herts LD1
House Sparrow	*Passer domesticus*	Birds	2011	2017	77	Sect.41; UKBAP; BRed; HSCC
Depressed River Mussel	*Pseudanodonta complanata*	Invertebrates - Molluscs	2008	2008	1	Sect.41; UKBAP; RLGLB.VU
White-letter Hairstreak	*Satyrium w-album*	Invertebrates - Butterflies	2009	2009	1	Sect.41; UKBAP; RLGB.EN; Herts Rare (B);HSCC
Lapwing	*Vanellus vanellus*	Birds	2011	2017	33	Sect.41; UKBAP; BRed; CMS_A2; HSCC;Herts LD2
Song Thrush	*Turdus philomelos*	Birds	2011	2018	127	LBAP; BRed
Common Sandpiper	*Actitis hypoleucos*	Birds	2012	2017	3	BAmb; CMS_A2
Teal	*Anas crecca*	Birds	2011	2018	12	BAmb; CMS_A2; Herts HL;Herts HR
Mallard	*Anas platyrhynchos*	Birds	2011	2018	348	BAmb; CMS_A2
Meadow Pipit	*Anthus pratensis*	Birds	2011	2011	1	BAmb; Bern2

Common Name	Scientific Name	Taxon Group	Earliest Record	Latest Record	Number of Records	Status Designations
Swift	*Apus apus*	Birds	2002	2018	45	BAmb; HSCC
Pochard	*Aythya ferina*	Birds	2011	2018	139	BRed; CMS_A2; Herts HL;Herts HR;HSCC
Barnacle Goose	*Branta leucopsis*	Birds	2003	2017	2	BAmb; BD1;Bern2;CMS_A2; WCA9
Black-headed Gull	*Chroicocephalus ridibundus*	Birds	2011	2018	219	BAmb
Stock Dove	*Columba oenas*	Birds	2011	2018	96	BAmb
Mute Swan	*Cygnus olor*	Birds	2003	2018	250	BAmb; CMS_A2
Common House Martin	*Delichon urbicum*	Birds	2011	2018	49	BAmb; Bern2; HSCC
Kestrel	*Falco tinnunculus*	Birds	2011	2016	10	BAmb; Bern2;CMS_A2
European Pied Flycatcher	*Ficedula hypoleuca*	Birds	2013	2013	1	BRed; CMS_A2
Oystercatcher	*Haematopus ostralegus*	Birds	2014	2016	8	BAmb
European Herring Gull	*Larus argentatus*	Birds	2011	2018	37	BRed
Common Gull	*Larus canus*	Birds	2011	2018	58	BAmb
Lesser Black-backed Gull	*Larus fuscus*	Birds	2011	2018	121	BAmb
Great Black-backed Gull	*Larus marinus*	Birds	2015	2016	5	BAmb
Limnebius papposus	*Limnebius papposus*	Invertebrates - Beetles (Coleoptera)	2002	2002	2	RLGB.Lr(NT); HSCC
Wigeon	*Mareca penelope*	Birds	2003	2017	50	BAmb; CMS_A2
Gadwall	*Mareca strepera*	Birds	2003	2018	127	BAmb; CMS_A2
Smew	*Mergellus albellus*	Birds	2012	2016	6	BAmb; BD1;Bern2;CMS_A2; HSCC

Common Name	Scientific Name	Taxon Group	Earliest Record	Latest Record	Number of Records	Status Designations
Grey Wagtail	*Motacilla cinerea*	Birds	2011	2018	38	BRed; Bern2; HSCC
Willow Warbler	*Phylloscopus trochilus*	Birds	2011	2017	8	BAmb; HSCC;Herts LD2
Marsh Tit	*Poecile palustris*	Birds	2014	2014	1	BRed; Bern2; HSCC
Dunnock	*Prunella modularis*	Birds	2011	2018	156	BAmb; Bern2
Eurasian Bullfinch	*Pyrrhula pyrrhula*	Birds	2011	2018	14	BAmb
Ragged-Robin	*Silene flos-cuculi*	Higher Plants - Flowering Plants	2012	2012	1	RLENG.Lr(NT)
Shoveler	*Spatula clypeata*	Birds	2003	2018	61	BAmb; CMS_A2; Herts HL;Herts HR;HSCC
Common Tern	*Sterna hirundo*	Birds	2011	2018	86	BAmb; BD1;Bern2
Arctic Tern	*Sterna paradisaea*	Birds	2016	2016	1	BAmb; BD1;Bern2;CMS_A2
Tawny Owl	*Strix aluco*	Birds	2014	2014	6	BAmb; Bern2
Starling	*Sturnus vulgaris*	Birds	2011	2017	48	BRed; HSCC
Shelduck	*Tadorna tadorna*	Birds	2013	2013	1	BAmb; Bern2;CMS_A2; Herts HL;Herts HR
Sandwich Tern	*Thalasseus sandvicensis*	Birds	2018	2018	2	BAmb; BD1;Bern2
Mistle Thrush	*Turdus viscivorus*	Birds	2012	2017	27	BRed
Common Valerian	*Valeriana officinalis*	Higher Plants - Flowering Plants	1992	1992	1	RLENG.Lr(NT); HSCC
Aquarius paludum	*Aquarius paludum*	Invertebrates - True Bugs (Hemiptera)	1953	1953	3	Nb
Musk Beetle	*Aromia moschata*	Invertebrates - Beetles (Coleoptera)	1953	1953	2	Nb
Ceutorhynchus rapae	*Ceutorhynchus rapae*	Invertebrates - Beetles (Coleoptera)	1945	1945	1	Nb; HSCC

Common Name	Scientific Name	Taxon Group	Earliest Record	Latest Record	Number of Records	Status Designations
Dittander	*Lepidium latifolium*	Higher Plants - Flowering Plants	1998	2002	2	NS-excludes
Pelenomus quadricorniger	*Pelenomus quadricorniger*	Invertebrates - Beetles (Coleoptera)	1945	1945	1	Na; HSCC
Scymnus limbatus	*Scymnus limbatus*	Invertebrates - Beetles (Coleoptera)	1945	1945	1	Nb; HSCC
Stenocarus ruficornis	*Stenocarus ruficornis*	Invertebrates - Beetles (Coleoptera)	1950	1950	1	Nb; HSCC
Sparrowhawk	*Accipiter nisus*	Birds	2011	2018	21	CMS_A2
Mandarin Duck	*Aix galericulata*	Birds	2013	2013	1	CMS_A2; WCA9
Snow Goose	*Anser caerulescens*	Birds	2013	2013	2	CMS_A2; WCA9
Little Owl	*Athene noctua*	Birds	2003	2003	1	Bern2
Tufted Duck	*Aythya fuligula*	Birds	2003	2018	218	CMS_A2
Waxwing	*Bombycilla garrulus*	Birds	2011	2011	3	Bern2
Canada Goose	*Branta canadensis*	Birds	2011	2018	226	CMS_A2; WCA9
Buzzard	*Buteo buteo*	Birds	2011	2017	14	CMS_A2
Goldfinch	*Carduelis carduelis*	Birds	2011	2017	68	Bern2
Treecreeper	*Certhia familiaris*	Birds	2011	2018	73	Bern2
Greenfinch	*Chloris chloris*	Birds	2011	2016	53	Bern2
Eurasian Blue Tit	*Cyanistes caeruleus*	Birds	2011	2018	186	Bern2
Great Spotted Woodpecker	*Dendrocopos major*	Birds	2011	2018	112	Bern2
Little Egret	*Egretta garzetta*	Birds	2011	2018	61	BD1;Bern2; HSCC
Robin	*Erithacus rubecula*	Birds	2011	2018	204	Bern2

Common Name	Scientific Name	Taxon Group	Earliest Record	Latest Record	Number of Records	Status Designations
Moorhen	*Gallinula chloropus*	Birds	2003	2018	222	CMS_A2
Swallow	*Hirundo rustica*	Birds	2011	2018	61	Bern2
Common Merganser	*Mergus merganser*	Birds	2001	2012	33	CMS_A2
Pied Wagtail	*Motacilla alba*	Birds	2011	2016	14	Bern2
Pied Wagtail	*Motacilla alba yarrellii*	Birds	2011	2018	22	Bern2
Red-crested Pochard	*Netta rufina*	Birds	2011	2018	309	CMS_A2; HSCC;HSCC.Resp; WCA9
Great Tit	*Parus major*	Birds	2011	2018	176	Bern2
Coal Tit	*Periparus ater*	Birds	2011	2015	5	Bern2
European Green Woodpecker	*Picus viridis*	Birds	2011	2018	84	Bern2
Goldcrest	*Regulus regulus*	Birds	2011	2018	111	Bern2
Sand Martin	*Riparia riparia*	Birds	2011	2018	15	Bern2; HSCC;Herts LD1
Eurasian Nuthatch	*Sitta europaea*	Birds	2011	2017	37	Bern2
Siskin	*Spinus spinus*	Birds	2003	2018	56	Bern2
Eurasian Wren	*Troglodytes troglodytes*	Birds	2011	2018	191	Bern2
Grey Heron	*Ardea cinerea*	Birds	2003	2018	174	Herts HL
Hedge Cosmet	*Cosmopterix zieglerella*	Invertebrates - Moths	2014	2014	1	HSCC;Herts Rare (M)
Enochrus melanocephalus	*Enochrus melanocephalus*	Invertebrates - Beetles (Coleoptera)	2002	2002	2	Herts HR (Col);HSCC
Alder Buckthorn	*Frangula alnus*	Higher Plants - Flowering Plants	2012	2012	1	Herts Rare;HSCC
Weasel	*Mustela nivalis*	Terrestrial Mammals (excl. Bats)	2015	2015	1	HSCC

Common Name	Scientific Name	Taxon Group	Earliest Record	Latest Record	Number of Records	Status Designations
Willow Bent-wing	*Phyllocnistis saligna*	Invertebrates - Moths	2011	2011	1	Herts End 4 (M);HSCC
Water Rail	*Rallus aquaticus*	Birds	2011	2017	14	Herts HL;Herts HR;HSCC;Herts LD1
Soronia punctatissima	*Soronia punctatissima*	Invertebrates - Beetles (Coleoptera)	1944	1944	1	Herts HR (Col);HSCC
Small Skipper	*Thymelicus sylvestris*	Invertebrates - Butterflies	2005	2005	1	Herts Wide Decl (B)
Egyptian Goose	*Alopochen aegyptiaca*	Birds	2003	2018	94	WCA9
Black Swan	*Cygnus atratus*	Birds	2001	2017	30	WCA9
Japanese Knotweed	*Fallopia japonica*	Higher Plants - Flowering Plants	1985	2012	4	WCA9
Chinese Muntjac	*Muntiacus reevesi*	Terrestrial Mammals (excl. Bats)	2019	2019	2	WCA9
American Signal Crayfish	*Pacifastacus leniusculus*	Invertebrates - Crustaceans	2011	2011	2	WCA9
Ring-necked Parakeet	*Psittacula krameri*	Birds	2011	2018	180	WCA9
Eastern Grey Squirrel	*Sciurus carolinensis*	Terrestrial Mammals (excl. Bats)	1997	2015	2	WCA9

Table 2. Status descriptions – provided by Hertfordshire Environmental Records Centre, August 2021.

European	
HSD2p	Habitats and species directive Annex 2 - priority species Species which are endangered, the conservation of which the Community has a particular responsibility in view of the proportion of their natural range which falls within the territory of the Community. They require the designation of special areas of conservation.
HSD4	Habitats and species directive Annex 4 Animal and plant species of Community interest (i.e. endangered, vulnerable, rare or endemic in the European Community) in need of strict protection. They are protected from killing, disturbance or the destruction of them or their habitat. Note that the contents of this annex have been updated in April 2003

	following the Treaty of Accession.
HSD5	Habitats and species directive Annex 5 Animal and plant species of Community interest whose taking in the wild and exploitation may be subject to management measures
Yes	(In European field). This identifies that bats are protected.
Berne/Bonn	
BD1	Bird Directive Annex I lists species that shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution.
Bern2	The Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) was adopted in Bern, Switzerland in 1979, and came into force in 1982. The principal aims of the Convention are to ensure conservation and protection of all wild plant and animal species and their natural habitats (listed in Appendices I and II of the Convention), to increase cooperation between contracting parties, and to regulate the exploitation of those species (including migratory species) listed in Appendix III. To this end the Convention imposes legal obligations on contracting parties, protecting over 500 wild plant species and more than 1000 wild animal species. Appendix 2 Special protection (`appropriate and necessary legislative and administrative measures`) for the animal taxa listed, including: - all forms of deliberate capture and keeping and deliberate killing; - the deliberate damage to or destruction of breeding or resting sites; - the deliberate disturbance of wild fauna, particularly during the period of breeding, - - rearing and hibernation, insofar as disturbance would be significant in relation to the objectives of this Convention; - the deliberate destruction or taking of eggs from the wild or keeping these eggs even if empty; - the possession of and internal trade in these animals, alive or dead, including stuffed animals and any readily recognisable part or derivative thereof, where this would contribute to the effectiveness of the provisions of this article.
CMS_A1	The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention or CMS) was adopted in Bonn, Germany in 1979 and came into force in 1985. Contracting Parties work together to conserve migratory species and their habitats by providing strict protection for endangered migratory species (listed in Appendix 1 of the Convention), concluding multilateral Agreements for the conservation and management of migratory species which require or would benefit from international cooperation (listed in Appendix 2), and by undertaking co-operative research activities. Appendix 1 Endangered migratory species in danger of extinction throughout all or a significant portion of their range, and for which Range States are obliged to prohibit taking and to take protective measures to conserve. (Note that taking may be permitted in some circumstances as outlined in Article III.5.)
CMS_A2	The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention or CMS) was adopted in Bonn, Germany in 1979 and came into force in 1985. Contracting Parties work together to conserve migratory species and their habitats by providing strict protection for endangered migratory species (listed in Appendix 1 of the Convention), concluding multilateral Agreements for the conservation and management of migratory species which require or would benefit from international cooperation (listed in Appendix 2), and by undertaking co-operative research activities. Appendix 2 Migratory species having an unfavourable conservation status for which Range States are encouraged to conclude international agreements for their benefit.
UK Legal	

PBA	Badgers and their setts are protected under the Protection of Badgers Act 1992 which makes it illegal to kill, injure or take badgers or to interfere with a badger sett. Interference with a sett includes blocking tunnels or damaging the sett in any way. Activities affecting badgers or their setts which would otherwise be illegal can be carried out under licence where there is suitable justification and the problem cannot be resolved by alternative means.
WCA1i	Protected Birds, Animals and Plants are listed in Schedules 1, 5 and 8 respectively of the Wildlife and Countryside Act. Schedule1: The Act makes it an offence (with exception to species listed in Schedule 2) to intentionally kill, injure, or take any wild bird or their eggs or nests. Special penalties are available for offences related to birds listed on Schedule 1, for which there are additional offences of disturbing these birds at their nests, or their dependent young. The Secretary of State may also designate Areas of Special Protection (subject to exceptions) to provide further protection to birds. The Act also prohibits certain methods of killing, injuring, or taking birds, restricts the sale and possession of captive bred birds, and sets standards for keeping birds in captivity. Schedule1 Part I Applies at all times
WCA1ii	Protected Birds, Animals and Plants are listed in Schedules 1, 5 and 8 respectively of the Wildlife and Countryside Act. Schedule1: The Act makes it an offence (with exception to species listed in Schedule 2) to intentionally kill, injure, or take any wild bird or their eggs or nests. Special penalties are available for offences related to birds listed on Schedule 1, for which there are additional offences of disturbing these birds at their nests, or their dependent young. The Secretary of State may also designate Areas of Special Protection (subject to exceptions) to provide further protection to birds. The Act also prohibits certain methods of killing, injuring, or taking birds, restricts the sale and possession of captive bred birds, and sets standards for keeping birds in captivity. Schedule 1 Part II Applies during the close season
WCA5/9.1k/l	Protected Birds, Animals and Plants are listed in Schedules 1, 5 and 8 respectively of the Wildlife and Countryside Act. Schedule 5: The Act makes it an offence (subject to exceptions) to intentionally kill, injure, or take, possess, or trade in any wild animal listed in Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying such places. The Act also prohibits certain methods of killing, injuring, or taking wild animals. Section 9.1. Animals which are protected from intentional killing or injuring.
WCA5/9.4a	Protected Birds, Animals and Plants are listed in Schedules 1, 5 and 8 respectively of the Wildlife and Countryside Act. Schedule 5: The Act makes it an offence (subject to exceptions) to intentionally kill, injure, or take, possess, or trade in any wild animal listed in Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying such places. The Act also prohibits certain methods of killing, injuring, or taking wild animals. Section 9.4a Animals which are protected from intentional disturbance while occupying a structure or place used for shelter or protection.
WCA5/9.4b	Protected Birds, Animals and Plants are listed in Schedules 1, 5 and 8 respectively of the Wildlife and Countryside Act. Schedule 5: The Act makes it an offence (subject to exceptions) to intentionally kill, injure, or take, possess, or trade in any wild animal listed in Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying such places. The Act also prohibits certain methods of killing, injuring, or taking wild animals.

	Section 9.4b Animals which are protected from intentional disturbance while occupying a structure or place used for shelter or protection. Section 9.4c Animals which are protected from their access to any structure or place which they use for shelter or protection being obstructed.
WCA8	Protected Birds, Animals and Plants are listed in Schedules 1, 5 and 8 respectively of the Wildlife and Countryside Act. Schedule 8: The Act makes it an offence (subject to exceptions) to pick, uproot, trade in, or possess (for the purposes of trade) any wild plant listed in Schedule 8, and prohibits the unauthorised intentional uprooting of such plants.
Yes	(In Berne/Bonn field). This identifies that bats are protected.
WCA9	
WCA9	Wildlife and Countryside Act Schedule 9 Animals which are not ordinarily resident in and are not a regular visitor to Great Britain in a wild state may not be released or allowed to escape into the wild. Plants included in Schedule 9, or hybrids thereof, may not be planted or otherwise grown in the wild.
NERC	
Sect.41	Section 40 of the NERC Act states that: 'Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity'. Section 40(3) also states that 'conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat'. Section 41 of the NERC Act states that the Secretary of State will produce a list of living organisms and types of habitat which are of principal importance for the purpose of conserving biodiversity.
BAP2007	
BAP-2007	The UK Biodiversity Action Plan (UK BAP), published in 1994 sets out a programme for conserving biodiversity in the UK. The UK BAP has published lists of species and habitats that are conservation priorities which are under threat because of their rarity and rate of decline.
LBAP	Local BAP species
IUCN	
BAmb	Bird Population Status – amber Amber list species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations.
BRed	Bird Population Status - red Red list species are those that are Globally Threatened according to IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and not shown a substantial recent recovery.
NR(vp)	Occurring in 15 or fewer hectads in Great Britain. Includes rare species qualifying under the main IUCN criteria.
RLGB.CR	IUCN - Critically endangered A taxon is Critically Endangered when it is facing an extremely high risk of extinction in the wild in the immediate future, as defined by any of the criteria A to E.
RLGB.DD	IUCN - Data Deficient A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution are lacking. Data Deficient is therefore not a category of threat or Lower Risk. Listing of taxa in this category indicates that more information is required and acknowledges the possibility that future research will show that a threatened category is appropriate.

RLGB.EN	IUCN - Endangered A taxon is Endangered when it is not Critically endangered but is facing a very high risk of extinction in the wild in the near future.
RLGB.Lr(NT)	IUCN - Lower risk - near threatened Taxa which do not qualify for Lower Risk (conservation dependent), but which are close to qualifying for Vulnerable. In Britain, this category includes species which occur in 15 or fewer hectads but do not qualify as Critically Endangered, Endangered or Vulnerable.
RLGB.VU	IUCN - Vulnerable A taxon is Vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium term future.
RLGLB.CR	IUCN - Critically endangered A taxon is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered (see Section V), and it is therefore considered to be facing an extremely high risk of extinction in the wild.
RLGLB.EN	IUCN - Endangered A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered (see Section V), and it is therefore considered to be facing a very high risk of extinction in the wild.
RDBEN.EX	Status from A Vascular Plant Red List for England BSBI 2014 (update). Believed Extinct in England
RDBEN.EN	Status from A Vascular Plant Red List for England BSBI 2014 (update). A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered (see Section V), and it is therefore considered to be facing a very high risk of extinction in the wild.
RDBEN.CR	Status from A Vascular Plant Red List for England BSBI 2014 (update). A taxon is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered (see Section V), and it is therefore considered to be facing an extremely high risk of extinction in the wild.
RDBEN.VU	Status from A Vascular Plant Red List for England BSBI 2014 (update). A taxon is Vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium term future.
RDBEN.NT	Status from A Vascular Plant Red List for England BSBI 2014 (update). Taxa which do not qualify for Lower Risk (conservation dependent), but which are close to qualifying for Vulnerable. In Britain, this category includes species which occur in 15 or fewer hectads but do not qualify as Critically Endangered, Endangered or Vulnerable.
RDBEN.EW	Status from A Vascular Plant Red List for England BSBI 2014 (update). Believed Extinct in the wild England
RDBEN.RE	Status from A Vascular Plant Red List for England BSBI 2014 (update). Believed Regionally Extinct
Scarce Rare	
N	Species which are estimated to occur within the range of 16 to 100 10km squares. (subdivision into Notable A and Notable B is not always possible because there may be insufficient information available). Superseded by Nationally Scarce, and therefore no longer in use.
Na	Taxa which do not fall within RDB categories but which are none-the-less uncommon in Great Britain and thought to occur in 30 or fewer 10km squares of the National Grid or, for less well-recorded groups, within seven or fewer vice-counties. Superseded by Nationally Scarce, and therefore no longer in use.
Nb	Taxa which do not fall within RDB categories but which are none-the-less uncommon in Great Britain and thought to occur in between 31 and 100 10km squares of the National Grid or, for less-well recorded groups between eight and twenty vice-counties. Superseded by Nationally Scarce, and therefore no longer in use.
NS	Occurring in 16-100 hectads in Great Britain. Excludes rare species qualifying under the main IUCN criteria.

Local	
Herts BB	Birds: >7% of the British breeding population in Hertfordshire. Published in Birds of Hertfordshire, 2015.
Herts HL	Birds: Hertfordshire local breeding species with 10 or less occupied breeding tetrads based on the 1988-92 atlas or subsequent records. Published in Birds of Hertfordshire, 2015.
Herts HR	Birds: Hertfordshire rare breeding species with less than 25 breeding pairs based on the 1988-92 atlas or subsequent records. Published in Birds of Hertfordshire, 2015.
Herts LD1	Birds: Local decline. Hertfordshire breeding species with greater than 50% decline in occupied tetrads between 1970 and 1990 based on the 1967-73 and 1988-92 atlases. Published in Birds of Hertfordshire, 2015.
Herts LD2	Birds: Recent local decline. Hertfordshire breeding species with greater than 25% decline between 1994 and 2000 based on the Hertfordshire BBS data. Published in Birds of Hertfordshire, 2015.
Herts LD3	Birds: Local decline based on records submitted to the county Bird Report or the results of specific Herts Bird Club surveys. Published in Birds of Hertfordshire, 2015.
Herts WS	Birds: Winter status - Hertfordshire holding >10% of the British wintering population. Published in Birds of Hertfordshire, 2015.
Herts NR	Birds: Species on the national Red List which occur regularly in Hertfordshire. Published in Birds of Hertfordshire, 2015.
Herts Extinct (B)	Butterflies: Herts Extinct. Formerly resident species that have not been reliably recorded in the county since at least the mid 1980s. Published in Butterflies of Hertfordshire and Middlesex, 2016.
Herts Absent (B)	Butterflies: Herts potentially extinct. Formerly resident species that have not been reliably recorded in the county in the period 2011-2015. Published in Butterflies of Hertfordshire and Middlesex, 2016.
Herts Rare (B)	Butterflies: Herts Rare. Species with restricted distributions, and in some cases recorded infrequently and/or in low abundances. Published in Butterflies of Hertfordshire and Middlesex,2016.
Herts Wide Decl (B)	Butterflies: Herts Widespread Declining. Species that have significant coverage of the county by tetrad, but show marked declines in abundance and/or number of occupied tetrads over the recording periods 1980-86 to 1996-2000 to 2011-2015. Published in Butterflies of Hertfordshire and Middlesex, 2016.
Herts Extinct (M)	Moths: Herts Extinct. Moths considered to be extinct as breeding species in Hertfordshire at 31st December 2006. *Published in The Moths of Hertfordshire,* 2008.
Herts End 1 (M)	Moths: Herts Endangered (Highest threat category). 1. 'Priority Species' within the UK Biodiversity Action Plan. Published in *The Moths of Hertfordshire,* 2008.
Herts End 2 (M)	Moths: Herts Endangered (Highest threat category). 2. Species categorised as ' Herts Rare' and believed to be declining in Hertfordshire and where none of these sites has a long term management plan that includes specifically identified proposals for this moth species. Published in *The Moths of Hertfordshire,* 2008.
Herts End 3 (M)	Moths: Herts Endangered (Highest threat category). 3. Species that would otherwise be categorised as Published in *The Moths of Hertfordshire,* 2008.
Herts End 4 (M)	Moths: Herts Endangered (Highest threat category). 4. Species that may be extinct in the county, but for which exists the possibility that they are overlooked rather than absent. Published in *The Moths of Hertfordshire,* 2008.
Herts Vul 1 (M)	Moths: Herts Vulnerable (Middle threat category). 1. Species categorised as 'Herts Rare' and believed to be declining in Hertfordshire but present on sites that either have a long term management plan that includes specifically identified proposals for this moth species or which are not under any specific threat. Published in *The Moths of Hertfordshire,* 2008.
Herts Vul 2 (M)	Moths: Herts Vulnerable (Middle threat category). 2. Species categorised as 'Herts Scarce' and believed to be declining in Hertfordshire and where none of these sites has a long term management plan that includes specifically identified proposals for this moth species. Published in *The Moths of Hertfordshire,* 2008.
Herts Vul 3 (M)	Moths: Herts Vulnerable (Middle threat category). 3. 'Herts Rare' species associated with a rare and threatened habitat, microhabitat or foodplant even if

	the moth itself does not appear to be declining. Published in *The Moths of Hertfordshire,* 2008.
Herts Vul 4 (M)	Moths: Herts Vulnerable (Middle threat category). 4. Nationally Rare (Red Data Book category 3) and Nationally Scarce (Nationally Notable) species not included elsewhere. Published in *The Moths of Hertfordshire,* 2008.
Herts Threat 1 (M)	Moths: Herts Threatened (Lower threat category). 1. Species categorised as 'Herts Scarce' and believed to be declining in Hertfordshire but present on at least one site that has a long term management plan that includes specifically identified proposals that will benefit this moth species. Published in *The Moths of Hertfordshire,* 2008.
Herts Threat 2 (M)	Moths: Herts Threatened (Lower threat category). 2. Species categorised as 'Herts Scarce' for which suitable habitat is in very short supply in the county even if there are no immediate threats to the habitat the balance could easily be tipped. Published in *The Moths of Hertfordshire,* 2008.
Herts Threat 3 (M)	Moths: Herts Threatened (Lower threat category). 3. Species not yet 'Herts Scarce' where these haveundergone a significant decline in Hertfordshire. Published in *The Moths of Hertfordshire*, 2008.
Herts Rare (M)	Moths: Herts Rare. Published in *The Moths of Hertfordshire,* 2008.
Herts Extinct	Plants: Herts Extinct. Plants thought to be extinct having not been recorded since at least before 1950, or whose havitat is known to have been degraded. Other probably extinct species are also listed. Published in *Flora of Hertfordshire,* 2010.
Herts Extinct as Native	Plants: Herts Extinct, as native. Plants thought to be extinct having not been recorded since at least before 1950, or whose havitat is known to have been degraded. Other probably extinct species are also listed. Published in *Flora of Hertfordshire,* 2010.
Herts ExtinctQ	Plants: Herts Extinct, status queried. Plants thought to be extinct having not been recorded since at least before 1950, or whose havitat is known to have been degraded. Other probably extinct species are also listed. Published in *Flora of Hertfordshire,* 2010.
Herts Rare	Plants: Herts Rare. Five or fewer current localities. Published in *Flora of Hertfordshire,* 2010.
Herts Rare as Native	Plants: Herts Rare, as native. Five or fewer current localities. Published in *Flora of Hertfordshire,* 2010.
Herts RareQ	Plants: Herts Rare, status queried. Five or fewer current localities. Published in *Flora of Hertfordshire,* 2010.
Herts Vulnerable	Plants: Herts Vulnerable. Species not otherwise Herts Rare or nationally under threat at any level, considered to have declinged 50% or more in the County since 1967, from the findings of the most recent Hertfordshire Flora Survey. Plants that may merit the 'Herts Rare' status, but whose current occurrence is uncertain, have also been listed. Published in *Flora of Hertfordshire,* 2010.
Herts VulnerableQ	Plants: Herts Vulnerable, status queried. Species not otherwise Herts Rare or nationally under threat at any level, considered to have declinged 50% or more in the County since 1967, from the findings of the most recent Hertfordshire Flora Survey. Plants that may merit the 'Herts Rare' status, but whose current occurrence is uncertain, have also been listed. Published in *Flora of Hertfordshire,* 2010.

Table 3. Nationally and locally rare invertebrates, extracted from Table 1 with additional habitat notes.

Common name	**Scientific name**	**Taxon group**	**Most recent record**	**UK status**	**Habitat notes**
Depressed River Mussel	*Pseudanodonta complanate*	Mollusc	2008	Red List: Vulnerable	Lives in the sediments of hard water rivers, typically at the margins. Likely to be threatened by water pollution and physical disturbance especially by dredging.
White-letter Hairstreak	*Satyrium w-album*	Butterfly	2009	Red List: Endangered	Breeds on various elm species, in sheltered hedgerows, mixed scrub and woodland rides.

	Limnebius papposus	Beetle	2002	Red List: Near Threatened (occurs in 15 or fewer 10km squares)	A ‘moss beetle’ associated with freshwater margins.
	Aquarius paludum	True bug	1953	Nationally Scarce (occurs in 16-100 10km squares)	Aquatic ‘water skater’ bug occurring on lakes, rivers and streams.
Musk beetle	*Aromia moschata*	Beetle	1953	Nationally Scarce (occurs in 16-100 10km squares)	Found in wetland or marginal situations with an abundance of the host, various species of willow.
	Ceutorhynchus rapae	Beetle	1945	Nationally Scarce (occurs in 16-100 10km squares)	A parasite of brassicas including oilseed rape.
	Pelenomus quadricorniger	Beetle	1945	Nationally Scarce (occurs in 16-100 10km squares)	
Bordered ladybird	*Scymnus limbatus*	Beetle	1945	Nationally Scarce (occurs in 16-100 10km squares)	Associated with willows and poplars in wetland habitats.
	Stenocarus ruficornis	Beetle	1950	Nationally Scarce (occurs in 16-100 10km squares)	
Hedge Cosmet	*Cosmopterix zieglerella*	Moth	2014	Herts Rare moth, Hertfordshire Species of Conservation Concern	Larva feeds on hop (*Humulus lupulus*).
	Enochrus melanocephalus	Beetle	2002	Herts Rare beetle, Hertfordshire Species of Conservation Concern	A water beetle associated with richly vegetated pools and ponds, sometimes in shaded areas.
Willow Bent-wing	*Phyllocnistis saligna*	Moth	2011	Herts Endangered moth (may be extinct in the county), Hertfordshire Species of Conservation Concern	Larva feeds on willow, particularly purple willow (*Salix purpurea*) and sometimes other smooth-leaved willows such as crack willow (*S. fragilis*).
	Soronia punctatissima	Beetle	1944	Herts Rare beetle, Hertfordshire Species of Conservation Concern	Little known. Found mainly on sap runs and in fermenting vegetable matter.
Small Skipper	*Thymelicus sylvestris*	Butterfly	2005	Herts Widespread Declining butterfly	Almost exclusively uses Yorkshire-fog (*Holcus lanatus*) as a food plant.

APPENDIX I: LOCAL WILDLIFE SITE SURVEY REPORT

Wildlife Site Survey Report for: Rickmansworth Aquadrome, Bury and Batchworth Lakes

Site Ref:	89/014		**Site size (ha):**	42.8	
District:	Three Rivers		**Grid Ref:**	TQ054939	
Surveyors:	SM, JL, BH, CL, JE, AH, JS				
Date of survey:	15th, 22nd May, 9th June, 30th Aug 2012	**Weather:** mixed – hail/sun/rain		**Duration:**	16 hours in total approx

Geology:	**Bedrock:**	Information unavailable
	Superficial Deposits:	ALLUVIUM - CLAY, SILT, SAND AND GRAVEL

Original criteria:	S.6.2 (invertebrates) S.5.1 (reptiles)	**Habitat:**	Mosaic – open and flowing water, grassland, wet woodland
Criteria met:	H.1.3.2 – wet woodland (not NVC community-specific) *Alnus glutinosa* and *Salix* are the predominant tree species H.2.2b – neutral grassland (12 indicators) H.2.2d – wet grassland (10 indicators) H.2.2e – mixed grassland (21 indicators) H.5.3 – Tall herb fens and swamps (not NVC specific) (10 indicators) H.6.1 – mosaic where at least one habitat is borderline WS		
Previous criteria not met:	Not surveyed for S.6.2 (invertebrates) or S.5.1 (reptiles/amphibians)		
Changes to boundary?	Yes - Areas of amenity grassland to be removed as annotated on the map (Areas A and C)		

New Site Description:	Flooded gravel pits along the valley of the River Colne with Bury Lake to the west and Batchworth Lake to the east, and urban areas to the north, east and southeast. Some small spp-rich grassland areas with relict areas of mature wet woodland composed of Crack Willow (Salix fragilis), Alder (Alnus glutinosa), Hawthorn (Crataegus monogyna) and Sycamore (Acer pseudoplatanus) with some Hybrid Black Poplar (Populus x canadensis) plantation. Old drainage ditches run through the wooded areas. The lake edges support sedges (Carex spp.), rushes (Juncus spp.), Common Reed (Phragmites australis), Reed Sweet-grass (Glyceria maxima), Wild Angelica (Angelica sylvestris), Butterbur (Petasites hybridus) and other marginal aquatic vegetation. The rougher open areas are mainly dominated by tall herbs, particularly Stinging Nettle (Urtica dioica), and Bramble (Rubus fruticosus agg.) but there are some extensive areas of Meadowsweet (Filipendula ulmaria) in parts of the grassland and woodland areas. The site has records for nationally notable beetles and is an important site for birds, particularly water fowl. Grass Snakes (Natrix natrix) have also been recorded from the site. Wildlife Site criteria: Mosaic; wet woodland, neutral and wet grassland, fen and swamp indicators.
'AM'; 'U'; 'PSIG'; 'TR'; 'PC'	'AM' = Amenity grassland; 'U' = Urban; 'PSIG'=poor=semi-improved-grassland; 'TR'=Tall Ruderal; 'PC'= Plantation of Conifers. These areas were not recorded in the spp lists as they are all of very poor botanical or habitat interest, and have been noted on the map, for consideration for removal from the WS boundary.
Area A: 'WW'; 'BW'; 'MC'; 'BP'	'WW' = Wet Woodland; 'BW' = dry/drier Broadleaved Woodland; 'MC'= Marginal Carr – i.e. waterside margins Wet Woodland strips; 'BP'=Broadleaved Plantation.

	BW: Broadleaved Woodland exists in scattered, small areas, mostly Hawthorn, Ash, Alder, Willow, Hybrid Black Poplar. Some plantation areas Scots Pine, European Larch, Elm sp. WW: extensive Wet Woodland areas on site merge throughout into drier smaller areas of BW. Plentiful tall standard mature trees: dominant mature species include Common Alder, Grey Alder, plentiful Crack Willow, Sycamore, Ash. Midlayer dominant species include Elder, Hawthorn, Hazel, Grey Willow, Spindle, young Wild Cherry, Ash saplings, young Maples. Ground flora dominated by Stinging Nettle, Butterbur, Pond Sedge spp, Meadowsweet, Cow Parsley, Bramble, Dock spp, Wild Angelica, and Bindweed spp. Woodland areas have plentiful deadwood and reasonable structure throughout, drains running throughout, areas of wet merging into dry throughout, but predominantly wet woodland. BP: The main area of Broadleaved Plantation is the area along the northern side with plentiful Hybrid Black Poplar had a very good structure, with midlayer of Hazel, Hornbeam, Field Maple, and Grey Alder. This midlayer may be a natural development but unsure. MC: Marginal Carr areas - these were wet-woodland community treelines around lakes – dominated by Crack Willow, Grey Willow, some Common Alder. Note that many of the herbaceous species found beneath trees here were the same as those recorded under Area B (herbaceous marginal vegetation). In the spp list, Area A2 is the area of WW, BW and BP woodland in the north east corner of the WS, between the river Colne along Riverside Drive– surveyed on a separate date. The woodland community species assemblage is similar to the rest of the site, with a mix of wet and dry woodland and some broadleaf plantation. Herbaceous lakeside species have also been recorded in this compartment, north of Bury Lake: with Comfrey, Water Figwort, Pond Sedge, Ash saplings.
Area B	Area B (spp rich herbaceous waterside / tall fen vegetation): Lakeside vegetation not overshadowed by trees – dominated by: Yellow Fleabane, Hemp Agrimony, some Wild Angelica, Great Willowherb, Cleavers, Yellow flag and Sweet Iris, Gypsywort, Purple Loosestrife, Meadowsweet, Water Mint, Greater and Lesser Pond Sedge. One larger area exists in the S corner of the site near the boathouse, along the SE shore of Bury Lake. Common Reed stands exist – along the SW shore of Bury Lake, and along the SW shore of Batchworth Lake.
AREA C1 (SING):	SING – spp rich neutral grassland – dominated by False Oat Grass, Cocksfoot, some Common Bent and Meadow Foxtail, Hedge Bedstraw, Bird's-foot-trefoil, Lesser Stitchwort, Common Knapweed, Common Vetch, Yellow-rattle (possibly planted), Sweet Vernal-grass, Agrimony, Creeping Cinquefoil. The edges were dominated by tall ruderal vegetation. Note that lower eastern edge alongside housing has a young planted tree-line which possibly should be removed for the purpose of restorative management of the grassland and preventing further shading. Sward herb composition in the central area approx 15%.
Area C2 (SING):	SING Meadow by Stockers Lake – dominated by False Oat-grass, Creeping Bent, Cocksfoot, Rough and Smooth Meadow Grass, Perennial Rye, Tufted Hair Grass, Red Fescue, some Meadow Foxtail, Wild Angelica, Hedge Bedstraw, Upright Hedge Parsley, Marsh Horsetail, Meadowsweet, Goatsbeard, Germander Speedwell, Creeping Cinquefoil, Yarrow.

	Sward herb composition approx 10%
Area F (Hedge/treeline):	Canalside towpath species –including dry ditch, overgrown hedgerow/treeline runs along either side of this ditch. Dominated by Ash, Hazel, Hawthorn, Crack Willow, Alder, Elder, Ivy, Larch, Scots Pine. Also with Stinging Nettle, Wild Angelica, Cow Parsley, Spindle, Great Willowherb, Japanese Knotweed, Hogweed, Creeping Buttercup, Bramble. This area is likely to be getting much nutrient enrichment from dogs as is near the car park.

Adjacent land:	Stockers Farm Meadow Wildlife Site 89/009 is to south, Stockers Lake 88/001 to west.

Fauna:	**Birds:**	Robin, Starling, Garden Warbler, Chiffchaff, Jackdaw, Woodpigeon, Stockdove, Canada Geese, Ring-necked Parakeets, Song Thrush, Swifts, Swallows, Cuckoo, Reed Warbler, Blackbird, Blackcap, Greater Spotted Woodpecker, Sedge Warbler, Heron, Common Tern, Reed Bunting, Moorhen, Great Crested Grebe, Mallard.
	Mammals:	Evidence of moles
	Invertebrates:	Bumblebee, Peacock Butterfly, Orange Tip, damselflies, several bee and hoverfly species spotted in the later summer survey, as well as Roesel's Bush Cricket and Silver-Y moth in Area C1.

Current Management:	Management: path maintenance and mowing currently keeping areas clear for public access. Water/lake areas are used for boating (non motorised). Some Black Poplar hybrids had been felled next to the tip. Extensive gravel stands have been put in recently for fishing all around Batchworth Lake and some sown amenity grass on either side of them. Grassland management – cutting regime unknown, but dominant False Oat-grass in areas C1 and C2 suggest that cutting is happening very late in the year and possibly not annually. Few new tree planting apparent, although the tree saplings which have been planted in area C1 may be related to the houses adjacent hoping to increase garden size – these should be cut and the edges of area C1 needs to be kept in check as tall ruderal (nettle and bramble) are dominating. Wet woodland areas are possibly unmanaged at present but that is not negative – plentiful dead wood and good structure (see woodland assessment below).
Recommended Management:	Firstly and immediately needed is invasive species control and grassland mowing regime. Notable plants in need of control are Japanese Knotweed, Orange Balsam, Michaelmas Daisy, Snowberry – all marked on Map 2 below. Grassland – cutting regime depending on spp assemblage – possibly a mid-July cut initially to control dominating False Oat-grass and a later cut as this is weakened. Waterside herbaceous vegetation should be encouraged and trees shading some of these areas or adjacent these areas along lakesides could be cleared to encourage the herbs.

Species List

Scientific Name	Common Name	WS inds (*/a/n/c/w/f) & neg inds ('-')	Area C1 - SING meadow DAFOR	Area F (canalside): DAFOR	Area C2 (meadow by Stockers Lake) DAFOR	Area A (MC, BW, WW, BP) DAFOR	Areas B herbaceous waterside/tall fen DAFOR	Area A2 (BW, WW, BP) DAFOR	all inds	no of comps total
Acer campestre	Maple, Field	*		+		R		+	x	3
Acer platanoides	Maple, Norway*					R		+		2
Acer pseudoplatanus	Sycamore			+		R	+	R		4
Achillea millefolium	Yarrow		R	+	R		R	+		5
Acorus calamus	Flag, Sweet						+			1
Aegopodium podagraria	Ground Elder			+		R	R	R		4
Aesculus hippocastanum	Chestnut, Horse*			+		R		+		3
Agrimonia eupatoria	Agrimony	c/n	+						x	1
Agrostis capillaris	Bent, Common	a/n	O		+					2
Agrostis stolonifera	Bent, Creeping				R					1
Alliaria petiolata	Mustard, Garlic			R		R	R	R		3
Alnus glutinosa	Alder, Common			R		O	O	R		4
Alnus cordata	Alder Italian*							+		1
Alnus incana	Alder, Grey*					R				1
Alopecurus pratensis	Foxtail, Meadow		F		R					2
Angelica sylvestris	Angelica	f/w		R	R	R	R	R	x	5
Anisantha sterilis	Brome, Barren		+	+	R					3
Anthoxanthum odoratum	Grass, Sweet Vernal	n	R						x	1
Anthriscus sylvestris	Parsley, Cow	- c/n/w	R	R	R	R	R	R		6
Aphanes arvensis	Parsley-piert				+					1
Apium nodiflorum	Watercress, Fool's						R			1
Arctium lappa	Burdock, Greater					R				1
Arctium minus	Burdock, Lesser			R		R	R	R		4
Arrhenatherum elatius	Oat-grass, False	- a/c/n/w	+		R			+		3
Artemisia vulgaris	Mugwort		R				+	+		3

Scientific Name	Common Name	WS inds (*/a/n/c/w/f) & neg inds ('-')	Area C1 - SING meadow DAFOR	Area F (canalside): DAFOR	Area C2 (meadow by Stockers Lake) DAFOR	Area A (MC, BW, WW, BP) DAFOR	Areas B herbaceous waterside/tall fen DAFOR	Area A2 (BW, WW, BP) DAFOR	all inds	no of comps total
Arum maculatum	Lords-and-Ladies			R		+				2
Aster pyrenaeus	Michaelmas Daisy*						+			1
Bellis perennis	Daisy	- a/c				+		R		2
Betula pendula	Birch, Silver			+		+		+		3
Brachypodium sylvaticum	Brome, False					R				1
Bromus hordeaceus	Brome, Soft	- n	+							1
Bryonia dioica	Bryony, White			+						1
Buddleia davidii	Butterfly Bush					R	+	+		3
Caltha palustris	Marigold, Marsh	f/w					R	+	x	2
Calystegia sp	Bindweed			+						1
Calystegia sepium	Bindweed, Hedge					+	+	R		3
Calystegia sylvatica	Bindweed, Large						R			1
Cardamine flexuosa	Bitter-cress, Wavy	*					+		x	1
Cardamine hirsuta	Bitter-cress, Hairy							+		1
Cardamine pratensis	Cuckoo-flower	n/w					+	+	x	2
Carduus crispus	Thistle, Welted					+				1
Carex acutiformis	Sedge, Lesser Pond	f				R	R	R	x	3
Carex hirta	Sedge, Hairy					+	+			2
Carex pendula	Sedge, Pendulous	*					+	+	x	2
Carex riparia	Sedge, Greater Pond						R			1
Carpinus betulus	Hornbeam	*	+			+		+	x	3
Castanea sativa	Chestnut, Sweet							+		1
Centaurea nigra	Knapweed, Black/Com'n	c/n	R				+		x	2
Cerastium fontanum	Mouse-ear, Common	- a			R	+				2
Chamaecyparis lawsoniana	Cypress, Lawson's*					R				1
Chamerion angustifolium	Willowherb, Rosebay	- a/c					+			1
Circaea lutetiana	Enchanter's-nightshade	*				+		+	x	2
Cirsium arvense	Thistle, Creeping	- a/c/n/w	R		R		R	+		4

Scientific Name	Common Name	WS inds (*/a/n/c/w/f) & neg inds ('-')	Area C1 - SING meadow DAFOR	Area F (canalside): DAFOR	Area C2 (meadow by Stockers Lake) DAFOR	Area A (MC, BW, WW, BP) DAFOR	Areas B herbaceous waterside/tall fen DAFOR	Area A2 (BW, WW, BP) DAFOR	all inds	no of comps total
Cirsium vulgare	Thistle, Spear	- a/c/n/w		R	+	R	+	+		5
Cicerbita macrophylla	Sow-thistle, Com'n Blue							R		1
Clematis vitalba	Clematis			+						1
Conium maculatum	Hemlock			+						1
Convolvulus arvensis	Bindweed, Field		R							1
Cornus sanguinea	Dogwood					+		+		2
Corylus avellana	Hazel	*		+		R			x	2
Crataegus monogyna	Hawthorn		+	R		O	+	R		5
Cupressus macrocarpa x Xanthocyparis nootkatensis = X Cuprocyparis leylandi	Cypress, Leyland*					+				1
Dactylis glomerata	Cocksfoot	- a/c/n/w	R	R	O	R	R	R		6
Deschampsia cespitosa	Hair-grass, Tufted	- n/w			R					1
Epilobium hirsutum	Willowherb, Great		R	R	R		R	+		5
Epilobium montanum	Willowherb, Broad-leaved							+		1
Equisetum arvense	Horsetail, Field	- n		+						1
Equisetum palustre	Horsetail, Marsh	f/w			R		+		x	2
Euonymus europaeus	Spindle		R	R		+				3
Eupatorium cannabinum	Agrimony, Hemp	f				+	R	R	x	3
Fagus sylvatica	Beech					+				1
Fallopia japonica	Knotweed, Japanese*			R			+	R		3
Festuca arundinacea	Fescue, Tall		R					+		2
Festuca rubra agg.	Fescue, Red (family)		R		R					2
Filipendula ulmaria	Meadowsweet	f/w		R	R	R	R	+	x	5
Frangula alnus	Buckthorn, Alder*		+							1
Fraxinus excelsior	Ash			F		O	+	R		4
Galeopsis bifida	Hemp-nettle, Bifid						+			1
Galium aparine	Cleavers	- c/n		R		F	O			3
Galium mollugo	Bedstraw, Hedge		R	+	R					3

Scientific Name	Common Name	WS inds (*/a/n/c/w/f) & neg inds ('-')	Area C1 - SING meadow DAFOR	Area F (canalside): DAFOR	Area C2 (meadow by Stockers Lake) DAFOR	Area A (MC, BW, WW, BP) DAFOR	Areas B herbaceous waterside/tall fen DAFOR	Area A2 (BW, WW, BP) DAFOR	all inds	no of comps total
Geranium dissectum	Cranesbill, Cut-leaved		R	+	+		+			4
Geranium molle	Cranesbill, Dove's-foot			+			+	R		3
Geranium pyrenaicum	Cranesbill, Hedge		+							1
Geranium robertianum	Herb Robert			+		R		R		3
Geum urbanum	Wood Avens			R		R	R	R		4
Glechoma hederacea	Ground Ivy			R		R	+	R		4
Glyceria maxima	Sweet-grass, Reed	- w					R			1
Hedera helix	Ivy			R		R	+	O		4
Heracleum sphondylium	Hogweed		R	R	+	+		+		5
Holcus lanatus	Yorkshire Fog	- a/c/n/w	R	R			R			3
Holcus mollis	Soft-grass, Creeping	a						+	x	1
Hordeum murinum	Barley, Wall							+		1
Humulus lupulus	Hop			R		R		+		3
Hyacinthoides x massartiana	Bluebell, hybrid			R		+				2
Hypericum perforatum	St John's-wort, Perforate		R							1
Hypericum tetrapterum	St John's-wort, Sq-stalked	w					+		x	1
Ilex aquifolium	Holly	*		+		+			x	2
Impatiens capensis	Balsam, Orange*						R			1
Iris pseudacorus	Iris, Yellow flag						R	R		2
Juncus articulatus	Rush, Jointed	w					R			1
Juncus effusus	Rush, soft				+					1
Juncus inflexus	Rush, Hard				+		+			2
Lactuca serriola	Lettuce, Prickly				+					1
Lamium album	Dead Nettle, White		+	R	+	+	+	R		6
Lamium purpureum	Dead-Nettle, Red		+	+				+		3
Lapsana communis	Nipplewort			R		+		+		3
Larix decidua	Larch, European			R				+		2
Lemna minor	Duckweed, Common					R				1

Scientific Name	Common Name	WS inds (*/a/n/c/w/f) & neg inds ('-')	Area C1 - SING meadow DAFOR	Area F (canalside): DAFOR	Area C2 (meadow by Stockers Lake) DAFOR	Area A (MC, BW, WW, BP) DAFOR	Areas B herbaceous waterside/tall fen DAFOR	Area A2 (BW, WW, BP) DAFOR	all inds	no of comps total
Leucanthemum vulgare	Daisy, Oxeye	c/n			+	+		+	x	3
Lolium perenne	Rye-grass, Perennial	- a/c/n/w			R			+		2
Lotus corniculatus	Bird's-foot-trefoil, Com'n	c/n	+						x	1
Lotus pedunculatus	Bird's-foot-trefoil, Greater	f/w	+						x	1
Lycopus europaeus	Gipsywort					+	R	+		3
Lythrum salicaria	Loosestrife, Purple	f					+	+	x	2
Mahonia sp.	Mahonia sp.*							+		1
Malus pumila	Apple, domestic*			+				+		2
Malva sylvestris	Mallow, Common			+				+		2
Medicago arabica	Medick, Spotted							+		1
Mentha aquatica	Mint, Water				R		R	+		3
Mycelis muralis,	Lettuce, Wall					+				1
Myosotis arvensis	Forget-me-not, Field							+		1
Myosotis spp	Forget-me-not, spp							+		1
Myosotis scorpioides	Forget-me-not, Water						R			1
Myosotis sylvatica	Forget-me-not, Wood, cultivated*					+				1
Odontites vernus	Bartsia, Red		+		+					2
Oenanthe crocata	Water Dropwort, Hemlock						R	R		2
Pentaglottis sempervirens	Alkanet, Green			+			+	+		3
Petasites hybridus	Butterbur					R	R	R		3
Phalaris arundinacea	Canary-grass, Reed	f					+	+	x	2
Phragmites australis	Reed, Common	f					O		x	1
Phleum pratense	Timothy				R					1
Pinus sylvestris	Pine, Scots			R				+		2
Plantago lanceolata	Plantain, Ribwort		R	R		R	+	R		5
Plantago major	Plantain, Greater	- a/c/n	+	R		R	+	R		5
Poa angustifolia	Meadow-grass, Narrow-leaved				+		+			2
Poa annua	Meadow-grass, Annual			R			R	+		3

Scientific Name	Common Name	WS inds (*/a/n/c/w/f) & neg inds ('-')	Area C1 - SING meadow DAFOR	Area F (canalside): DAFOR	Area C2 (meadow by Stockers Lake) DAFOR	Area A (MC, BW, WW, BP) DAFOR	Areas B herbaceous waterside/tall fen DAFOR	Area A2 (BW, WW, BP) DAFOR	all inds	no of comps total
Poa pratensis	Meadow-grass, Smooth		R	R	R					3
Poa trivialis	Meadow-grass, Rough	- w			R		R	R		3
Polygonum aviculare	Knotgrass							+		1
Polygonum maculosa	Redshank						+			1
Populus x canadensis agg.	Poplar Hybrid Black							+		1
Populus tricocarpa	Poplar, Balsam*					+				1
Potentilla anserina	Silverweed						+	+		2
Potentilla reptans	Cinquefoil, Creeping		R				R	R		3
Prunella vulgaris	Selfheal		+					R		2
Prunus avium	Cherry, Wild	*		+		+		+	x	3
Prunus laurocerasus	Laurel, Cherry*					+		+		2
Prunus spinosa	Blackthorn			+				+		2
Pulicaria dysenterica	Fleabane, Common	w			R	+	R		x	3
Quercus cerris	Oak, Turkey							+		1
Quercus robur	Oak, Pedunculate		+	+		+		+		4
Ranunculus acris	Buttercup, Meadow	n		+				+	x	2
Ranunculus bulbosus	Buttercup, Bulbous	c/n	R		R				x	2
Ranunculus ficaria	Celandine, Lesser					R				1
Ranunculus repens	Buttercup, Creeping	- w	+	R	R	R	R			5
Rhamnus cathartica	Buckthorn*		+							1
Rhinanthus minor	Rattle, Yellow*	c/n	+						x	1
Rhus typhina	Sumach, Rhus*		R							1
Rosa arvensis	Rose, Field	*		+					x	1
Rosa canina agg	Rose, Dog			+		+	+			3
Rubus fruticosus agg.	Bramble		R	R		R	R	R		5
Rumex acetosa	Sorrel, Common	n	R		+				x	2
Rumex crispus	Dock, Curled	- c/n/w			+					1
Rumex obtusifolius	Dock, Broad-leaved	- c/n/w	+	R	+	+	R	R		6

Scientific Name	Common Name	WS inds (*/a/n/c/w/f) & neg inds ('-')	Area C1 - SING meadow DAFOR	Area F (canalside): DAFOR	Area C2 (meadow by Stockers Lake) DAFOR	Area A (MC, BW, WW, BP) DAFOR	Areas B herbaceous waterside/tall fen DAFOR	Area A2 (BW, WW, BP) DAFOR	all inds	no of comps total
Rumex palustris	Dock, Marsh							+		1
Rumex sanguineus	Dock, Wood			R	+	+	+	+		5
Salix alba	Willow, White					+		R		2
Salix babylonica	Willow, Weeping							+		1
Salix caprea	Willow, Goat					R		R		2
Salix cinerea agg	Willow, Grey						R			1
Salix fragilis	Willow, Crack			F		F				2
Sambucus nigra	Elder			R		R	R	R		4
Scorzoneroides autumnalis	Hawkbit, Autumn			R			R			2
Scrophularia auriculata	Figwort, Water					+	+	R		3
Senecio jacobaea	Ragwort, Common	- a/c/n	R					+		2
Senecio vulgaris	Groundsel							+		1
Silene dioica	Campion, Red			R		+		+		3
Silene flos-cuculi	Ragged Robin	f/w					+		x	1
Silene latifolia	Campion, White					+				1
Sisymbrium officinale	Mustard, Hedge				+			+		2
Solanum dulcamara	Bittersweet						R	R		2
Solidago canadensis	Goldenrod, Canadian*						+			1
Sonchus oleraceus	Sow-thistle, Smooth						+	+		2
Sorbus agg.	Whitebeam, agg							+		1
Sorbus aria	Whitebeam, Common			+						1
Sorbus aucuparia	Rowan / Mountain Ash			+						1
Sparganium erectum	Burr-reed, Branched						+			1
Stachys palustris	Woundwort, Marsh						R			1
Stachys sylvatica	Woundwort, Hedge		+	R			+	+		4
Stellaria graminea	Stitchwort, Lesser	a/n	R						x	1
Stellaria holostea	Stitchwort, Greater					+				1
Stellaria media	Chickweed			R		+		+		3

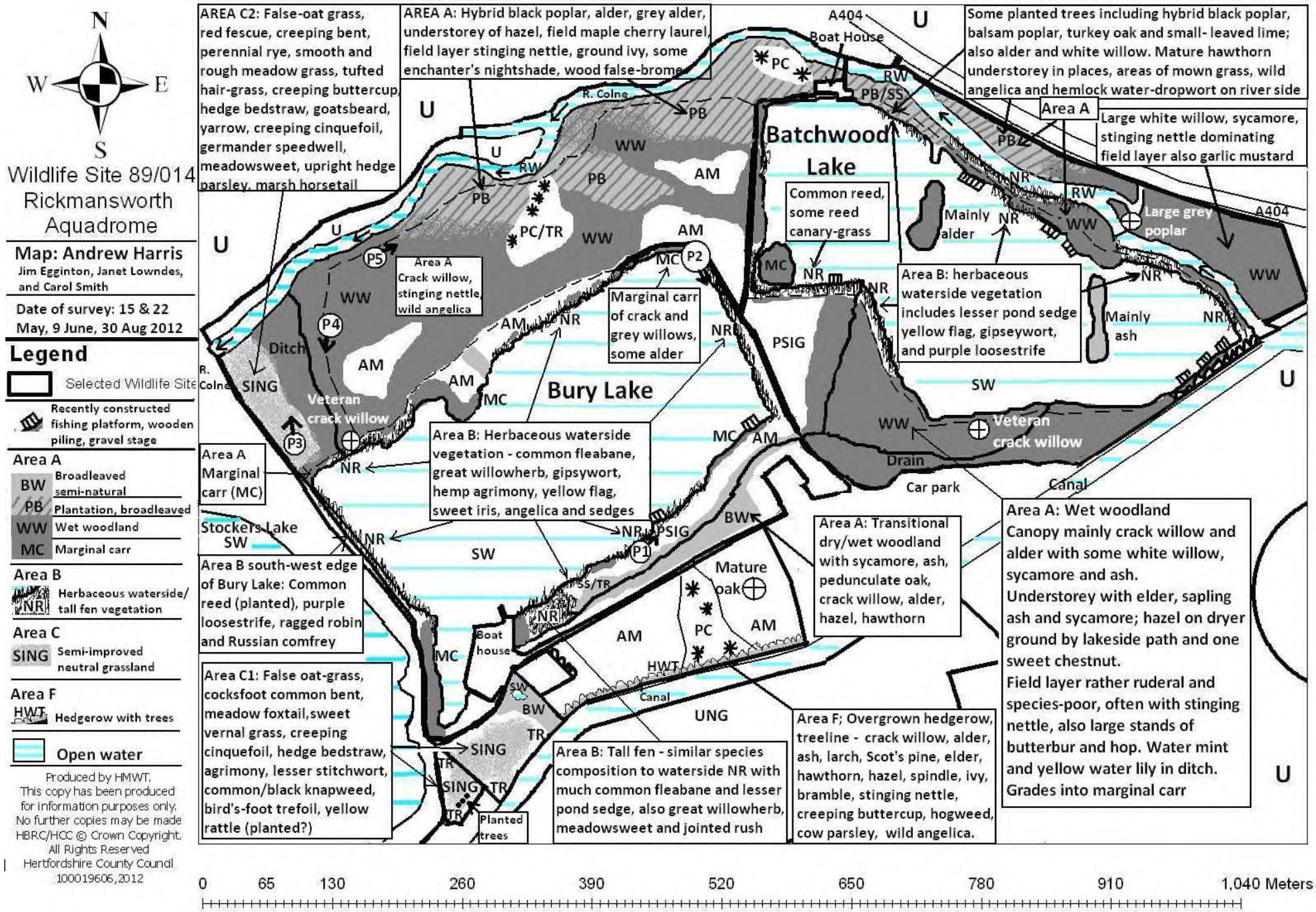
Scientific Name	Common Name	WS inds (*/a/n/c/w/f) & neg inds ('-')	Area C1 - SING meadow DAFOR	Area F (canalside): DAFOR	Area C2 (meadow by Stockers Lake) DAFOR	Area A (MC, BW, WW, BP) DAFOR	Areas B herbaceous waterside/tall fen DAFOR	Area A2 (BW, WW, BP) DAFOR	all inds	no of comps total
Symphoricarpus albus	Snowberry					+		+		2
Symphytum officinale	Comfrey, Common	f		+	+	R			x	3
Symphytum officinale x asperum = S. x uplandicum	Comfrey, Russian						+			1
Symphytum orientale	Comfrey, White							R		1
Taraxacum officinale agg.	Dandelion family		+	+	+	+	R	+		6
Taxodium distichum	Cypress, Swamp*							+		1
Taxus baccata	Yew					+		+		2
Tilia platyphyllos x cordata = T. x europaea	Lime, Common*			+		R		+		3
Torilis japonica	Parsley, Upright Hedge				R		+			2
Tragopogon pratensis	Goat's-beard		R		R					2
Trifolium repens	Clover, White	- a/c/n/w	R				+	+		3
Tussilago farfara	Colt's-foot						+	+		2
Typha latifolia	Bulrush						R			1
Urtica dioica	Nettle, Stinging	- a/c/n/w	R	R		F	R	O		5
Veronica arvensis	Speedwell, Wall		+							1
Veronica beccabunga	Speedwell, Brooklime									1
Veronica chamaedrys	Speedwell, Germander	c/n	R	R	+	+		R	x	5
Veronica filiformis	Speedwell, Slender					+				1
Veronica hederifolia	Speedwell, Ivy-leaved			+		+				2
Veronica persica	Speedwell, Com'n Field			+			+			2
Veronica serpyllifolia	Speedwell, Thyme-leaved			+						1
Viburnum lantana	Wayfaring-tree					+				1
Viburnum opulus	Guelder-rose*		+							1
Vicia sativa	Vetch, Common		R				+			2
Viola odorata	Violet, Sweet			+						1
*=planted/introduced/escape	**per compartment totals:**		**57**	**79**	**46**	**85**	92	**113**		

Total species (all comp.s) 217	total indicators 36						
Area A (MC, BW, WW, BP) DOMIN	**AWI**	**Neut**	**Acid**	**Calc**	**Wet**	**Fen**	**c/a/n/w**
	6	**2**	**0**	**2**	**3**	**5**	**5**
Area A2 (BW, WW, BP) DOMIN	**AWI**	**Neut**	**Acid**	**Calc**	**Wet**	**Fen**	**c/a/n/w**
(only the area east of the canal surveyed 9/6)	**6**	**4**	**1**	**2**	**4**	**7**	**8**
Areas B herbaceous waterside/tall fen DOMIN	**AWI**	**Neut**	**Acid**	**Calc**	**Wet**	**Fen**	**c/a/n/w**
	2	**2**	**0**	**1**	**9**	**10**	**10**
Area C1 - SING meadow DOMIN	**AWI**	**Neut**	**Acid**	**Calc**	**Wet**	**Fen**	**c/a/n/w**
	1	**10**	**2**	**6**	**1**	**1**	**11**
Area C2 (meadow by Stockers Lake)	**AWI**	**Neut**	**Acid**	**Calc**	**Wet**	**Fen**	**c/a/n/w**
	0	**5**	**1**	**3**	**4**	**4**	**9**
Area F (canalside): DOMIN	**AWI**	**Neut**	**Acid**	**Calc**	**Wet**	**Fen**	**c/a/n/w**
	5	**2**	**0**	**1**	**2**	**3**	**4**
All Compartments:	**AWI**	**Neut**	**Acid**	**Calc**	**Wet**	**Fen**	**c/a/n/w**
	9	**13**	**3**	**7**	**10**	**12**	**22**
Threshholds:	**AWI**	**Neut**	**Acid**	**Calc**	**Wet**	**Fen**	**c/a/n/w**
min size (ha)	1	0.25	0.25	0.25	0.25	0.25	0.25
min indicators	10	8	5	8	5	5	12

DAFOR Scale:

D	Dominant	>75% cover
A	Abundant	51-75% cover
F	Frequent	26-50% cover
O	Occasional	11-25% cover

Map 1: showing compartments and with habitat/spp community descriptions per area:


N
W
E
S
Wildlife Site 89/014
Rickmansworth
Aquadrome
Map: Andrew Harris
Jim Egginton, Janet Lowndes, and Carol Smith
Date of survey: 15 & 22 May, 9 June, 30 Aug 2012
Legend
Selected Wildlife Site
Recently constructed fishing platform, wooden piling, gravel stage
Area A
BW Broadleaved semi-natural
PB Plantation, broadleaved
WW Wet woodland
MC Marginal carr
Area B
NR Herbaceous waterside/ tall fen vegetation
Area C
SING Semi-improved neutral grassland
Area F
HWT Hedgerow with trees
Open water
Produced by HMWT.
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Hertfordshire County Council 100019606, 2012
AREA C2: False-oat grass, red fescue, creeping bent, perennial rye, smooth and rough meadow grass, tufted hair-grass, creeping buttercup, hedge bedstraw, goatsbeard, yarrow, creeping cinquefoil, germander speedwell, meadowsweet, upright hedge parsley, marsh horsetail
AREA A: Hybrid black poplar, alder, grey alder, understorey of hazel, field maple cherry laurel, field layer stinging nettle, ground ivy, some enchanter's nightshade, wood false-brome
Some planted trees including hybrid black poplar, balsam poplar, turkey oak and small- leaved lime; also alder and white willow. Mature hawthorn understorey in places, areas of mown grass, wild angelica and hemlock water-dropwort on river side
Area A
Large white willow, sycamore, stinging nettle dominating field layer also garlic mustard
Batchwood Lake
Bury Lake
Stockers Lake
A404
Boat House
R. Colne
Common reed, some reed canary-grass
Mainly alder
Large grey poplar
Area B: herbaceous waterside vegetation includes lesser pond sedge yellow flag, gipseywort, and purple loosestrife
Mainly ash
Area A Crack willow, stinging nettle, wild angelica
Marginal carr of crack and grey willows, some alder
Ditch
Veteran crack willow
Area A Marginal carr (MC)
Area B: Herbaceous waterside vegetation - common fleabane, great willowherb, gipsywort, hemp agrimony, yellow flag, sweet iris, angelica and sedges
Drain
Car park
Canal
Area A: Transitional dry/wet woodland with sycamore, ash, pedunculate oak, crack willow, alder, hazel, hawthorn
Area A: Wet woodland
Canopy mainly crack willow and alder with some white willow, sycamore and ash.
Understorey with elder, sapling ash and sycamore; hazel on dryer ground by lakeside path and one sweet chestnut.
Field layer rather ruderal and species-poor, often with stinging nettle, also large stands of butterbur and hop. Water mint and yellow water lily in ditch. Grades into marginal carr
Area B south-west edge of Bury Lake: Common reed (planted), purple loosestrife, ragged robin and Russian comfrey
Mature oak
Boat house
Area C1: False oat-grass, cocksfoot common bent, meadow foxtail,sweet vernal grass, creeping cinquefoil, hedge bedstraw, agrimony, lesser stitchwort, common/black knapweed, bird's-foot trefoil, yellow rattle (planted?)
Planted trees
Area B: Tall fen - similar species composition to waterside NR with much common fleabane and lesser pond sedge, also great willowherb, meadowsweet and jointed rush
Area F; Overgrown hedgerow, treeline - crack willow, alder, ash, larch, Scot's pine, elder, hawthorn, hazel, spindle, ivy, bramble, stinging nettle, creeping buttercup, hogweed, cow parsley, wild angelica.
0 65 130 260 390 520 650 780 910 1,040 Meters

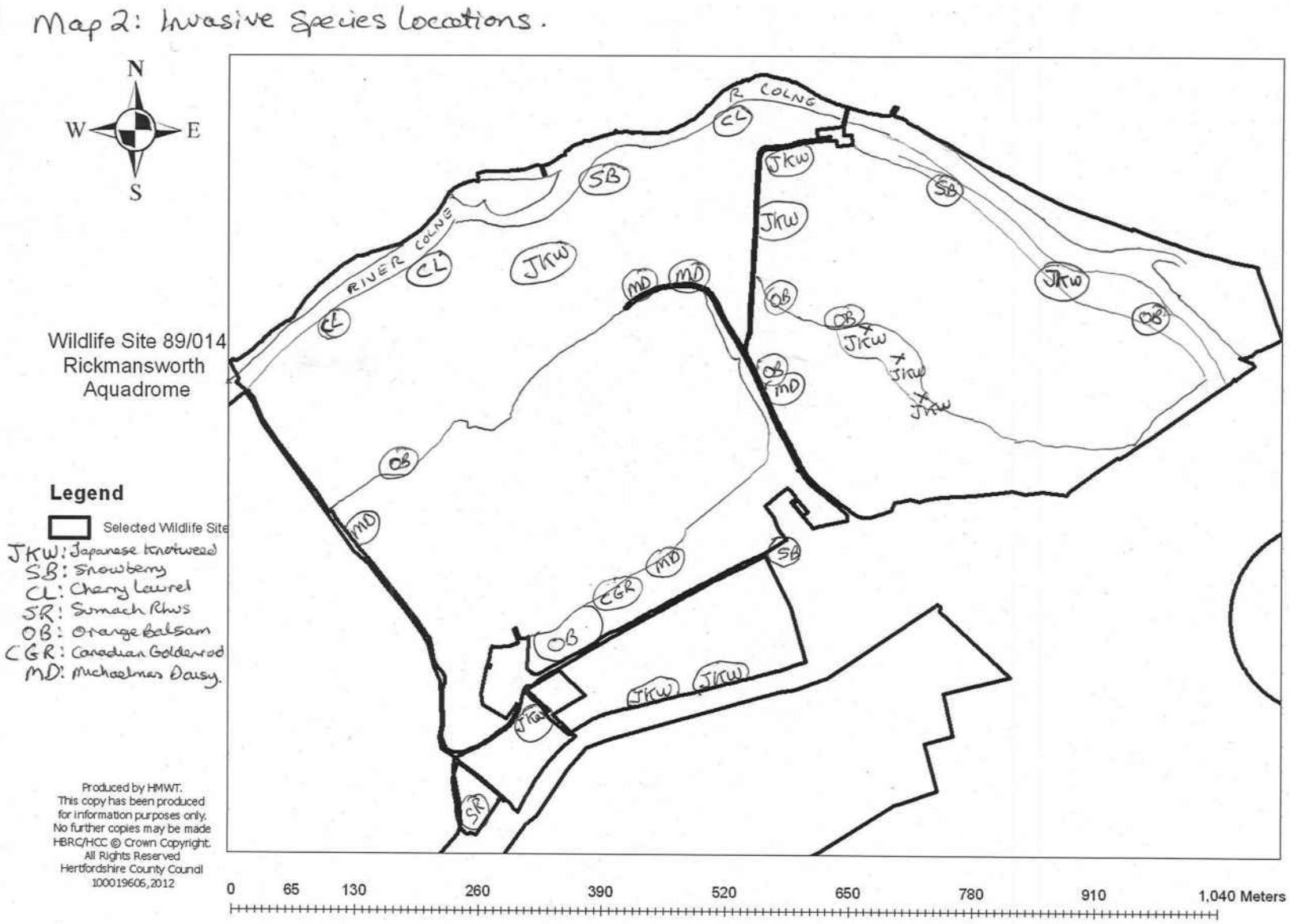
Map key:

		WS boundary (NB use a red line to denote anywhere boundary changes should be made)
WOODLAND & SCRUB	BW	Semi-natural broadleaved woodland
	PB	Plantation broadleaved woodland
	PC	Plantation coniferous woodland
	MW	Mixed woodland
	DS	Dense-continuous scrub
	SS	Scattered scrub (NB: notate grassland type beneath)
	SB	Broadleaved Parkland/scattered trees (NB: notate grassland type beneath)
	SC	Coniferous Parkland/scattered trees (NB: notate grassland type beneath)
	SM	Mixed Parkland/scattered trees (NB: notate grassland type beneath)
	FB	Broadleaved recently felled woodland
	FC	Coniferous recently felled woodland
	FM	Mixed recently felled woodland
GRASSLAND	UAG	Unimproved acid grassland
	SIAG	Semi-improved acid grassland
	UCG	Unimproved calcareous grassland
	SICG	Semi-improved calcareous grassland
	UNG	Unimproved neutral grassland
	SING	Semi-improved neutral grassland
	I	Improved grassland
	MG	Marsh/marshy grassland
	PSIG	Species-poor semi-improved grassland
Tall herb and fen	CB	Continuous bracken
	SB	Scattered bracken (NB: notate grassland type beneath)
	TR	Tall ruderal vegetation
	NR	Non-ruderal vegetation (fen, e.g. reed/sweetgrass dominant stands)
WATER	SW	Standing water
	RW	Running water
CULTIVATED	A	Arable land
	AM	Amenity grassland / U Urban
	ESP	Ephemeral/short (e.g. herbal pioneer communities/weedy species)
	IS	Perennial introduced shrub (eg snowberry, rhododendron, laurel, cotoneaster, bamboo etc)

CBW Coppiced broadleaved woodland
RCBW Relict coppiced broadleaved woodland

Path
Track/lane/road
Hedgerow
Ditch
Bank
Feature (annotate)
Stream
Fence

Map 2: showing invasive species distribution/locations



APPENDIX J: RICKMANSWORTH AQUADROME BAT SURVEY 2007

RICKMANSWORTH AQUADROME 2007 BAT SURVEY

Report October 2007

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Contents

Introduction

Jones and Sons Environmental Sciences Ltd carried out a bat survey at Rickmansworth Aquadrome (Batchworth lake area) situated at central Ordnance Survey Grid Reference TQ 058 939.

The survey was undertaken at the request of the Countryside Management Service (West and Southern Area) Hixberry Lane, St Albans, Hertfordshire.

The survey concentrated on a transect around the east side of Batchworth lake in the area of proposed tree management works. The survey included an evening survey of bat activity and an inspection of the bankside trees to assess their potential to provide roosting sites for bats.

As part of the management of Batchworth Lake, there are proposals to pollard some of the bankside trees on the east side of the lake and create new reedbeds along the western margin.

Tree lined waterways are highly favourable habitats for a range of bat species and bats may preferentially select roosting sites close to water. There is therefore a possibility that the trees could be providing roosting sites for the local bat population.

Since bats are protected under UK and European legislation and there is a possibility that bats may be roosting in the trees by the lake, a bat survey was undertaken to ensure that the management proposals would not impact on a bat roosting site. Any impact identified will need mitigation measures to be undertaken to ensure the bat population in the area is maintained at a favourable conservation status.

The principal objectives of the bat survey were to:

- Assess the presence of bats at Rickmansworth Aquadrome (Batchworth Lake).
- Assess the potential of the bankside trees to provide bat roosting sites.
- Assess the suitability of the semi-natural habitats for bats.
- Provide recommendations to minimize any possible impact on the bats and provide management recommendations to maintain the bat population at a favourable conservation status.

Summary of present laws relevant to bats

Throughout Europe especially in the last 30 years there has been a growing awareness of the fact that bat populations are declining considerably. The decline of bat populations combined with their special roosting requirements have led to them being given special protection by law.

All bats and their roost sites are protected by the Wildlife and Countryside Act 1981 (as amended), through inclusion in Schedule 5, Section 9. All bats are also included in Schedule 2 of the Conservation (Natural Habitats, &c.) Regulations 1994 which defines 'European protected species of animals.' More recently, the Countryside & Rights of Way (CROW) Act adds the word "reckless" to the offence of disturbing a bat or damaging its roost site. In summary, taken together the legislation makes it illegal to:

- Intentionally kill, injure or capture bats;
- Intentionally or recklessly disturb bats while they are occupying a structure used for shelter or protection.
- Intentionally or recklessly damage, destroy or obstruct access to areas used by bats for shelter or protection.

Structures used by bats for shelter are commonly known as bat roosts. Because bats tend to reuse the same roosts, legal opinion is that, the roost is protected whether or not the bats are present at the time. The appropriate Statutory Nature Conservation Organisation (SNCO) must be consulted of any work that may affect bats, or their roosts. In England, the appropriate SNCO is Natural England. Natural England will advise, as to whether the work can be carried out and, if so, the methods to be used.

Activities such as the felling/ pruning of trees that support a bat roost contravenes the protection afforded to bats under the Conservation (Natural Habitats & c) Regulations 1994 and requires a Habitat Regulations Licence issued by Natural England before any works can commence. Three tests must be satisfied before Natural England can issue a licence to permit otherwise prohibited acts. The three tests are:

1. That the activity is "in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of social or economic nature and beneficial consequences of primary importance for the environment" (Regulation 44 (2)(e)).
2. That there is no satisfactory alternative (Regulation 44(3)(a)).
3. That the action authorised will not be detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range (Regulation 44(3)(b)).

The legislation means that if there is an impact on a bat roost there will be need to be a clearly documented compensation strategy to maintain the numbers of bats in the local area.

Methodology

A search of existing bat records held by the Hertfordshire and Middlesex Bat Group was made of the area within 2km of Rickmansworth Aquadrome and the status of the bat species within the area assessed.

An evening survey was undertaken on the 17th September 2007 by four people from Jones and Sons Environmental Sciences Ltd with a more detailed daytime inspection of the trees on the 4th October 2007. Dr Jenny Jones MIEEM and Mr R.T. Jones are licensed by Natural England to disturb and survey for bats in all counties of England.

The habitats within the general area were surveyed to assess their potential to support a range of insects suitable for foraging bats and for features in the area which could be important as flyways for bats commuting from their roosts to their foraging grounds.

Water and bankside vegetation provide insect food and valuable cover for foraging and some species of bat preferentially select roosting sites close to water.

Tree roost use by bats can be very complex. Trees may be used as winter hibernation sites, spring gathering roosts, summer maternity roosts, autumn courtship roosts or as temporary roosts close to an ephemeral food source. The length of time during which bats may use a tree can vary from a single day, to more or less continuously throughout the year. Radio tracking studies have demonstrated that some species may use over 30 different sites over one summer period. Bats will shelter in a variety of features within or associated with trees. Transient roosting sites may be found in precarious locations such as behind loose bark or within splits in branches. Some may become unsuitable due to adverse weather conditions or advanced stages of decay. Where sites however become established they may be used as nursery roosting sites or hibernacula.

The most effective method of surveying trees for bats involves a description of the tree and noting the features that could be suitable for bat use. This enables an assessment to be made of the likelihood of trees being used by bats.

The potential for the trees to support bats was assessed by eye from the ground facilitated by the use of binoculars. The assessment included taking account of features such as rot holes, abandoned woodpecker holes, splits, broken branches, dead wood, loose bark with crevices behind and ivy cover.

Where possible, tree holes were examined in detail searching for any signs of bat use such as oil staining from the bat's fur around the hole, polished surfaces, claw marks, or accumulation of droppings.

Following inspection of the trees, they were divided into three main Categories.

- Category 1 = confirmed bat roost trees.

- Category 2 = Trees with potential to provide bat roosts. Trees with potential to provide roosting sites for bats are further graded into High (Category 2a), Medium, and Low probability (Category 2b).

- Category 3 = Trees with negligible potential to provide roosting sites for bats.

An assessment of this kind needs to be undertaken by an experienced bat surveyor with a good understanding of roosting behaviour of bats.

The general principals of the grading are listed below:

- Trees of High potential.

  Mature trees with highly favourable roosting features in particular holes leading to cavities within the tree. Other favourable roosting features such as split branches or loose bark may also be present. Tree with high roosting potential are usually located within favourable sheltered positions and within areas favourable for foraging and commuting bats.

- Trees of Medium potential.

  Mature trees with a combination of features capable of providing roosting sites for bats such as broken branches, splits and cracks in the trunk/ large branches, loose bark or dense ivy cover providing crevices behind the stems. Holes may also be present although if classified in this category they would not be assessed as providing highly favourable environmental conditions for roosting bats. The trees will usually be within suitable bat areas.

- Trees of Low potential.

  Trees without any holes leading to the tree cavity but with features such as loose bark, split branches and ivy cover providing some potential for bats to access the crevices behind. Other aspects of the trees assessment such as location, exposed crevices etc may reduce the potential of a tree supporting features of a higher potential to a lower potential.

In addition to assessing the potential of the trees to support roosting bats, the lake bankside habitat was assessed for its foraging quality. Notes were taken of the structural diversity (i.e. presence of aquatic emergent vegetation fringes, tall grass and herbs, shrubs and mature trees), presence of overhanging branches and presence of dead wood.

Photographs of the general habitat and trees were taken to aid visual interpretation.

The evening bat survey was designed to watch for any bats emerging from the trees around the lake, to determine the species using the site and also to assess the general bat activity in the area.

Bat detectors convert the bat's high-pitched sounds into the human hearing range. Many of the sounds are species specific and can be used to assist in species identification. Two models of detectors were used for the survey - the frequency division Batbox Duet and a time expansion Petterssen D240. Recordings of the bat sounds were made to allow subsequent computer analysis and critical identification of the bat species.

The Evening observation began at sunset and bat activity, with the aid of a high quality ultrasonic bat detector was recorded for over one hour.

The temperature and weather conditions were recorded throughout the evening.

Temperature is known to affect bat activity: under cool conditions insect availability is lower and bat activity is likely to be reduced. Temperatures above 10 ^{o}C are suitable for a range of insects and therefore foraging bats. The temperature conditions during the survey are given in Table 2.

Constraints

There were no major constraints although the survey was conducted in September and October when foliage still covers the trees. This can pose difficulties in searching for holes that may be obscured by the surrounding leaves. Many of the trees also possessed dense ivy cover concealing any holes behind the ivy.

A survey in the warmer months, however, when bats are active increases the chances of finding signs of bat use around potential roosting features. Bat droppings around tree roosting sites may be washed away by rain or dislodged by wind. This may result in bat roosting sites not being identified on the date of the survey.

Tree roost use by bats can be very complex. It should generally be recognised that tree bat roosts are frequently of a transient nature and bats may regularly move from roost to roost. A single bat may therefore use a large number and wide variety of roosts during a year. The survey represents a snap-shot in time that can change with changing environmental conditions.

Results

Results of the Bat Records Search

Five species of bat have previously been recorded by the Herts and Middlesex bat Group at Rickmansworth Aquadrome (Batchworth Lake and Bury Lake). These include: Common pipistrelle bat *Pipistrellus pipistrellus,* Soprano pipistrelle bat *Pipistrellus pygmaeus,* Noctule bat *Nyctalus noctula,* Serotine bat *Eptesicus serotinus* and Daubenton's bat *Myotis daubentonii*.

The species listed below are other bat records computerised on the Hertfordshire and Middlesex Bat Group Records Database within 2 km of Rickmansworth Aquadrome.

- Pipistrelle bat *Pipistrellus sp* (either common pipistrelle or soprano pipistrelle bat) roosting sites have been recorded within 1km at: Ebury Road Croxley Green to the north, Rectory Lane, Rickmansworth, Skidmore Lane to the east, Thames Valley water building to the southeast, Rusmore Close (nursery colony) to the south east and Uxbridge Road to the west. Further roosts and nursery colonies are present within 2km. The species is relatively common and widespread within the region.

- Soprano 55kHz pipistrelle bat. -Roosts recorded along Ebury Road, Croxley Green in the north and along Mead Place, Rickmansworth. This is a species that particularly favours aquatic habitats. The species is relatively common and widespread within the region.

- Nathusius Pipistrelle bat (*Pipistrellus nathusii*). Recorded in flight at the Withey Beds Rickmansworth approx 2 km to the east of the Aquadrome. This is a very rare species of bat in Hertfordshire and also nationally.

- Brown long-eared bat *(Plecotus auritus*) Roost within 1km to the south west at Stockers Farm with further presence recorded at Lynwood House, Rickmansworth 1.5km north. Hibernacula within 2km. This is a species dependant on woodland habitats and, although relatively common, is vulnerable to change.

- Serotine bat- Roost within 1km. This species roosts in buildings and rarely roosts in trees. The species distribution in England is restricted to southern England. It is a rare species of bat within the county.

- Noctule Bat -Roost recorded in Croxley Hall Wood 1.7km north east. This is a bat that primarily roosts in trees. It is declining in Hertfordshire.

- Leisler's bat (Nyctalus *leisleri*) Recorded in flight at the Withey Beds Rickmansworth approx 2 km to the east of the Aquadrome. This is a rare species of bat within the area.

- Daubenton's bat - Flight and roost records within 100m at Batchworth Lock, Rickmansworth High Street, and River Chess, with a roost recorded on River Chess 1km north east. Flight records over the lake within the Aquadrome and along the River Colne and Grand Union Canal. This is a widespread species of bat that typically forages over waterways. It also roosts in trees particularly trees by water. There are few summer bat roosting sites known in Hertfordshire.

The data search found eight species of bat recorded within 2km of Rickmansworth Aquadrome.

Evaluation of the trees and bankside habitat for bats

Rickmansworth Aquadrome is located within the Colne Valley on the south side of Rickmansworth. The aquadrome consists of a flooded former gravel pit between the River Colne and the Grand Union Canal. The survey focused on Batchworth Lake situated at Ordnance Survey Grid Reference TQ058939 to the east of Bury lake.

Photograph 1: Lake and wooded banks

Photograph 2: Marginal reed beds

The main habitats within the survey site include open water, aquatic marginal vegetation, relic patches of mature wet woodland, areas of rough grassland with tall herbs, bramble scrub and areas of short amenity grassland.

A transect around the east side of the lake was walked and is described below.

Northeast section-island to junction River Colne/Grand Union Canal (Section A)

From Ordnance Survey Grid Ref TQ 05830 94024 to TQ 05967 93945 (180 metres)

Photograph 3 long wooded island.

Photograph 4: view west along path

At the east end of the lake (approx 200 metres from the east point), a 100m long wooded strip projects southwards into the open water. The island supports trees with overhanging branches and dead wood of value to a range of invertebrates and therefore foraging bats. By the lakeside public path extending westwards from the wooded strip (outside the survey area) are a group of tall mature ash trees similarly providing a sheltered foraging habitat. To the north is the River Colne.

Photograph 5: NE bank

Proceeding eastwards the lake bankside includes stretches of open grassland and marginal reed/sedge beds with groups of trees projecting over the water. The water itself, waterway marginal vegetation, dead wood, scrub and mature trees along the bank provide structurally diverse habitats capable of supporting high concentrations of insects favourable to a diverse range of bat species

Photograph 6: open areas

Photograph 7: mature Alder (tree 1)

A mature Alder (tree 1) within this area supports medium potential to provide roosting sites for bats. The multi-stemmed old coppice supports dense ivy cover and broken branches providing potential roosting crevices for bats. The dense ivy cover could obscure any holes present in the trunk and also provides potential for bats to roost behind the ivy stems. Many species of insects live within the sheltered foliage and stems of ivy, providing good foraging habitat for hunting bats. Within good foraging areas bats will use this type of roosting site as a transient/ night roost, on a temporary basis during the warmer months. Preferably the tree should be retained, but if tree reduction/ pruning is required the ivy should be cut in the cooler months, below the area requiring surgery so that it dies back and renders it unfavourable for roosting.

Photograph 8: mature ash (tree 2)

Adjacent to the alder is a mature ash (tree2). The leaning trunk and branches overhanging the water are also of value to aquatic invertebrates and provide a sheltered environment for foraging bats. The tree contains loose bark with crevices providing potential for bats to roost within the crevices on a temporary basis. The tree has some potential although the probability of bats roosting within the crevices is considered to be low.

Photograph 9: Ivy covered trees (3&4)

To the east of the ivy-covered alder is a further group of mature ivy covered trees (hawthorn tree 3 and ash tree 4).

The hawthorn has some potential to provide roosting sites for bats behind the ivy and the adjacent ash has crevices in the trunk providing potential for roosting sites within the trunk crevices behind the ivy. Since the areas with roosting potential are around the trunk any pruning of the branches will not impact on a bat roosting site.

Photograph 10-11: Immature ash and hawthorn (trees 5) with tall herbs/sedge beds

Groups of immature trees (trees 5) along the lake bank, such as those illustrated in the adjacent photograph provide no potential for roosting bats.

Their main value lies in the structural diversity of the habitat provided creating sheltered areas for foraging bats

Photograph 12: Ivy covered trees (trees 6,7 & 8)

The scalloped edges along the lake bank also provide good marginal bat foraging habitat.

During the evening survey Daubenton's bats followed these scalloped edges as well as flying across the open water.

In addition to sedges in this area, other plants such as water mint, gipsywort, water figwort and willowherbs were noted along with patches of bramble scrub.

Some more mature trees: ash (tree 6), alder (tree 7) and sycamore (tree 8) support some light ivy cover providing some potential for roosting bats although the probability of bats roosting in these trees is considered to be low.

Photograph 13: Pollarded willow stump (tree 9)

Further east is a mature pollarded willow stump (tree 9). This tree contains broken branches with suitable roosting crevices, loose bark with cervices and very dense ivy cover. The tree provides medium potential for roosting bats.

A second willow stump (tree 11) was noted in this region with fallen broken branches, loose bark and dense ivy cover. Due to the stump being shorter, this tree provides low potential for roosting bats; it's main value being the invertebrate habitat the tree provides.

Other habitats within this stretch include groups of immature trees (no roosting potential), bramble scrub, greater reedmace and grassland. The structurally diverse habitats, however, are of value to foraging bats.

Photograph 14: Willow (tree 11) Photograph 15-16: immature trees (12) and bramble

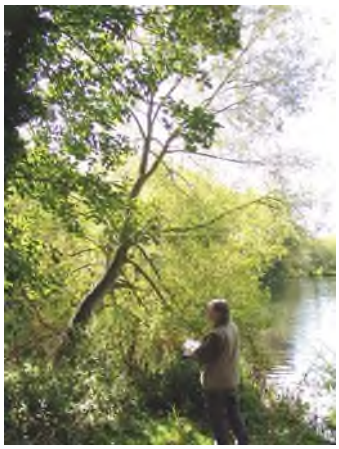
Photo 17: Alder (tree 13) Photo 18-19: Willow (tree 14) & willow coppice (tree 15)

Along this stretch (near the junction of the River Colne and Grand Union Canal) is a mature alder (tree 13) leaning over the water. The tree has loose bark with suitable crevices and light ivy cover with some (but low) roosting potential. Similarly the large ivy covered old willow coppice (tree 15) that leans over the water contains some favourable crevices behind its bark providing some (low) roosting potential for bats. The immature willow pollard (tree 14) has no roosting potential.

Photograph 20-21: Willow (tree16)

A further mature pollarded willow (tree 16) located by the path has broken branches, crevices in the lower trunk and dense ivy cover. The tree provides potential roosting sites within the lower section of the trunk (medium potential). If re-pollarding is required, the ivy will need to be cut in the area of repollarding to allow the ivy to die off and expose any crevices. Tree surgery should avoid any impact to the main trunk. The removal of branches of narrow diameter is unlikely to impact on any bat roosting sites. Adjacent to this tree is an ash (tree17) that leans over the waters edge. The tree provides some but low potential for roosting bats.

Photo 22: Sycamore (tree 18) Photo 23: Alder (tree 21) Photo 24: Willow (tree 19)



Photograph 25: pollarded willows (tree 20)

Other trees in the east corner of the lake include: an ivy covered multi-stem sycamore (tree 18) and a mature alder (tree 21) with loose bark and light ivy cover. Both trees are classified as providing low potential for roosting bats.

The willows on the corner (tree 19 and 20) all support stems of narrow diameter with no roosting potential.

Southeast section, adjacent to Grand Union Canal- Section B

From Ordnance Survey Grid Ref TQ 05967 93944 to TQ 05868 93866 (120 metres)

Photograph 26: Willow tree 22

After the corner proceeding southwest (opposite the Grand Union canal and Tesco building) is an over mature multistem willow (tree 22) with stems of thick diameter, loose bark and dense ivy cover. There are also cracked branches with potential for roosting bats within the crevices. No obvious holes were located. The tree is assessed as providing medium potential for roosting bats.

A reduction in the height of the tree during the cooler months when bats are unlikely to be present will ensure that there is no impact on a bat roosting site.

Photograph 27: Group of trees overhanging water

Further west is a group of trees that include a birch with light ivy cover leaning towards the water. The tree has little potential for roosting bats; its main value being the sheltered foraging habitat it provides over the water. Other trees include willows and alder; some with light ivy cover providing some roosting potential.

Tree 24 is a mature alder with branches overhanging the water. The tree has dense ivy cover providing some (low) potential to provide roosting sites for bats. Tree 25, a willow, similarly supports dense ivy cover with bark fissures beneath providing medium potential

Photograph 28: Alder (tree 24)

Photograph 29: Willow (tree 25)

Tree 25 and 26 are mature willows with dense ivy coverage extending c. 5 metres up the trunk.

The crevices in the trunk provide medium potential for roosting bats.

Photograph 30: Mature Hawthorn (tree 28)

Further west is a mature hawthorn (tree 28) supporting dense ivy cover over the trunk with loose bark providing potential roosting crevices behind. The tree provides low potential for roosting bats. Immature sycamore and ash within this area have no potential for bats but tree 29, 30, 32 and 34 are mature pollarded willows with thick stems and bark crevices with very dense ivy cover providing medium potential for roosting bats.

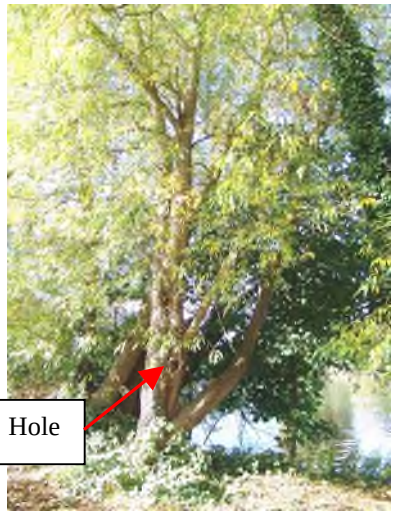
Photo 31:willow 29 and 30 Photo 32: Willow tree 32 Photo 33: Willow 34

Photo 34: tree 35:willow Photo 35: tree 36: Alders Photo 36:tree 37: willow

Other trees within this section are the willow pollard (tree 35) with light ivy cover, multistemmed alders (tree 36) with loose bark and light ivy cover and a mature pollarded willow similarly with loose bark and ivy cover (tree 37). These trees are all assessed as providing low potential for roosting bats. Re pollarding of the trees in the cooler months is unlikely to impact on any bat roosting site. However the precaution of cutting the ivy at the base prior to tree surgery should be undertaken.

The pollarded willow (tree 38) has a large hole low down in the trunk. The location of the hole is not highly favourable for roosting bats and the tree is assessed as providing low roosting potential. Tree 39 is also a mature pollarded willow with broken side branches and loose bark providing low potential for roosting bats. In this area, the trees/branches leaning over the water and also the branches within the water provide valuable invertebrate habitat and favourable cover for foraging bats.

Photograph 37: tree Willow 38



Photograph 38: willows tree 39

The mature straight stemmed willow (tree 40) has some fissures in the bark but generally provides little potential for roosting bats. From this tree to the bend in the public path are some dead trees and immature trees of ash, alder and sycamore with no potential to provide roosting sites for bats.

Photo 39: bankside trees

Photo 40: view across lake

South section opposite woodland and car park – Section C

From Ordnance Survey Grid Ref TQ 05868 93866 to TQ 05639 93854 (240 metres)

To the south of the public path, along this section, is woodland supporting mature neglected hazel coppice with alder and ash and many ivy covered trees.

The lake margin is bordered by trees with a few open patches of reed bed and tall herbs. Patches of brambles adjacent to the trees add to the structural diversity of the lakeside habitat.

The mature alder (tree 42) on the bend of the public path has trunk coverage of dense ivy obscuring any potential holes and is assessed as providing low roosting potential. An adjacent willow (tree 43) leans over the water providing a sheltered foraging habitat for bats. This tree supports bark fissures and is also assessed as providing low potential for roosting bats.

Photo 41: Alder (tree 42)

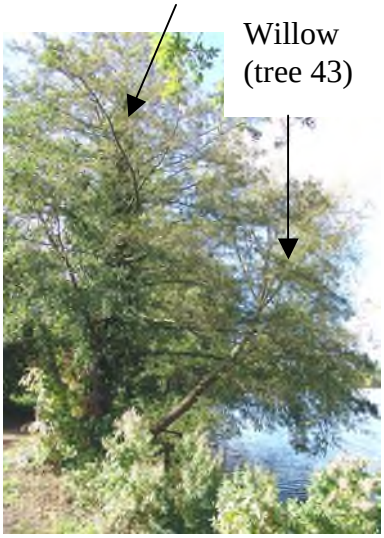


Photo 42: Immature ash

Along this stretch are some immature ash trees (trees 44), unsuitable for roosting bats.

Photo 43:Tree 45 Alder

Photo 44: trees 47-50

Further ivy covered mature alder trees (trees 45, 47, 49, 50) within this section supports low potential for roosting bats within the crevices of the bark and behind the ivy stems.

Further west is a scalloped edge along the lake bank with patches of reed and a further group of alder, willow and alder trees. The mature alder (tree 51) with very dense ivy cover provides low potential for roosting bats. The semi-mature willows support fissures in the bark of low roosting potential.

Photo 45-46: Tree by scalloped edge (trees 51)

Photograph 47: Hawthorn (tree 52)

Photograph 48:Alder (tree 55)

To the west, ivy-covered hawthorn trees (tree 48 and 53) provide low potential for roosting bats. Other trees within the area include immature ash, alder and willow with no suitable roosting sites. A mature pollarded alder (tree 55) has some bark fissures but is generally considered also to be unsuitable for roosting bats.

Photograph 49: trees 56

Photo 50: Sycamore (tree 57)

Photo 51: Willow (tree 58)

Within this area are patches of nettles and further ivy covered trees of low potential for roosting bats.

A sycamore (tree 57) and mature willow (tree 58) both have dense ivy covering potential roosting areas behind the stem. These trees are assessed as providing medium potential for roosting bats. Within this area are areas of lying dead wood favourable for invertebrates.

Photograph 52:Willow (trees 60)

By the jetty are some immature ash and willow of no roosting potential along with some ivy covered willows (tree 62) and mature ivy covered hawthorns (trees 61 of low roosting potential

Photo 53: Tree 62 crack willow

Photograph 54- 56: Ash (tree 63) with high roosting potential

At the junction of the public paths is a mature ash. This tree has fissures in its bark, broken branches with suitable roosting crevices and also holes in the trunk and branches leading to cavities within the tree. No signs of any bat use were found around the holes but due to the trees favourable location by the lake, the tree is classified as providing high roosting potential for bats. The first bats recorded in the evening survey were recorded within the vicinity of this tree.

Example of potential roosting crevices located in split branches

Branch hole in trunk.

Other favourable roosting holes present higher up in branches.

If possible tree surgery to the main stems with roosting potential should be avoided. If tree surgery is required in an area of high roosting potential, a bat ecologist will need to supervise the tree work. The stems with crevices and holes will need to be checked for any bat presence with an endoscope prior to any cutting.

If no bats are found, immediately following the inspection, the cut branch sections should be roped to enable the gentle lowering of the section to the ground. Soft felling principles should be applied and the stem cut to avoid any cross cutting in the proximity of the cavities and hollow sections. The sections containing cavities should be lowered carefully to the ground and left on the ground with the opening clear. Following removal, if practical, the stem with the hole/crevice should be strapped to the tree/alternative tree at an appropriate height to provide continued roosting opportunities.

If the initial bat inspection, undertaken prior to tree surgery, confirms the presence of bats, all works to the tree must stop and a Habitat Regulations Licence applied for to ensure no offence is committed. Details on the legislation and licence application procedure are given on page 4 of this report. The licence applicant will need to be demonstrate that there is no satisfactory alternative to the loss of the bat roost.

West section opposite open woodland and Bury Lake- Section D

From Ordnance Survey Grid TQ 05639 93854 to TQ 05602 93945 (120 metres)

Photograph 57: wet woodland with clearings

Batchworth Lake to the east and open wet willow woodland to the west border the public path extending northwards. The structural diversity of the lower shrubs/tall herbs within the clearings and taller edge habitat provided by the willow woodland is highly favourable for a diversity of insects and therefore foraging bats. The invasive alien plant Japanese Knotweed was noted.

Photograph 58: willow (tree 64)

Photograph 59: Fallen Willow (tree 65)

Proceeding northwards from the junction of the paths, a willow (tree 64) leaning over the lake supports bark fissures and light ivy cover providing low roosting potential. An adjacent willow (tree 65) has little roosting potential but has a large split branch lying on the ground. The horizontal main stem on the ground is sprouting new growth from the upper section of the stem. The lying dead wood is capable of supporting a range of different invertebrates and fungi and is therefore of general high ecological value. It is important that the felled tree should be retained, in situ. Any pruning of the new growth would not impact on any bat roosting sites.

Photograph 60: Willow (tree 66)

Further north is a willow (tree 66) overhanging the water with splits in the bark providing low bat roosting potential. An adjacent straight stemmed alder has no potential but the mature alder (tree 68) has some light ivy cover with some (low) roosting potential

Photograph 61:Alder (tree 68)

Photograph 62: Mature Alder (tree 69)

Further north the mature alder (tree 57) has a denser coverage of ivy. The tree is assessed as therefore providing medium potential for roosting bats.

Further north the lake bank becomes more open with larger strips of reed beds. This area was assessed as providing highly favourable habitats for foraging bats but was not surveyed in detail.

Table 1: Bat roost potential of the Trees at Batchworth Lake

Section	Tree Ref	Species	Bat tree roosting features	Category	Potential
A	1	Mature old coppice Alder	Broken branch crevices. Dense ivy	2b	Medium
	2	Mature ash	Loose bark with crevices	2b	Low
	3	Mature Hawthorn	Dense ivy cover.	2b	Low
	4	Mature Ash	Loose bark. Dense ivy cover.	2b	Low
	5	Immature Ash & Hawthorn	Unsuitable for roosting	3	None
	6	Ash	Light ivy cover	2b	Low
	7	Alder	Light ivy cover	2b	Low
	8	Sycamore	Moderate ivy cover	2b	Low
	9	Pollarded Willow stump	Broken branch crevices, Loose bark, and dense ivy cover.	2b	Medium
	10	Immature Alder	Unsuitable for roosting	3	None
	11	Willow stump	Broken branch crevices, loose bark, and dense ivy cover.	2b	Low
	12	Group of immature trees	Unsuitable for roosting	3	None
	13	Mature Alder	Loose bark. Light ivy cover	2b	Low
	14	Immature pollarded Willow	Unsuitable for roosting	3	None
	15	Mature old coppice Willow	Loose bark. Dense ivy cover	2b	Low
	16	Mature Willow pollard	Broken branch crevices, loose bark, and dense ivy cover.	2b	Medium
	17	Ash leaning over water	Loose bark. Small holes-blind.	2b	Low
	18	Multistem Sycamore	Loose bark. Dense ivy cover	2b	Low
	19	Immature willows on corner	Unsuitable for roosting	3	None
	20	Pollarded Willow	Low down split branches	3	Negligible
	21	Alder on corner	Loose bark. Light ivy cover.	2b	Low
B	22	Mature multistem willow	Broken branch crevices. Loose bark. Dense ivy cover	2b	Medium
	23	Group of trees (birch, willow alder).	Most tree with no roost potential but some trees with light ivy cover	3 2b	None Low
	24	Mature Alder over water	Bark fissures. Ivy cover	2b	Low
	25	Willow	Bark fissures. Dense ivy cover	2b	Medium
	26	Mature pollarded Willow	Crevices in bark. Dense ivy cover	2b	Medium
	27	Immature Willow	Unsuitable for roosting	3	None
	28	Mature Hawthorn	Loose bark. Dense ivy cover.	2b	Low
	29	Mature pollarded Willow	Bark fissures. Dense ivy cover.	2b	Medium
	30	Mature pollarded Willow	Bark fissures. Dense ivy cover	2b	Medium
	31	Immature Sycamore	Unsuitable for roosting	3	None
	32	Mature pollarded Willow	Bark fissures. Dense ivy cover.	2b	Medium
	33	Immature Ash & Hawthorn	Unsuitable for roosting	3	None
	34	Mature pollarded Willow	Bark fissures. Dense ivy cover.	2b	Medium
	35	Willow pollard	Ivy cover	2b	Low
	36	Multistem Alder	Loose bark. Light ivy cover	2b	Low
	37	Mature Willow pollard	Loose bark. Light ivy cover	2b	Low
	38	Willow pollard	Loose bark. Large hole low down.	2b	Low
	39	Mature Willow pollard	Loose bark. Broken branch.	2b	Low
	40	Willow	Bark fissures	2b	Low
	41	Group of immature Ash, Alder & Sycamore	Unsuitable for roosting	3	None
C	42	Mature Alder	Dense ivy cover	2b	Low
	43	Willow over water	Bark fissures	2b	Low

	44	Immature Ash	Unsuitable for roosting	3	None
Section	**Tree Ref**	**Species**	**Bat tree roosting features**	**Category**	**Potential**
	45	Mature old coppice Alder	Bark fissures. Dense ivy cover	2b	Low
	46	Immature Ash & Sycamore	Unsuitable for roosting	3	None
	47	Mature old coppice Alder	Ivy cover.	2b	Low
	48	Immature Alder	Unsuitable for roosting	3	None
	49	Mature old coppice Alder	Bark fissures. Light ivy cover	2b	Low
	50	Mature old coppice Alder	Light ivy cover	2b	Low
	51	Group of Alder, Hawthorn and Willow.	Some trees with bark fissure and dense ivy cover by water.	2b	Medium
	52	Hawthorn	Ivy cover	2b	Low
	53	Mature Hawthorn	Bark fissures. Dense ivy cover	2b	Low
	54	Group of immature Alder & Ash	Unsuitable for roosting	3	None
	55	Mature pollarded Alder	No suitable roosting areas	3	None
	56	Willow	Light ivy cover	2b	Low
	57	Sycamore	Dense ivy cover	2b	Medium
	58	Mature Willow	Dense ivy cover	2b	Medium
	59	Immature Ash & Willow stump	Unsuitable for roosting	3	None
	60	Willow	Ivy cover	2b	Low
	61	Mature Hawthorn	Bark fissures. Ivy cover	2b	Low
	62	Willow	Bark fissures. Ivy cover	2b	Low
	63	**Mature Ash**	Bark fissures, Broken branch crevices. Hole in trunk and holes in branches.	**2a**	**High**
D	64	Willow	Bark fissures. Light ivy cover.	2b	Low
	65	Willow (branch on ground)	Bark fissures but unsuitable for roosting	3	None
	66	Willow	Bark fissures.	2b	Low
	67	Alder	Straight trunk. No suitable roosting features	3	None
	68	Alder	Light ivy cover	2b	Low
	69	Mature Alder	Dense ivy cover	2b	Medium
	70	Immature Willows	Unsuitable for roosting	3	None

Evening Bat Survey

During the evening bat detector survey on the 17th September 2007 four observers walked transects around the lake. One complete circuit was undertaken between sunset and 20 minutes after sunset to watch for any bat emergence from different areas. A second slower transect was then walked to determine general bat activity within the survey sections around the lake.

No bats were observed to emerge from any of the trees during the initial walk round after sunset.

The first bats observed were two common 45 kHz pipistrelle bat (*Pipistrellus pipistrellus*) flying over the path from the direction of the Grand Union Canal in the east corner 36 minutes after sunset. One minute later this species was also observed by the lake within the vicinity of the ash tree (tree with high roosting potential). Subsequently pipistrelle bat activity was high around the lake margins and tree lines by the path. A high number of this species was estimated to be present.

At 42 minutes after sunset, soprano pipistrelle bats (*Pipistrellus pygmaeus*) were also detected, initially along the southern transect (Transect C). High soprano pipistrelle bat activity was subsequently recorded all around the lake and also along the Grand Union Canal and River Colne. A high number of this species was estimated to be present.

Noctule bats (*Nyctalus noctula*) were detected 45 minutes after sunset initially on the west side of the lake. At least 2 bats were observed flying over the lake towards the east side. Noctules were recorded foraging over the lake throughout the survey. It was estimated that a high number of this species was present.

Serotine bats (*Eptesicus serotinus*) were recorded briefly over the open woodland on the west side of the lake, 51 minutes after sunset. It was thought that this species was likely to be foraging over the lake together with the Noctules.

The first Daubenton's bat (*Myotis daubentonii*) was recorded over the water 1 hour after sunset; initially on the west side of the lake and then on the east side of the lake. Bats were generally observed skimming the water in pairs or threes. Daubenton's bats were also observed flying along the Grand Union Canal. In addition to flying across the open water, they were observed flying low over the water surface and vegetation around the scalloped margins of the lake.

Towards the end of the survey a brown long-eared bat (*Plecotus auritus*) was recorded by the ash tree (tree 63) in the southwest corner of the site at 82 minutes after sunset.

A table summarising the bat activity and weather conditions is given below

Table 2: Summary of Bat Activity at Batchworth Lake 17th September 2007.

Time hours	Bat species	Section	Notes
19:13			Sunset Start of survey
19:39	45kHz Pipistrelle	C east	2 bats flying over path (area by Canal). Foraging over lake by tree 42.
19:40	45kHz Pipistrelle	D south	Bat detected by Ash (tree 63)
19:40-19:44	45kHz Pipistrelle	D south	Foraging around corner of lake in area of ash tree.
19:45	55kHz Pipistrelle	B mid	Detected along lake edge.
19:48	Noctule	D mid	Detected by lake
19:48	45kHz Pipistrelle	D south	3 bats foraging around fallen wood by lake (tree 65)
19:48	55kHz Pipistrelle	D south	Detected by fallen wood (tree 65)
19:50	55kHz Pipistrelle	B	Minimum of 3 bats flying around lakeside trees in area of pollarded willows tree 29 & 30 and across path to canal opposite.
19:51	Noctule	Open water	2 bats observed flying over lake between wooded long island and Section A.
19:53-20:00	Noctule	D north	Bats detected foraging by lake edge. High activity most of evening. Also to the north (outside survey area)
19:54-20:00	45kHz Pipistrelle	D	Bats foraging along complete section. High activity
19:54-20:00	55kHz Pipistrelle	D	Bats foraging along complete section. High activity
19:54-19:55	Serotine	D north	Bat recorded by woodland to west.
19:56	Noctule	A	1 bat still observed flying over lake
19:56	55kHz Pipistrelle	A	Minimum of 4 bats flying by lake
19:58	45kHz Pipistrelle	C	Bats detected foraging over lake
19:58	55kHz Pipistrelle	C	Bats detected foraging over lake
20:02	55kHz Pipistrelle	A	5/6 bats flying by lake near wooded island spit
20:02	Noctule	A	2 bats flying by island spit
20:03	Daubenton's	D north	Bat observed skinning water by lake edge
20:07-20:10	Daubenton's	A west	2- 3 bats water skimming water, both sides of wooded island and by trees 6,7 & 8 proceeding along edge.
20:07	Noctule	A west	1 bat observed over water
20:07	55kHz Pipistrelle	A west	5 bats foraging along lake edge either side of long island
20: 08	Daubenton's	C	1 bat skimming water scalloped area by tree 51, flying along edge
20:08	Noctule	C west	Flying over water
20:00-20:10	45kHz Pipistrelle	A, B,C & D	Foraging bats
20:00-20:10	55kHz Pipistrelle	A, B,C &D	Foraging bats
20:10	Daubenton's	B	Bat flying along Grand Union Canal
20:10-20:30	Noctule	Open water	High activity generally over lake
20: 10 - 20:30	Daubenton's	Open water	High activity generally over lake. Flyng low over open water and along water edge.
20: 10 - 20:30	45kHz Pipistrelle		High activity generally over lake
20: 10 - 20:30	55kHz Pipistrelle		High activity generally over lake
20:25	Brown long-eared	D south	Bat detected by Ash (tree 63)
20:30			End of survey

Table 3: weather conditions during the evening bat survey

17th September 2007	Wind Speed	Temperature	Wind Chill	Relative Humidity	Heat Index	Dew Point
Sunset: 19:13	mph	°C	°C	%	°C	°C
18:56	0.9	15.4	15.4	59.3	14.7	7.4
18:57	1.8	13.9	13.9	60.6	13.3	6.4
20:30	1.2	12.6	12.6	57.4	12	4.3

The weather conditions during the survey were favourable for foraging bats.

Summary

Within 2km of Rickmansworth Aquadrome the data search of the Hertfordshire and Middlesex Bat Group dataset found 8 species of bat recorded. These are: Common 45kHz pipistrelle bat (*Pipistrellus pipistrellus*), Soprano 55kHz pipistrelle bat (*Pipistrellus pygmaeus*), Nathusius's pipistrelle bat (*Pipistrellus nathusii),* Brown long-eared bat (Plecotus *auritus*) Leisler's bat (Nyctalus *leisleri*), Noctule bat (*Nyctalus noctula*) Serotine bat *Eptesicus serotinus* and Daubenton's bat (*Myotis daubentonii*). With the exception of Serotine bats, the above species will all use trees as roosting sites.

Rickmansworth Aquadrome supports a good diversity of habitats suitable for a range of insects and therefore for foraging bats. The important foraging features within the Batchworth Lake survey area include: the open water within the lake, the adjacent running water habitats (River Colne and Grand Union Canal), the wooded islands within the lake, the sheltered scalloped edges around the lake, the tall aquatic marginal vegetation, branches with leaves overhanging the water, structurally diverse terrestrial vegetation (grass/tall herbs/brambles), the mature trees themselves and areas of ivy and dead wood.

Bat activity recorded over Batchworth Lake during September 2007 was extremely high with six species of bat recorded. The species recorded at the lake include: Common 45 kHz Pipistrelle bat, Soprano 55 kHz Pipistrelle bat, Brown long-eared bat, Noctule bat, Serotine bat and Daubenton's bat.

None of the 70 trees (or groups of trees) investigated during the surveys were confirmed to be bat roosting sites within Category 1. Due to the fact that bat signs may not always be present and bats frequently move between different tree roosting sites, this should not be interpreted as an absence of bat roosting trees.

Of the trees investigated 50 trees possessed some potential to provide roosting sites for bats and therefore could be assigned to Category 2. Within the survey transect 71% of the trees supported some bat roosting potential.

Only one tree (a mature ash – tree 63) was assessed as providing high bat roosting potential (Category 2a) mainly due to the presence of holes in the trunk and branches and crevices/ splits in the branches. For management purposes, this tree should be treated as a 'bat roost' tree with the roosting features retained wherever possible.

Fourteen trees were considered to have medium potential. The alder trees (1 and 69), the willow trees (9, 16, 22, 25, 26, 29, 30, 32, 34, 51 13) and a sycamore tree (57).

The majority of trees (thirty-six trees) within Category 2 provide some but generally low potential to provide roosting sites for bats. Potential bat roosting areas in these trees were mainly within bark fissures or behind stems of ivy. Since these trees are close to high quality foraging habitat, the crevices may be used as temporary roosting sites (e.g. overnight) during the warmer months.

Recommendations

The Rickmansworth Aquadrome (Batchworth Lake) currently supports a good diversity of habitats of importance to the local bat population. The quality of foraging habitats for bats is important since the colony size of bats is usually related to the amount of quality feeding habitat within easy commuting distance of their roost. It is therefore important to maintain management practices that favour high densities of insects.

Scalloped areas around the lake with overhanging branches and tall aquatic vegetation provide more variation for insects and should be retained. Any reinforcement of curved edges, through the encouragement of marginal aquatic vegetation, will improve the foraging habitat for bats. Management of the lake should allow for areas of open water and areas of structurally diverse marginal vegetation.

Daubenton's bats (and also soprano pipistrelle bats) feed mainly on insects with aquatic larval stages. Sheltered parts of lakes are particularly important. Noctule bats are frequently observed foraging on beetles, moth and flies over open water. This species may travel considerable distances from their tree roosting sites to open lakes. Serotine bats favour foraging habitats of pasture, parkland, woodland edge and also calm open water.

The structural diversity of the terrestrial habitat created by the gradation from grassland to scrub and mature trees is similarly of high value to foraging bats.

The bankside mature trees should be retained and managed favourably. It is important to avoid over management of lost branches and dead wood. Standing or lying wood that is dead or moribund should be left in place as habitat for invertebrates.

The pollarding or re- pollarding of the trees around the lake should help to extend the life of the trees, benefit insect diversity and should also benefit roosting opportunities for bats in the long term. Conservation pruning involving the reduction of the tree coupled with vertical slits cut in the branch ends (coronet cutting) to maintain a natural appearance to their cut ends are also of general biodiversity benefit.

Although no roosting site was positively identified in the trees, suitable gaps where it was possible for bats to gain access were present in 70% of the trees inspected. Care should therefore be exercised on any tree surgery to those trees considered to have potential roosting areas.

The timing of tree works is important. To reduce the chance of disturbing roosting bats, it is recommended that tree works be planned to avoid the summer months. Bats will frequently use a range of tree crevice roosting sites during the summer particularly where trees are located close to a rich feeding source such as found at Rickmansworth Aquadrome. Tree works required should therefore be planned for the autumn or winter months. Tree works in the spring may impact on nesting birds and therefore should also be avoided.

Bat may hibernate within trees but these roosting sites are usually within deep cavities within the tree, nearer the ground, where the temperature remains relatively constant. Potential hibernation areas may be present in the base of the trunks of mature trees but since no mature trees are to be felled, these areas are unlikely to be affected. Where it is thought unlikely that bats will hibernate in the trees (i.e. trees of low potential) tree surgery can be undertaken during the winter months. Selective pruning of smaller diameter branches in the winter months is unlikely to impact on bat roosting sites.

If roosting potential is considered to be low or to have medium potential, tree work operations can proceed on the basis that if evidence of a roost site or the presence of a bat roost is discovered at a later date, all work will stop. Although the probability of encountering bats is considered to be low, any obvious large pieces of loose bark around the main trunk/stems may need to be checked before tree surgery.

Where tree surgery is required to ivy-covered trees, the ivy should be cut at the base so that it dies back and renders the area unfavourable for roosting. Any holes found behind the ivy should be checked for any use by bats prior to tree surgery.

Where roosting potential is considered to be high, but no roosting site is confirmed, such as the ash tree (tree 63), it is recommended that an experienced licensed bat ecologist supervises the tree works in the areas of high roosting potential. This is due to the fact that there is a high chance that bats may be using the tree at different times of the year.

Wherever possible the areas with roosting potential should be maintained by sensitive reduction work rather than complete branch removal. It is important that identified roosting features on the tree should be checked prior to cutting, to minimize any risk to bats. Some holes may need to be checked using a flexible endoscope; particularly where cavities extend into the trunk of the tree.

If no bats are found, immediately following the inspection, the tree or branches should be felled, following the procedure recommended by the bat ecologist on site. It is important to establish the size of any cavities before cutting. If a potential roosting feature requires removal, soft felling principles in areas of roosting potential will need to be adopted and the section of the branch or trunk (with identified roosting feature) lowered gently to the ground. This may require special roping techniques to cradle the branch and keep the branch level whilst lowering or the use of a cherry picker to enable close inspection and gentle lowering of the branches. The sections containing cavities should be lowered carefully to the ground and left on the ground with the hole opening clear.

Wherever possible cut branches should be retained as deadwood around the tree. If it is necessary to remove felled branches containing cavities from the site, they should be left on the site for at least 24 hours before removal.

If further bat inspection of roosting features in trees confirms the presence of bats, a Habitat Regulations Licence will be required from Natural England before any works to the tree can commence. The licence applicant will need to demonstrate that there is no satisfactory alternative to the loss of the bat roost. Habitat Regulation Licences

may be refused and will only be granted if there are health and safety reasons, or other imperative reasons of overriding public interest requiring the necessary damage of bat roosting sites.

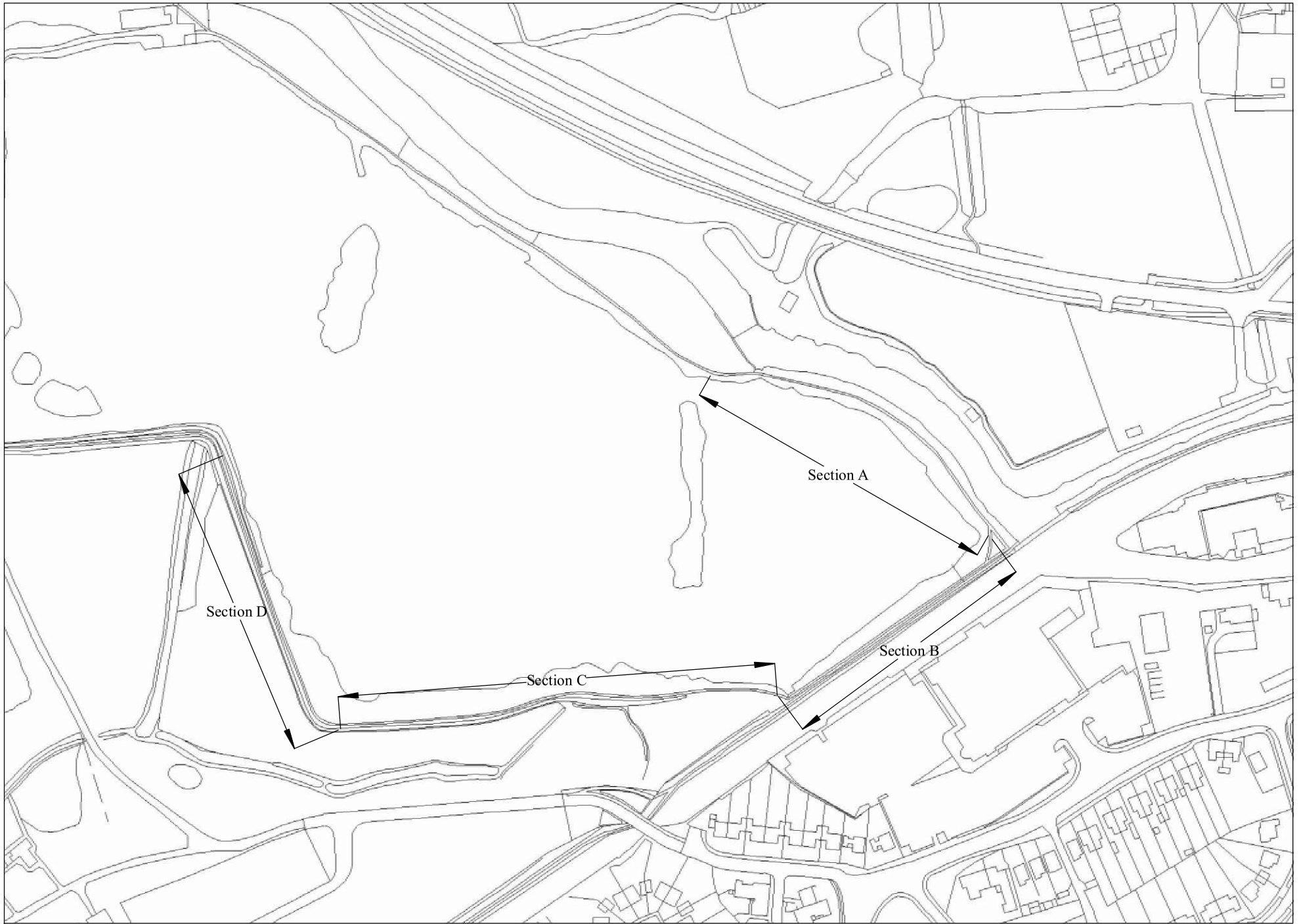
The application for a licence to Natural England will need to include a Reasoned Statement providing justification for the proposed work and a Method Statement outlining the results of an appropriate bat survey, the methods to be used to avoid any harm to bats and compensation measures proposed for the loss of the roosting site. Licence applications require at least 40 working days for the processing of the licence and consultation process.

An important part of a licence application is the mitigation required to compensate for the loss of foraging and roosting habitat. Mitigation for roost loss should be based on the number, size and character of the features removed. Where possible mitigation should include the resurrection of some of the trunk and branch sections (containing roost/potential roosting sites) removed during the tree work. Cut branches can be capped and strapped onto trees to allow continuing use of the roosting site.

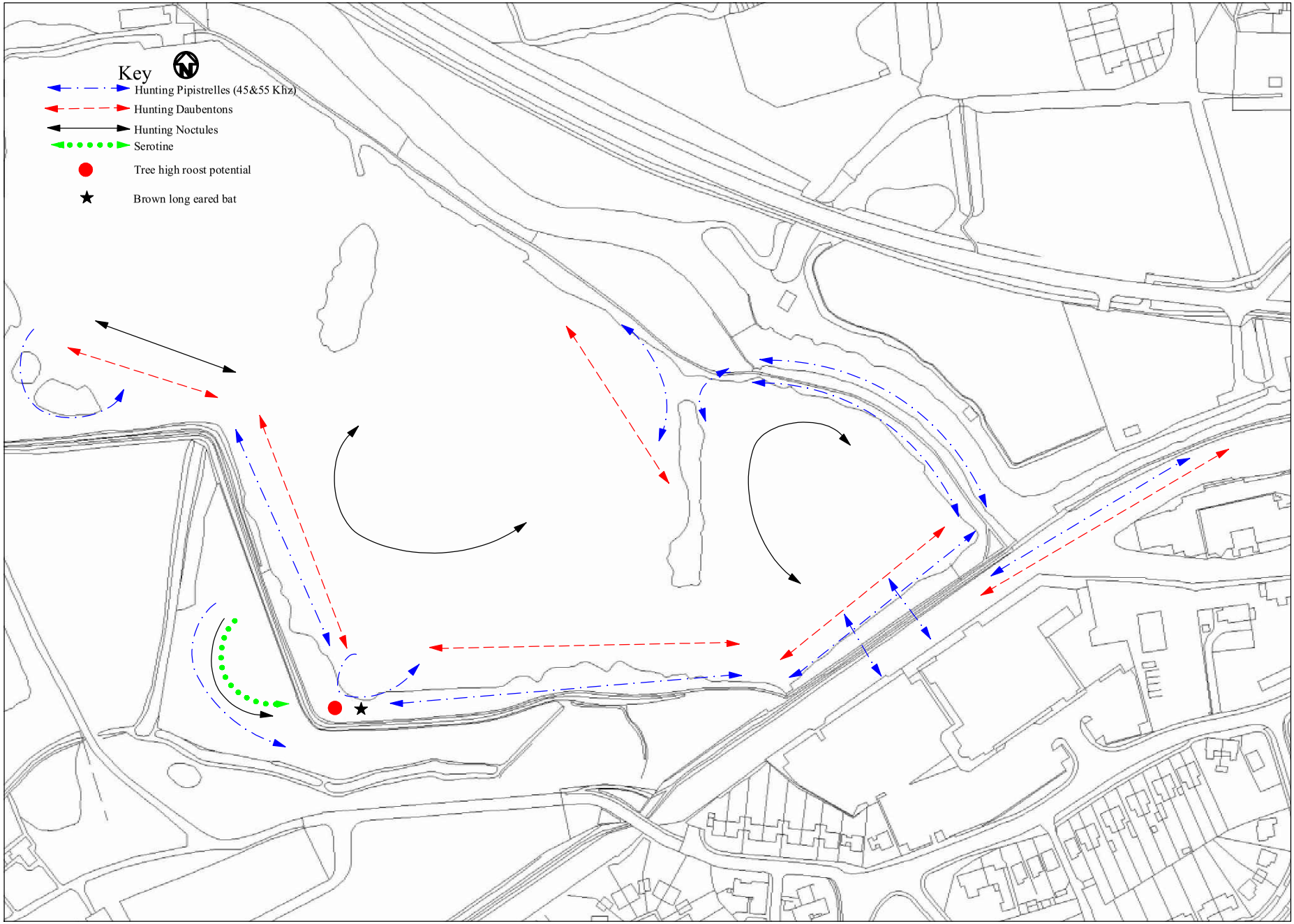
To enhance the bat population of the area, incorporation of bat roosting areas (such as bat boxes) around the lake would be of benefit to the local bat population. Bat boxes, appropriate as long term roosting sites for a range of species, are the woodcrete type of box manufactured by Schwegler. Woodcrete boxes are recommended since these keep a constant temperature favoured by bats, are maintenance free and have a longer life span than wooden boxes. Suitable designs include Type 2F bat box, Type 1FF bat box and type 2F-DFP bat box. These are suitable for both crevice dwelling bats and bats favouring hollows.

In addition to the lakeside habitat, habitat enhancement works could be undertaken to the woodland habitats adjacent to the lake. Pipistrelle bats, in particular, are usually associated with edge habitats found at the boundary between different habitats and feed particularly along sheltered woodland edges. Creating some clearings within the woodland areas to produce a gradation from grassland to scrub and mature trees will also be of value to foraging bats.

Transect Sections



Bat Activity



APPENDIX K: VISITOR SURVEY INFORMATION

The report below summarises the results of visitor survey information obtained in 2018.

Aquadrome Country Park Satisfaction Consultation

SUMMARY REPORT
Wave 2 (January to December 2018)

June 2019

• Background

Three Rivers District Council has historically run an on-site visitor survey for its parks (every 2 years) to ensure that visitor needs are being met and the quality of the park and facilities upheld. During 2017, it was decided to put this survey on-line instead, which, together with saving budget, has enabled a bigger sample of opinions to be gathered, including for the first time, those who visit *infrequently*. Thus a broader perspective of the parks is now being gathered. This survey will remain open and at points within the year, a 'cut' of the data will be taken to review and report back findings.

• Objectives

To ascertain customer satisfaction ratings and confirm areas that require attention/improvement or development.

• Methodology

A **'Survey Monkey' on-line survey** was launched on **Thursday 8th August 2017**. This is a continuous survey and will remain open indefinitely.

The enclosed report contains all **554 responses** made **during the period of 2018**

The **on-line survey** is marketed on the **Three Rivers District Council website,** via **social media**, **e-newsletters**, neighbourhood watch email group: **'Owl'**, '**Friends of the park'** groups and **Three Rivers Times**.

Respondent Profile

Please see the **Appendix** for the full **respondent profile**

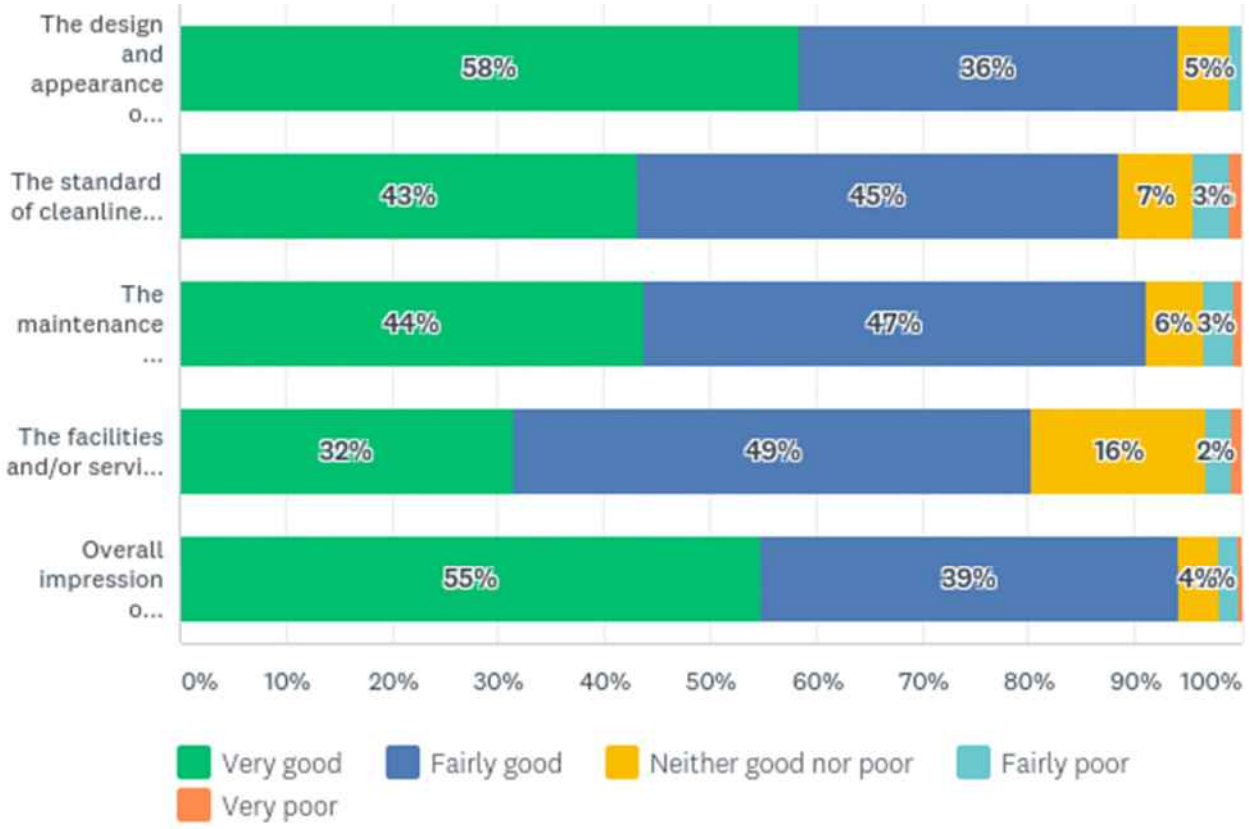
• Executive Summary

Satisfaction ratings

Satisfaction levels for the Aquadrome are **consistently high across various measures**. However, there is *some* dissatisfaction and suggestions for improvement (see below).

	% Very good/good
The **design and appearance** of the park	94
The **standard of cleanliness** of the park	88
The **maintenance** of the park	91
The **facilities and/or services** that are provided for **children and their parents**	81
Overall impression of the park.	94

Q8: Please rate the following for the park



Improvement Suggestions for the Aquadrome

Key suggestions for improvements for the park **surround paths, car parking, facilities, dog control** and **lake swimming.**

The paths

There were 12 mentions suggesting **improvements to the paths**. The **management of plant overgrowth on paths** was also an issue for many (particularly **nettles**) – 9 mentions. Requests for **cycle paths** was also raised (10 mentions) and a **new request for disabled wheelchair access** (5 mentions).

*"**Better path to access** to the park from the disabled bays – it's very uneven"*

*"**More information on boards explaining what improvements** or plant maintenance is being done"*

*"**The entrance by Uxbridge Road**…overgrown nettles, dog poo, **horrible pathway**"*

*"**Open some of the woodlands** to the kids with adventure routes over bridges. The **river banks should be manicured** to allow much more use to sit by a nice river"*

*"The **ramps over bridge are quite steep** and the **surface very uneven** when returning from Aquadrome"*

The car park

There were comments regarding **suggested improvements to the car park,** including **issues raised regarding car park charging** (20 mentions) and requests for simply **more car park options** (14 mentions).

*"**Better car park surface**"*

*"One night of rain and car park is so **deep in huge puddles** everywhere. It's not nice getting in or out of a car via a huge muddy puddle"*

*"**Less cars driving into the park**. It's dangerous to children and dogs and not necessary and **there is as car park so close to the sailing club"***

There seemed some **real concern that car parking charges would commence** (15 mentions).

"*Do not impose parking fees. It's the **only family outing local people on a budget can do for me"***

Facilities

Suggestions made were for **more and better toilets**, particularly around the **playground** (30 mentions) and **another/better/cheaper café** (28 mentions).

Toilets

*"A **toilet near to the playground**"*

*"**Toilets by water ski place are disgusting**"*

***"Toilet**s need **better cleaning and an update**"*

*"There's **not much play equipment safe for toddlers**"*

Café

*"Really hope the sailing club will have a café open to the public and dog. See **Café Cha in Cassiobury**. Café in the park **overpriced, not dog friendly"***

*"The **seating around the back of the café is quite miserable** if it is raining and feels like an afterthought. It was definitely better before when it was a **proper covered veranda** and not the rickety seating there is just now"*

*"**A quieter café**. The food is excellent, but it can feel like a zoo"*

*"A **coffee and water machine** so that you don't have to queue for ages in the café if you just want a drink"*

Other concerns/requests were for **more seating** (13 mentions), a **new suggestion of huts for picnics** (13 mentions), more **bins** (10 mentions), **more/better facilities for children** (9 mentions) and better **lighting** (8 mentions. There was also interest **more sailing/water sport provision** (6 mentions)

Bins

*"Litter bins required near the **Frogmoor Lane bridge** entrance"*

***"Better arrangements for rubbish disposal** especially after summer weekends. Every **bin overflows**, the wildlife spread debris everywhere"*

*"**Bigger bins with lids** so that the rubbish can't escape during windy weather and to prevent wildlife from getting at the rubbish"*

Children's facilities

*"**Wooden play ground in front of main big lake** would be perfect"*

*"**Improved barriers to stop children running across the bridge** into the road near the playground"*

Water fountain
*"Please can you install at **water fountain.** Would encourage more people to run around the lakes"*

Dog control

There were mentions relating to **dog control** (20 mentions) and **dog fouling concerns** (8 mentions).

*"I have had to deal with **out of control dogs** whilst walking in the Aquadrome. A few weeks ago my daughter in law was **bitten by a dog** and the owners were disinterested and didn't apologise"*

*"I have felt **very uncomfortable at times with dogs approaching me** and I know of many people who do not visit for this reason"*

*"The monitoring of dogs. Dogs are **not on their leads** and have completely spoilt the experience for my children who have been **jumped at by unruly dogs"***

*"**Please do not let dogs poo**. This is **incredibly dangerous for children**. Do you know what dog poo can do to children"*

Swimming in the lake

A **new suggestion** made during the year was to **allow swimming in the lakes** (7 mentions)

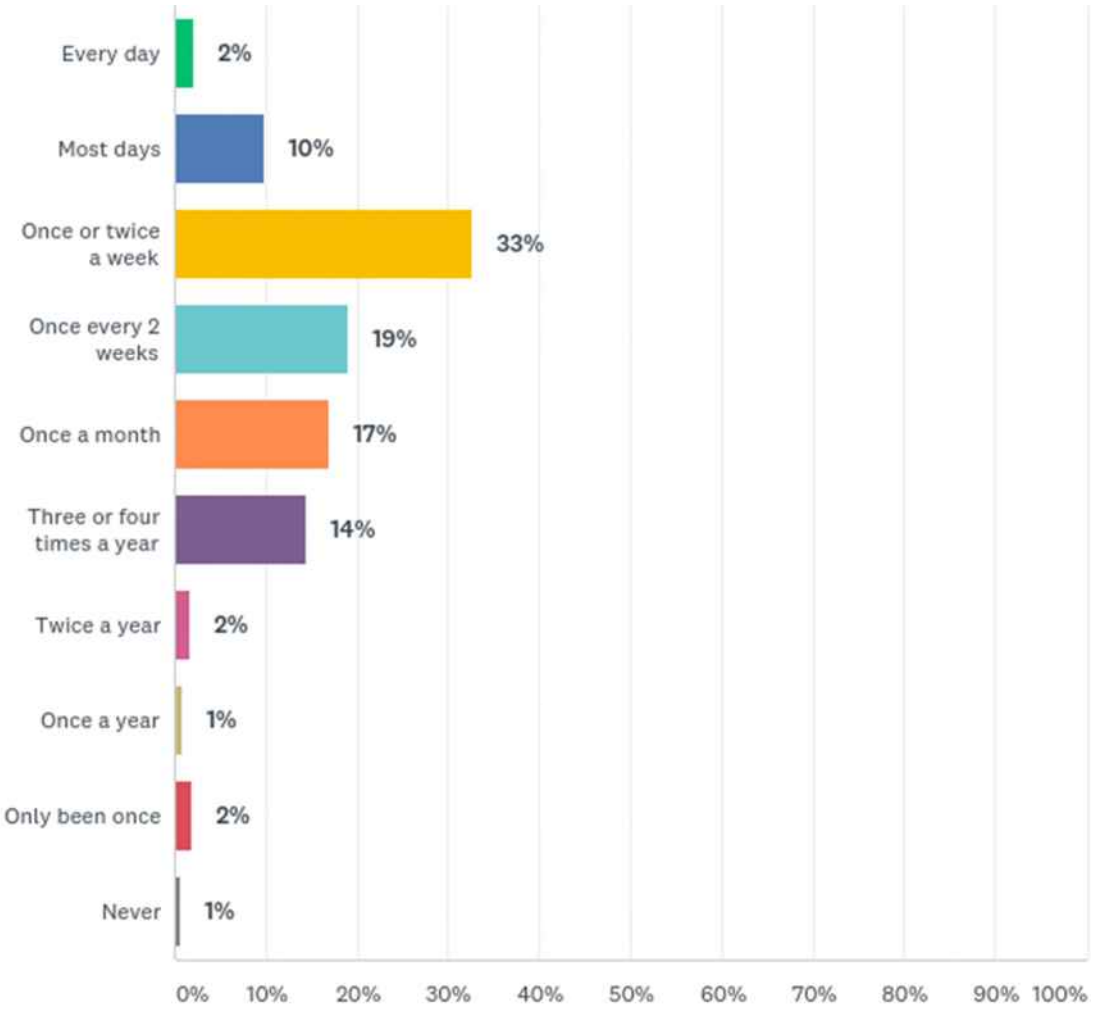
***"I think it is a shame, that with such a great local facility, it is not possible to swim** in one or more of the lakes. I know of the evident problem of weed – however I suggest officials/members of the local authority **visit Sweden** to examine **how authorities make similar use of facilities**"*

*"**Barriers so dogs can't get near the boat** areas in the water"*

- **Results**

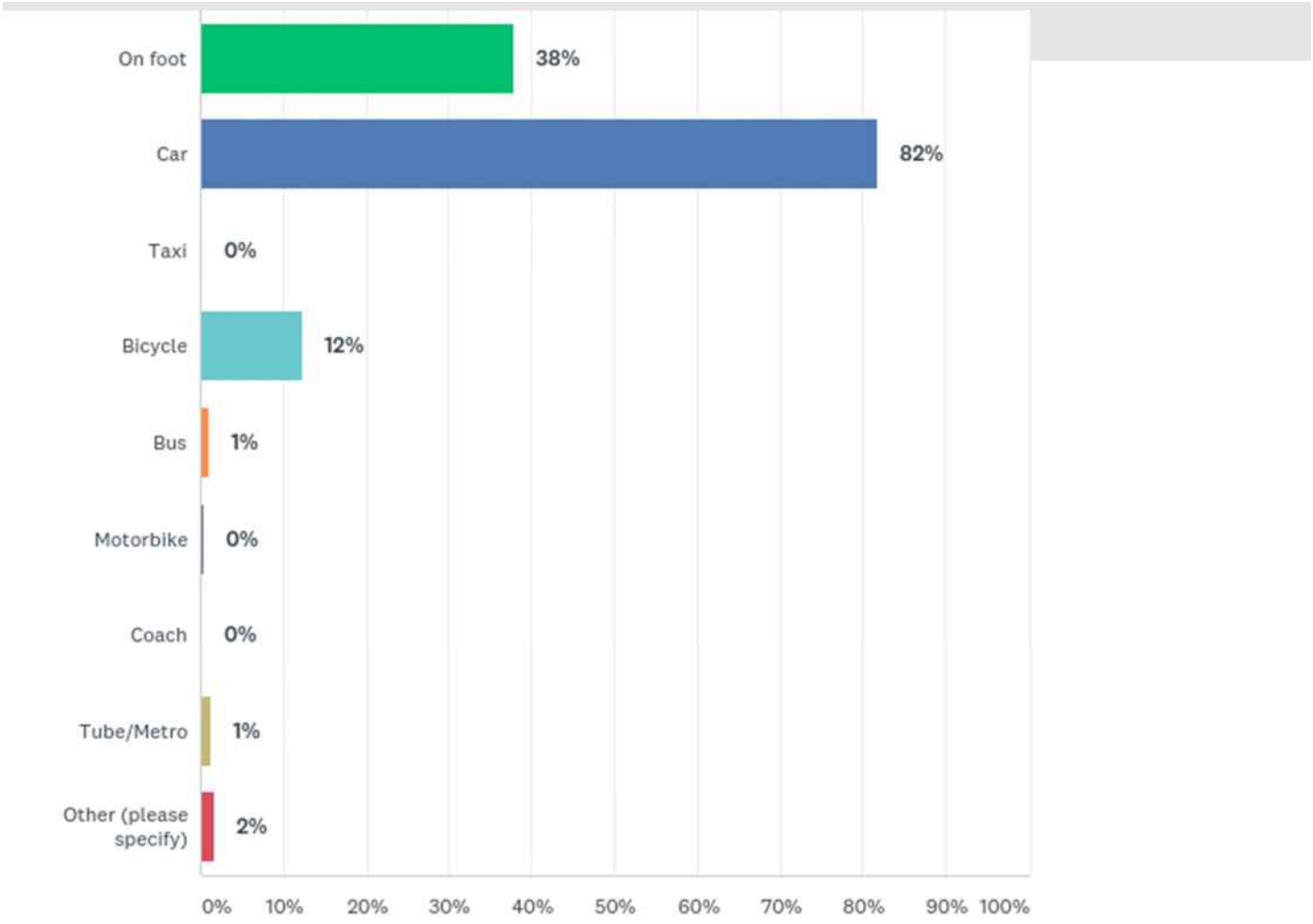
Visit frequency

Q1: How often do you visit the park?



Getting to the park

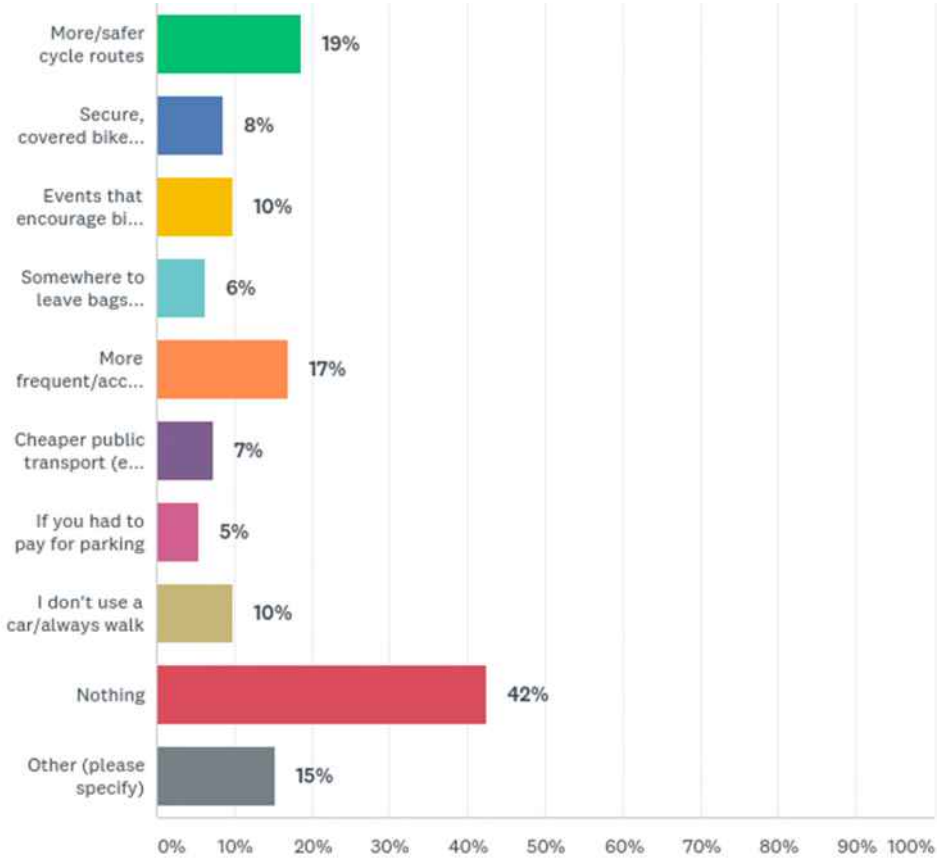
Q2: How do you tend to get to the park (tick all that apply)?



Encouragements for using public transport to visit park

The top encouragers for using public transport for the park were '**more/safer cycle routes'** (19% mentioned) and **'more frequent/accessible public transport'** (17%). Other key mentions were '**cycle events to encourage bike use'** (10%), **'secure, covered bike parking'** (8%), and '**cheaper public transport'** (7%)

Q3: How might you be encouraged to get to the park without using a car (tick all that apply)?

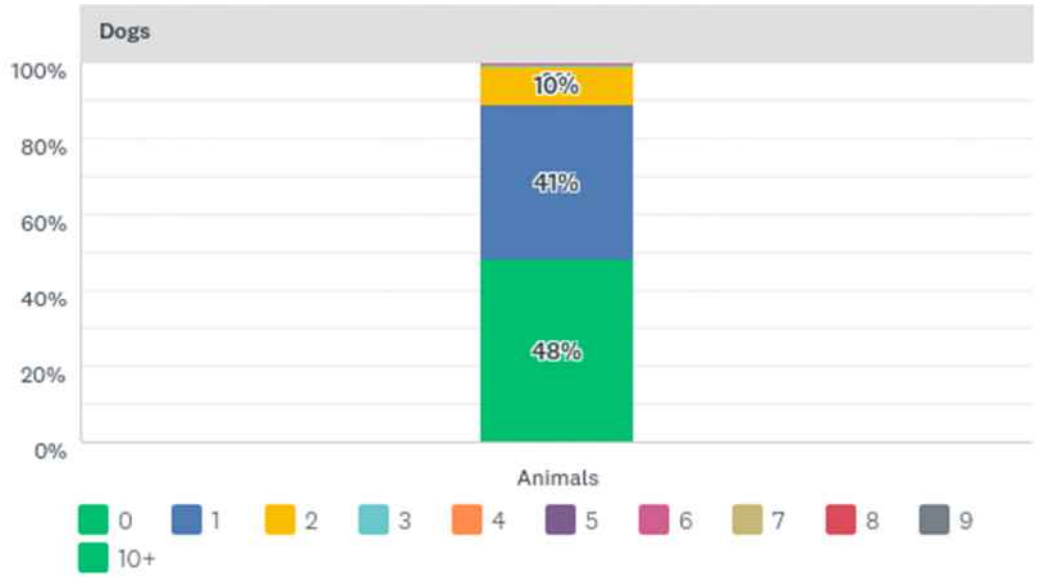


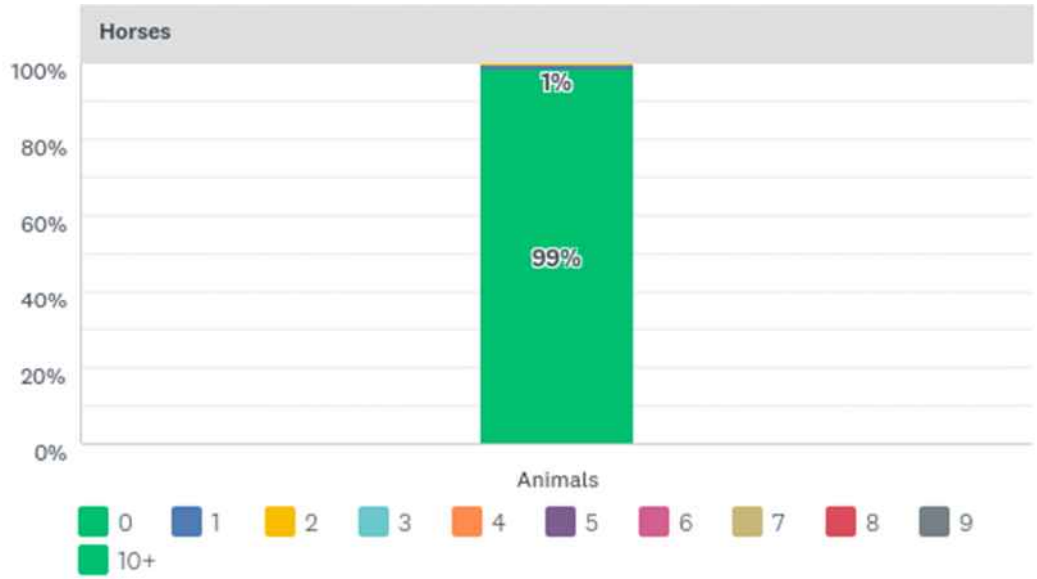
Visitor groups to the park

Q4: Including yourself, how many people tend to visit the park with you?

Animals to the park

Q5: Which animals, and how many (if any) do you tend to bring with you to the park?





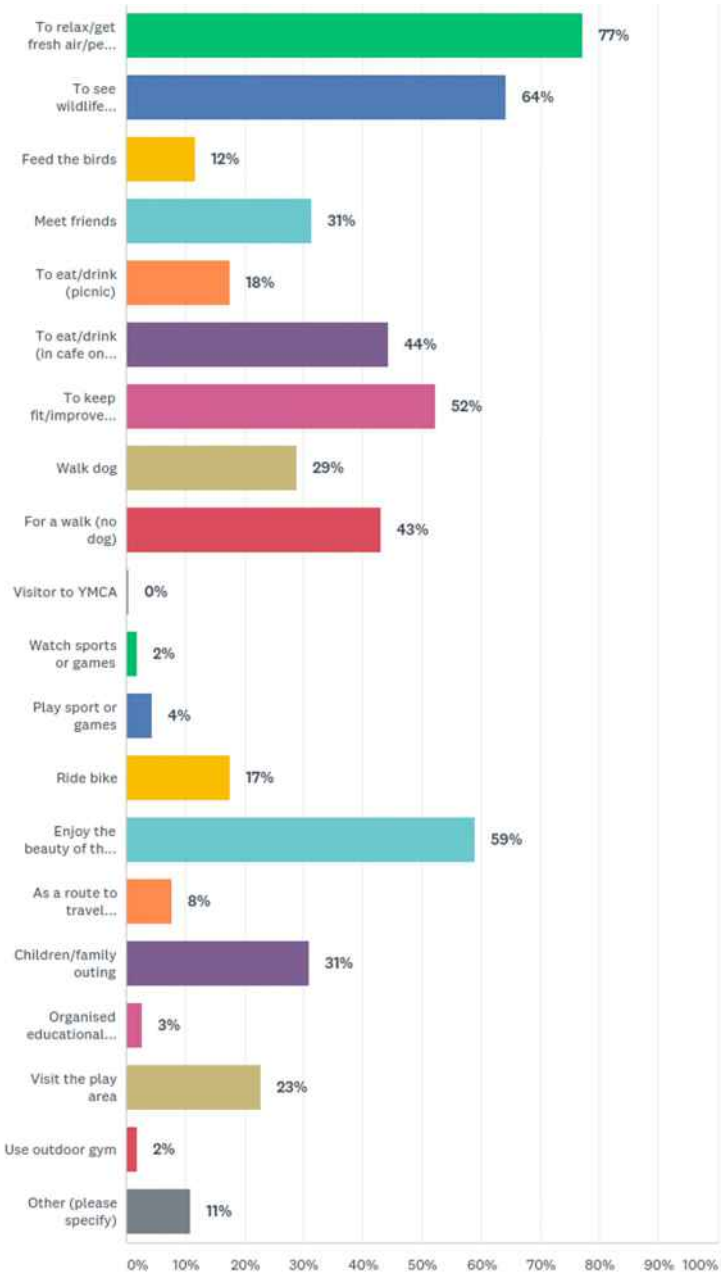
Reasons for visiting to the park

The majority of people visit the Aquadrome to simply **relax** (77%), see **wildlife** (64%), **enjoy the scenery** (59%) and to **improve fitness** (52%), to **visit the café (**44%), for a **family outing** (31%), **visit the play area** (23%), **socialise** (31%) and **walk a dog** (29%).

A pull at the weekend is **the 'Park Run'** which takes place at the Aquadrome (with 16 mentions of this – **a rise on the previous year's responses)**.

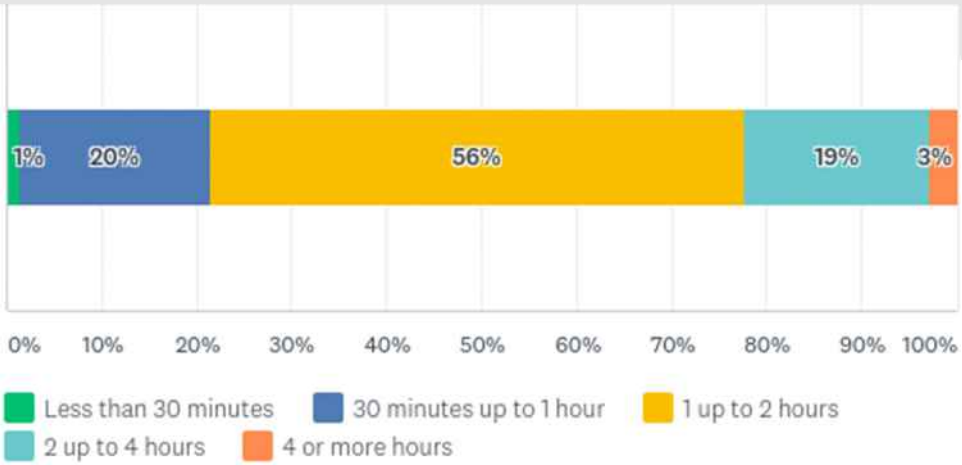
A new pull for the Aquadrome was to do **photography** (6 mentions), possibly as a result of the photography classes promoted in the district. **Bury Lake Young Mariners** was also a new feature on the list (6 mentions).

Q6: Why do you visit the park (tick all that apply)



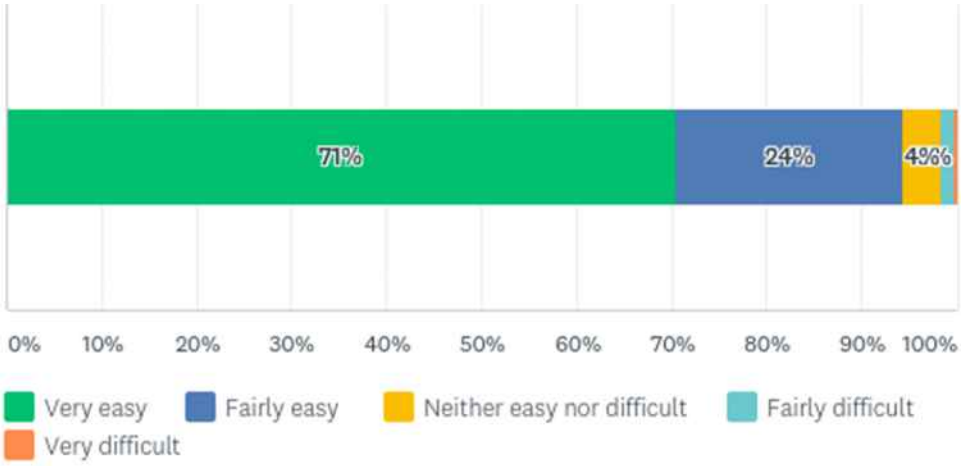
Length of stay in the park

Q7: How long do you tend to stay at the park?



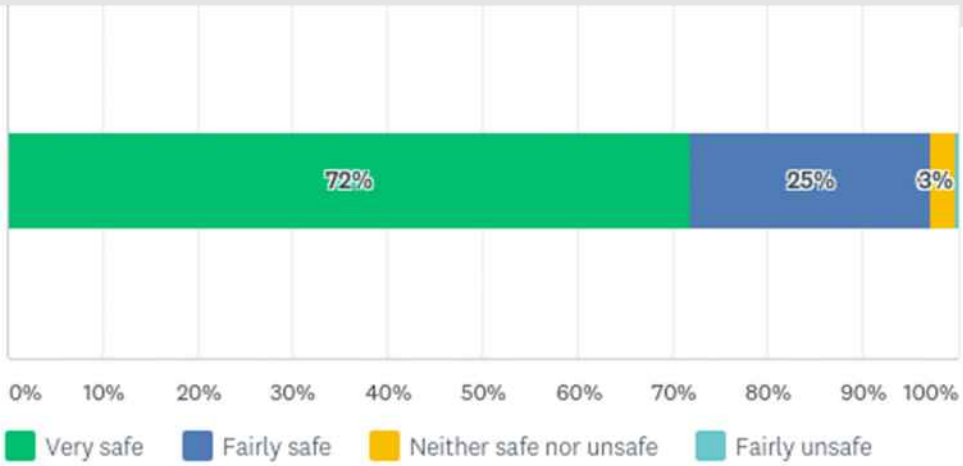
Ease of getting around the park

Q9: How easy is it for you to get around the park?

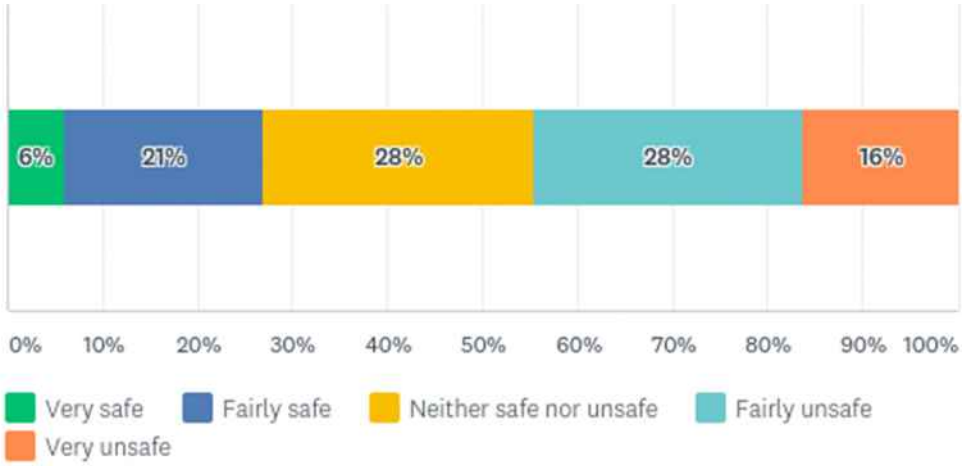


Safety in the park

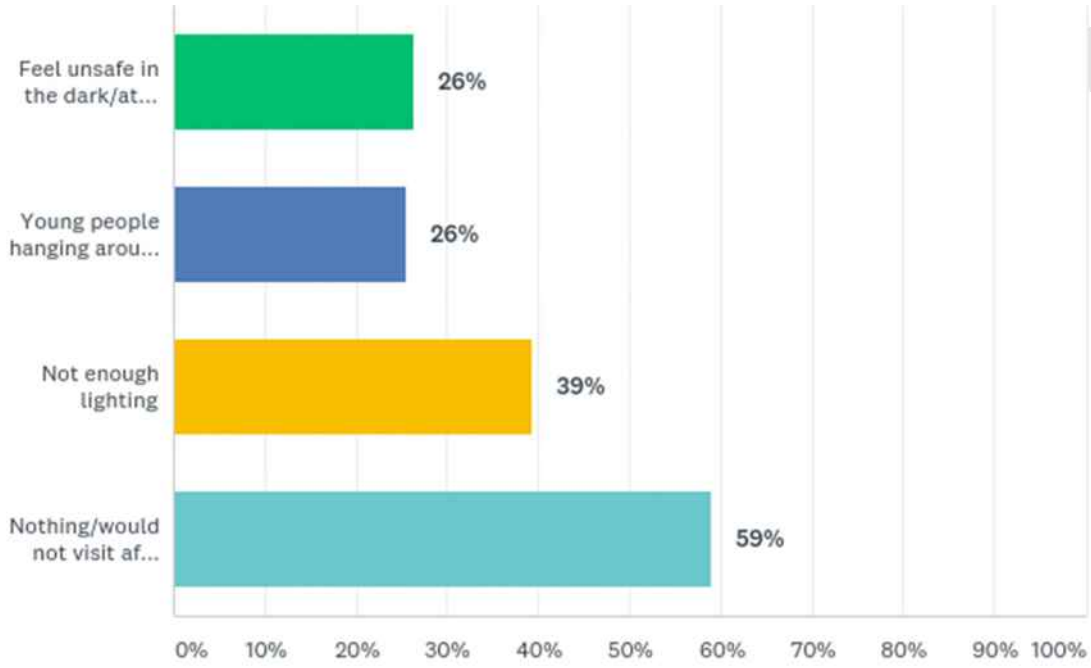
Q10: How safe or unsafe do you feel using the park in daylight?



Q12: How safe or unsafe do/would you feel using the park after dark?

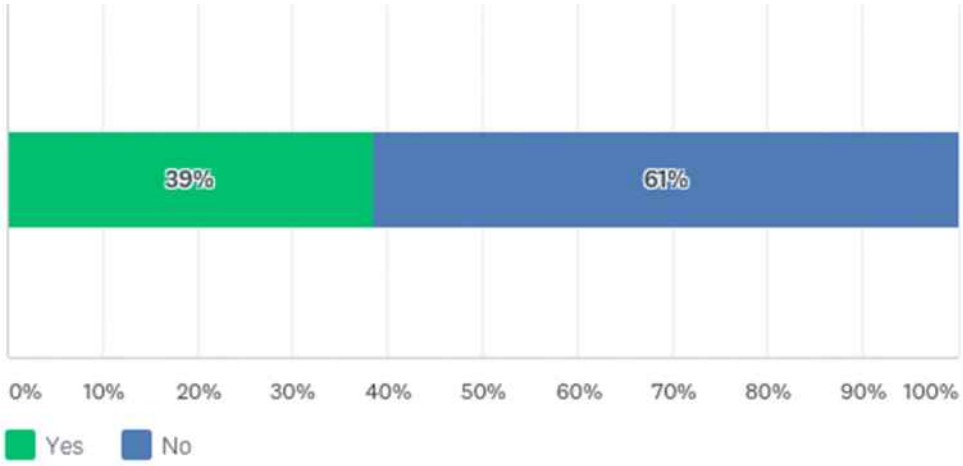


Q13: If you would feel unsafe using the park after dark, please explain why. What would make you feel safer (tick all that apply and comment further)?



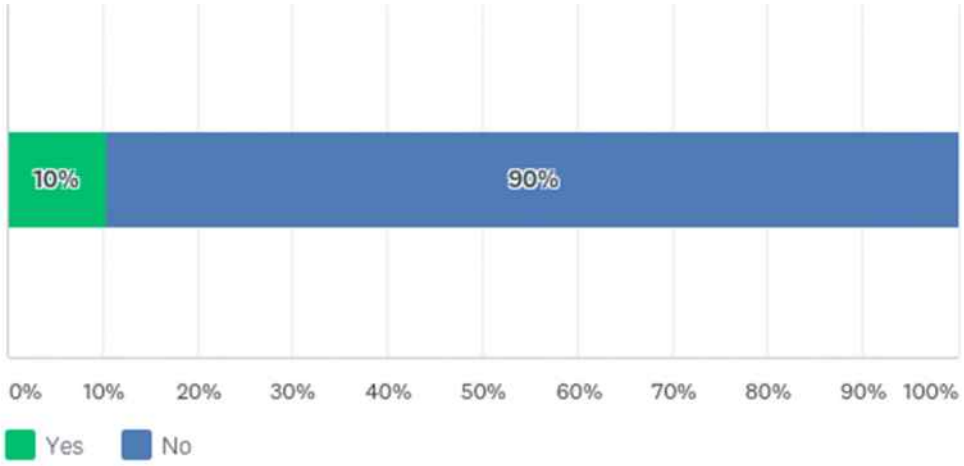
Park ranger

Q15: Are you aware that there is a park ranger based at the Aquadrome?

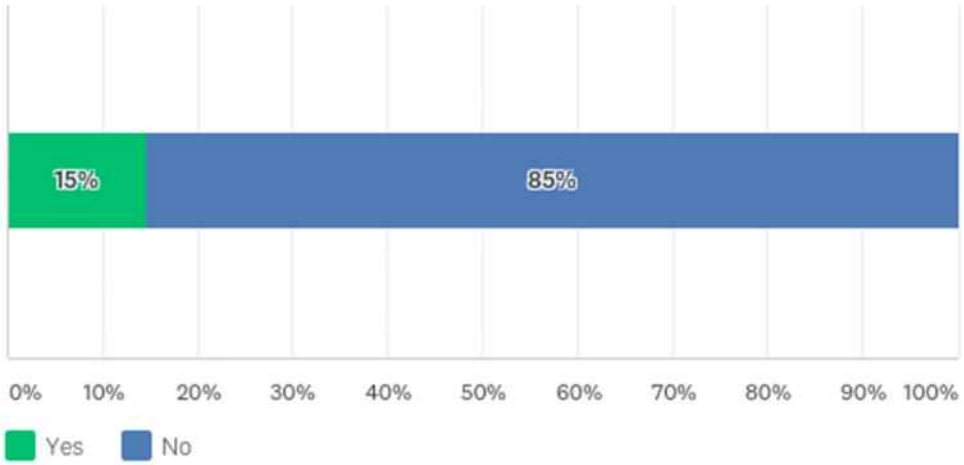


Friends of the Park

Q16: Have you been involved with any park ranger led activities at the Aquadrome?

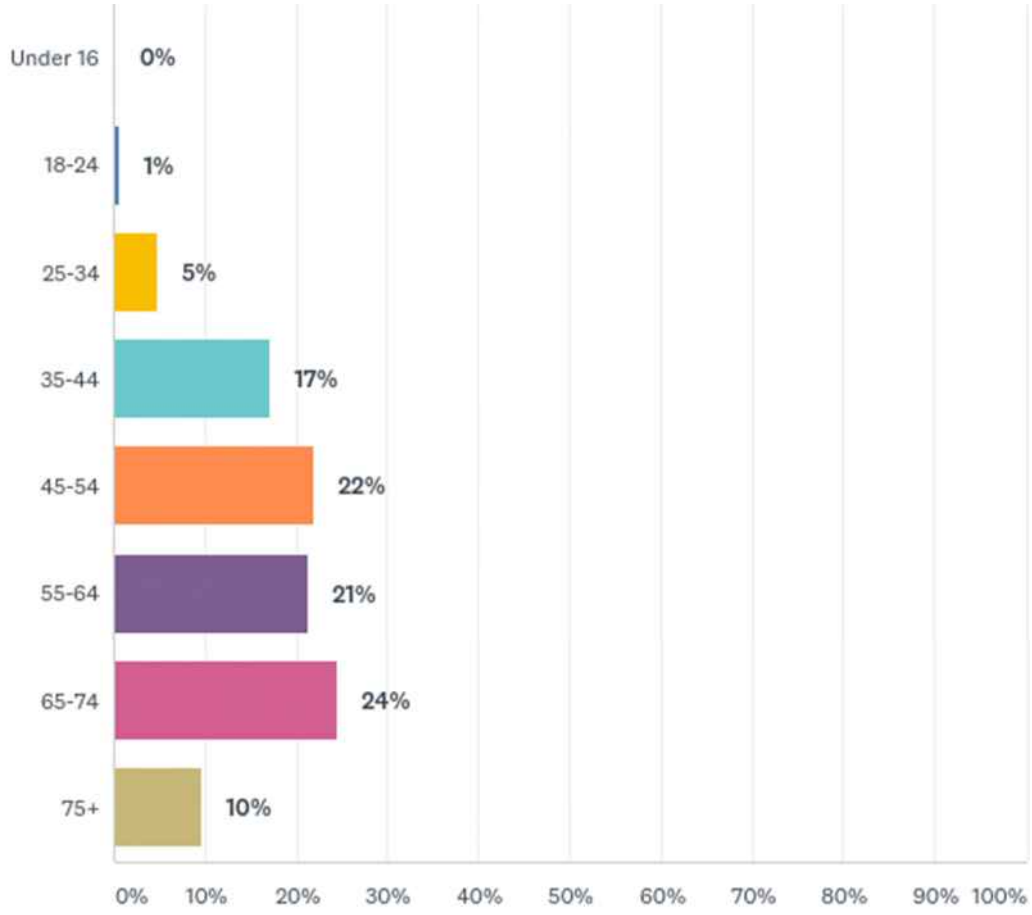


Q17: Would you like to be more involved in the running and promotion of the Aquadrome by joining a 'Friends of the Aquadrome' group (as yet to be set up)'? (This could be helping with guided walks, volunteering with gardening, or carrying out plant or animal surveys).

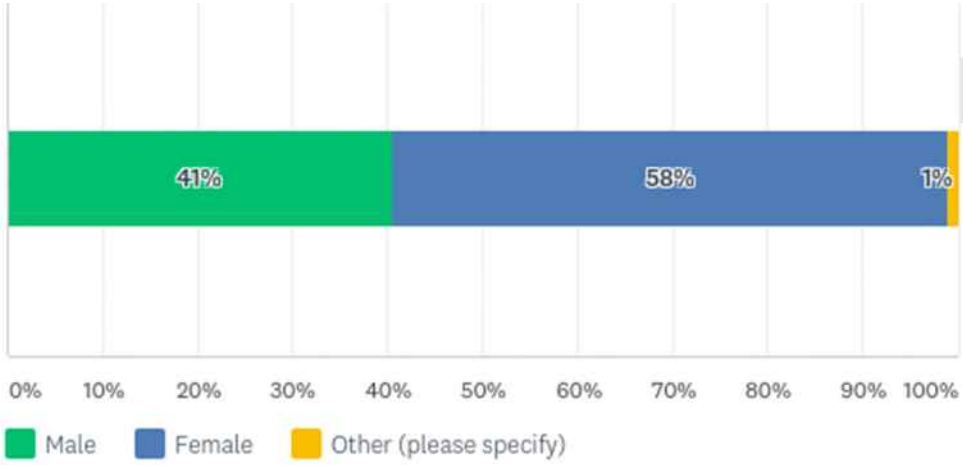


- **Profile**

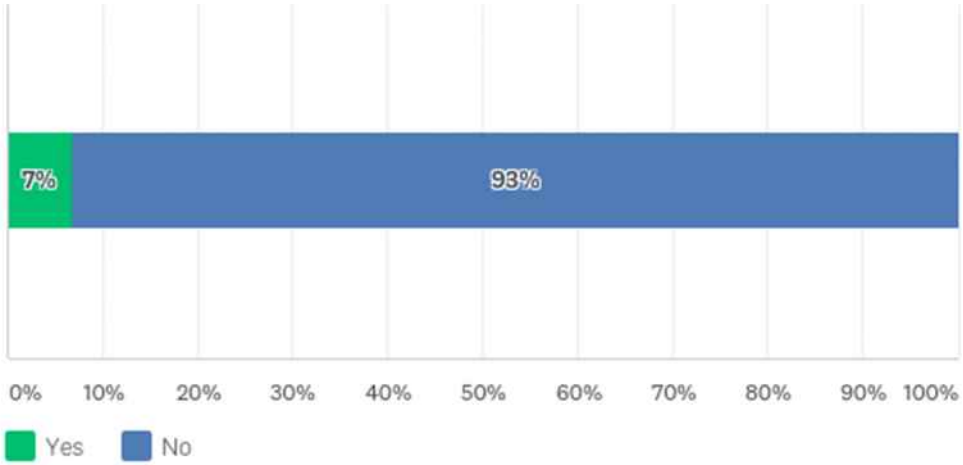
Q19: What is your age?



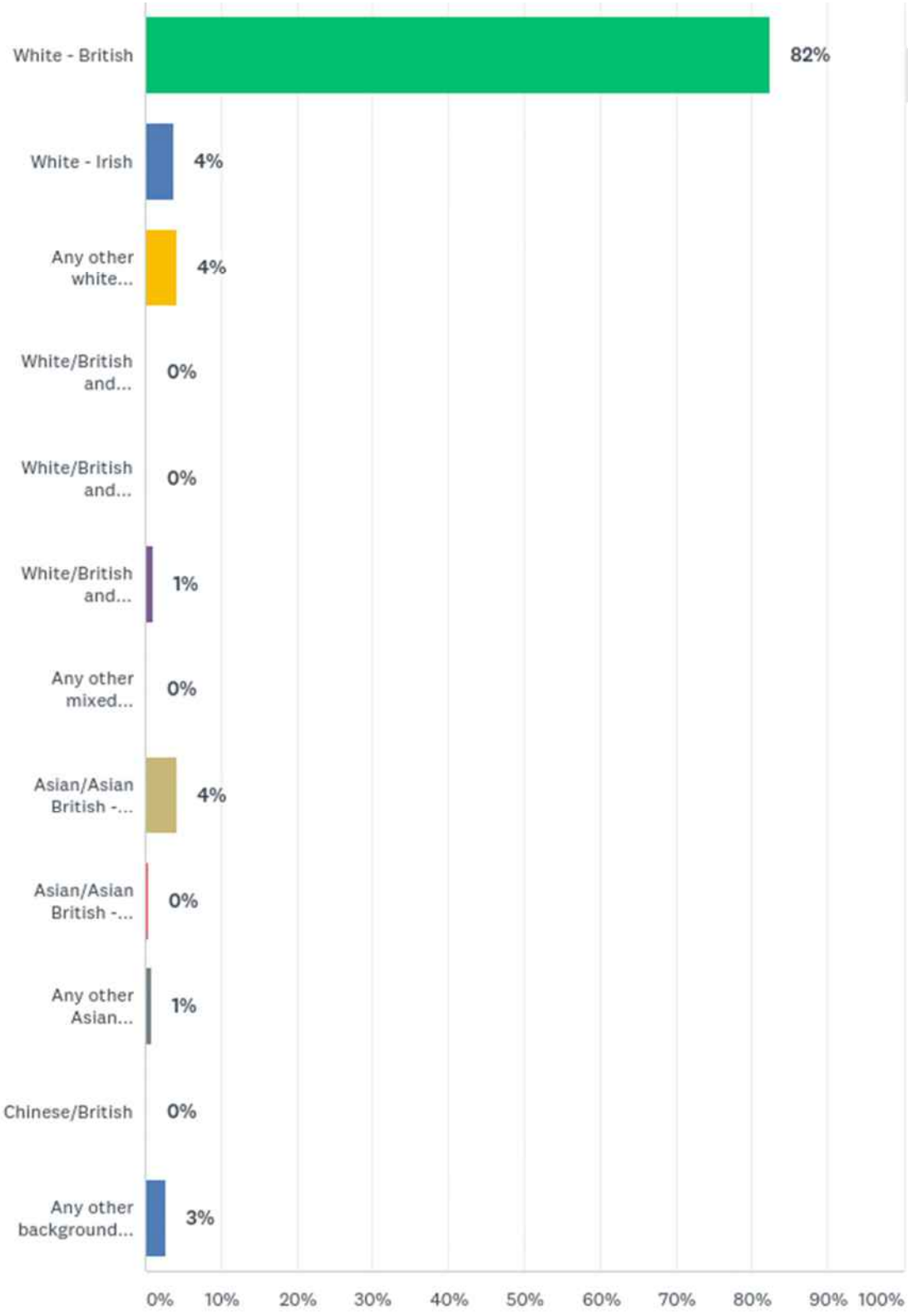
Q20: What gender do you identify with?



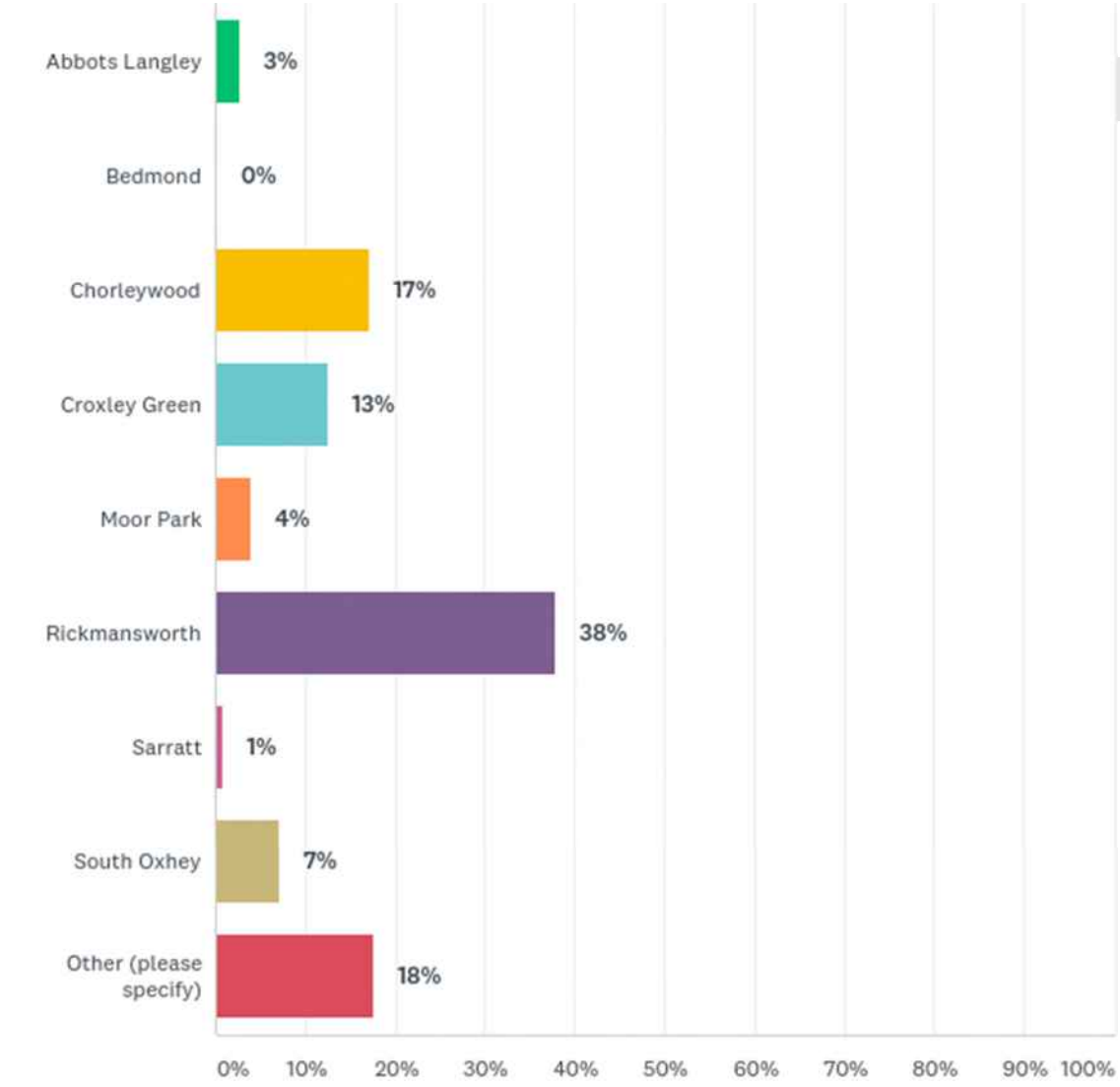
Q21: Do you consider yourself to have a disability that affects your use of parks?



Q22: To which of the following groups do you consider you belong?



Q23: Where do you live?



APPENDIX L: AQUADROME BRAND GUIDELINES

Rickmansworth Aquadrome

Brand Guidelines 2021

Concept

Having researched what the Aquadrome is known for and how people use the space, the same themes recurred across all demographics' comments – walking and nature.

The concept was developed with a circular icon to represent the circular walks visitors enjoy, the lines are clean and simple representing the flowing water of the lakes creating a strong standalone contemporary shape with a feeling of space.

The fluid shapes mark the identity clearly apart as a nature park, and individual elements can be used to create interesting shapes across different media uses as well as being used to house imagery.

Colour Palette

The gradient colour palette in seasonal pastel tones clearly represent the 'aqua' element, whilst also incorporating the green of the open spaces and woodland. The bold, fresh colour palette gives a feeling of space and calm experienced by visitors.

Typography

The font family Ginger Round has been chosen for its clean and contemporary feel to be warm and welcoming to all visiters. This was also employed for the identity of Leavesden Country Park which creates a consistency across the Three Rivers parks and starts to build a recognisable identity.


Rickmansworth
Aquadrome

Usage

The logo may be used in monochrome if placed on white, black or coloured background.

The gradient of the primary logo may not be altered in angle or colour.


Rickmansworth
Aquadrome

Usage

The logo may be used in monochrome if placed on white, black or coloured background.

The gradient of the primary logo may not be altered in angle or colour.

Secondary Identity

The secondary identity has been created for seasonal usage and to differentiate between different elements within the park.

The same safe zone rules and minimum size apply as with the primary logo, and the logo may be reversed to use on the gradient background, although the gradient may not be altered.

Safe Zones

All of the logo lock-ups must have the correct safe area applied in both digital and print formats.

To ensure the correct space, the safe zone distance should be measured using the x height of the capital A.

This rule can be applied to the logo at any size.

Minimum Size

The provided minimum print sizes should be used to ensure the logos are always legible.

Safe Zones

All of the logo lock-ups must have the correct safe area applied in both digital and print formats.

To ensure the correct space, the safe zone distance should be measured using the x height of the capital A.

This rule can be applied to the logo at any size.

Minimum Size

The provided minimum print sizes should be used to ensure the logos are always legible.

Supporting Logos

The Rickmansworth Aquadrome logo can be used alongside the following approved supporting logos only, providing greater weighting is given to the primary identity than the supporting logos.

Headline F37 Ginger Round Bold

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789

Body F37 Ginger Round Light

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789

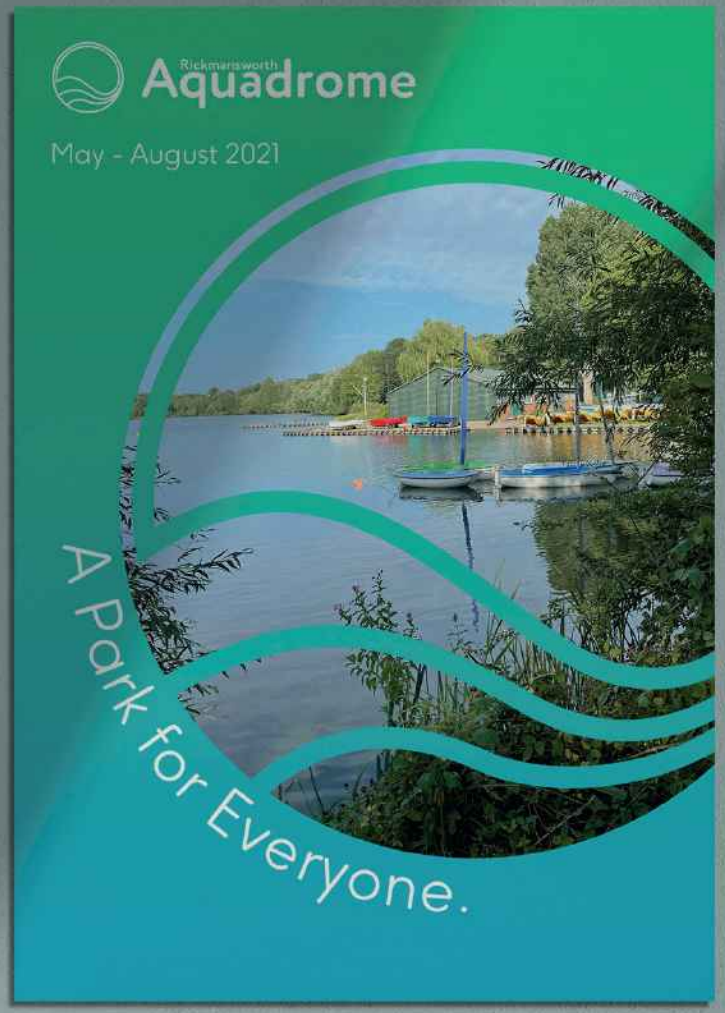
PRIMARY **SECONDARY**

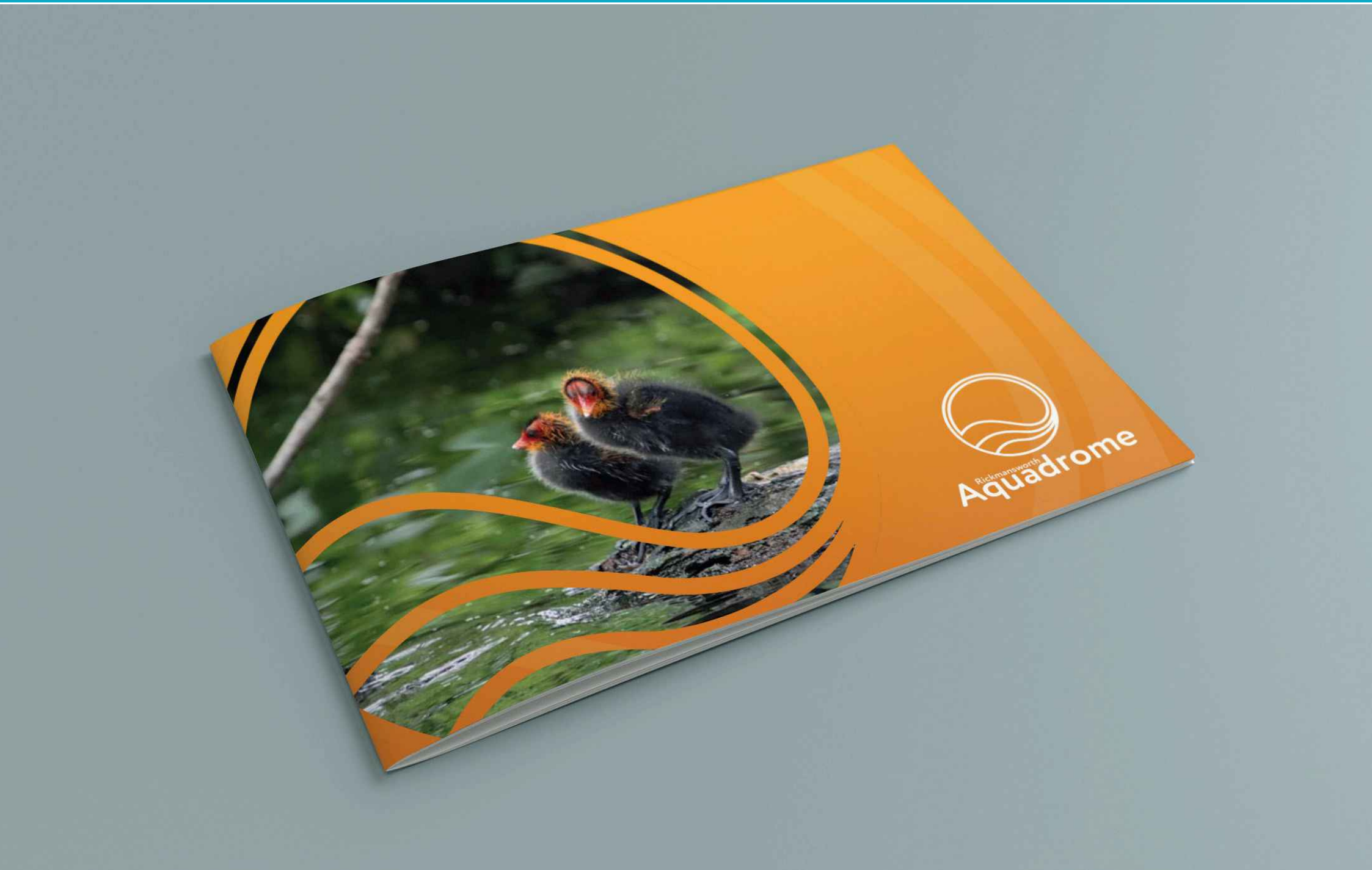
Pantone 2200	Pantone 7480	Pantone 137	Pantone 138
C 75 M 11 Y 17 K 0	C 83 M 0 Y 72 K 0	C 0 M 43 Y 93 K 0	C 9 M 58 Y 100 K 1
R 0 G 167 B 199	R 0 G 188 B 112	R 255 G 164 B 0	R 224 G 124 B 0
# 02a8c9	# 00bc70	# ffa400	# e07c00

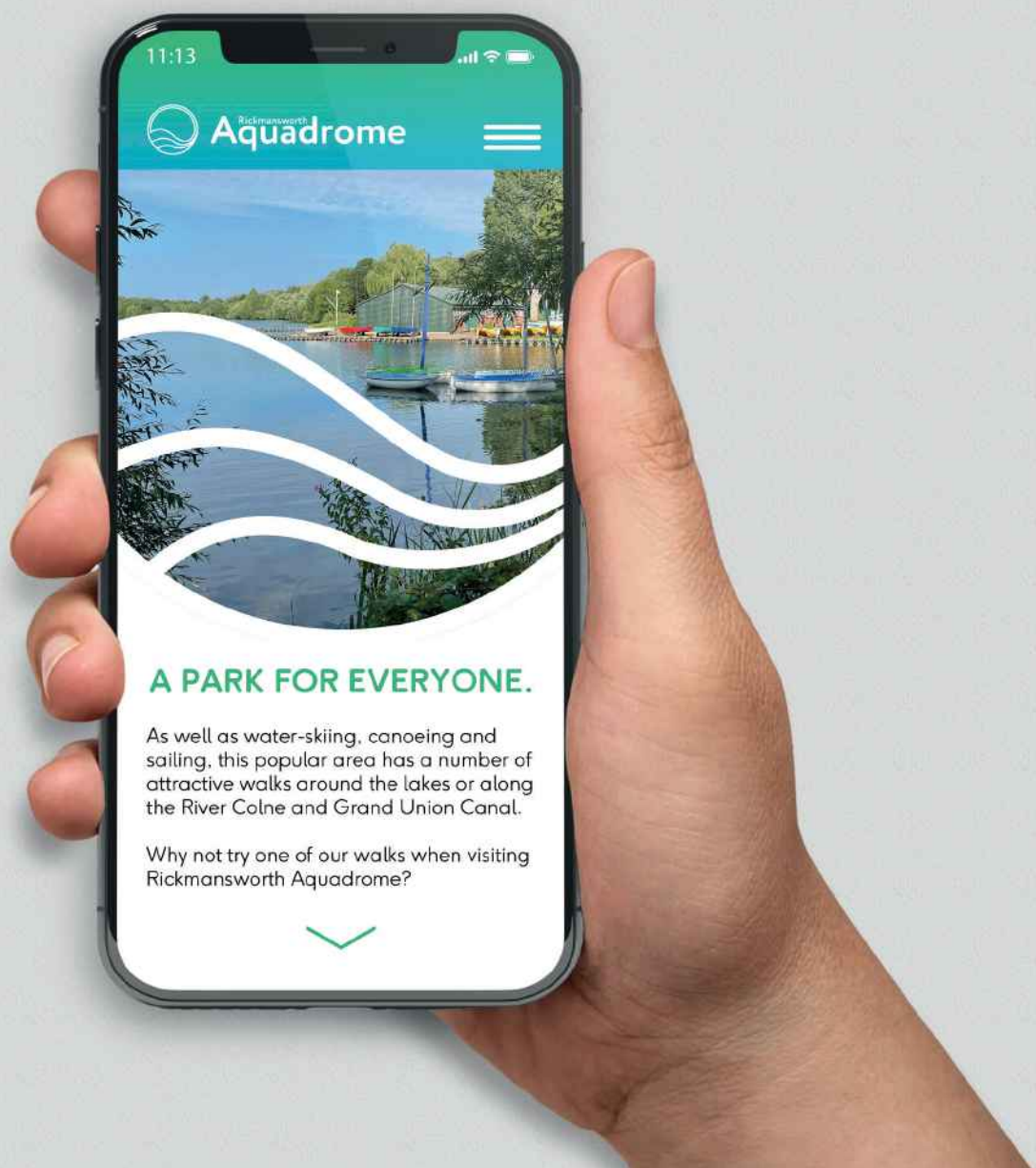
Imagery

The logo icon can be used as a holding device to house imagery to create striking visual representations of the brand across both print and digital application.


Rickmansworth
Aquadrome


Rickmansworth
Aquadrome
May - August 2021
A Park for Everyone.


Rickmansworth
Aquadrome


11:13
Rickmansworth
Aquadrome
A PARK FOR EVERYONE.
As well as water-skiing, canoeing and sailing, this popular area has a number of attractive walks around the lakes or along the River Colne and Grand Union Canal.
Why not try one of our walks when visiting Rickmansworth Aquadrome?


Rickmansworth
Aquadrome

www.creativeplace.co.uk

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DISQ

MUSEUMS ASSOCIATION CORPORATE MEMBER

APPENDIX M: ENVIRONMENTAL MANAGEMENT AND SUSTAINABILITY

1. Managing Environmental Impact and Climate Change Strategies

Three Rivers District Council has a strong commitment to the environment and environmental sustainability and recognises the impacts of its operations on the environment. The council's dedication to protect the environment is reflected in council policies, strategies, commitments and partnerships, including its Climate Emergency and Sustainability Strategy.

TRDC is a World Wildlife Fund Sustainable Timber Pledge Bronze achiever. This reflects the council's commitment to only buy timber or paper that is recycled, certified or sustainable and legal.

The council's procurement process enables appropriate consideration to be given to sustainable, socially and environmentally sound sources as well as to value for money.

TRDC was certified with ISO 14001 and now works to maintain the standard. ISO 14001 is an internationally recognised standard relating to environmental management which guides TRDC in how to minimise its operations to reduce the negative impact on the environment and show continual improvements in environmental performance.

2. Water Efficiency

Wood chip is used to reduce water requirements (and help reduce the volume of weeds). Watering is carried out on an 'as necessary' basis rather than as part of a regimented routine, and usually only when new plants are initially planted does watering take place.

Waste water from hand basins at one of the Council's depots is collected. Rainwater is also collected from the main council offices. This water is used to water plants, when required.

The Aquadrome urinals are on a timed flush so they are not constantly flushing. The sink taps have been designed so they cannot be left running. The sinks are button operated units which give a controlled volume of water, which helps save water.

3. Energy Efficiency

Machinery used in the grounds maintenance operations, from chainsaws to mowers, run on lead free petrol or petrol/oil mix. Machines running on diesel use Ultra Low Sulphur Diesel.

Three Rivers District Council utilises an electric vehicle in the implementation of the Grounds Maintenance contract at the Aquadrome.

4. Buildings

The café, toilets and accommodation are heated with warmth generated from a Ground Source Heat Pump (GSHP) which was installed at the same time as the buildings were constructed. The GSHP transfers energy from the ground, via an underground coil, to the buildings. This greatly reduces the volume of fossils fuels that are used on site.

5. Waste Minimisation

The Grounds Maintenance contract sets the procedures which are followed for waste management. The aim is to recycle the highest amount of material as possible with landfill being the last option. Litter from bins and litter picks is sorted for recycling and a recycling bin is located centrally within the site. The café supports the recycling scheme.

There is a green waste site in the LNR, and all suitable materials are composted.

6. Chemical Use

Pesticides will not be used by the Council unless there are no alternative means of control. Glyphosate will not be used in the district except for the control of Japanese knotweed.

TRDC takes all reasonable precautions to prevent the pollution of the atmosphere, waterways, countryside and urban areas by the discharge of liquids, solids or gases. TRDC does not use wood preservatives or wood treated with preservatives containing pentachlorophenol, lindane or tributylin oxide. All fertilisers are as environmentally sustainable as possible, and all cleaning materials (detergents, polishes and disinfectants) are phosphate free.

7. Peat Use

TRDC has a presumption against peat use and is committed to eliminating peat from its operations, including where plants are purchased from outside organisations. The Grounds Maintenance contract states:

F6.3 Manures, mulches, top dressings, composts and all other organic matter required in undertaking works included in the specification shall be peat free.

23.3 Plants must be obtained from a source approved by the Authorised Officer. They must not have been grown under soil and climatic conditions substantially different from that of the district. The nursery

supplying all plant material shall have a policy of not using peat in its growing mediums.

23.10/11 Bedding plants, trees and shrubs supplied by the Contractor will be free from any growing medium containing peat.

APPENDIX N: ENGAGEMENT RESPONSE DOCUMENT

Below is a summary of comments received from the engagement process on the Rickmansworth Aquadrome Management Plan 2022-27, carried out in May and June 2022, with Council responses and amendments made to the plan as a result.

General

Theme of responses	Council response and outcome
Most responses expressed general support for the actions contained within management plan. Some considered that no changes were required at the Aquadrome or expressed concern about the cost of proposals.	We are committed to pursuing the aims of the management plan to enhance biodiversity and improve the visitor experience at the Aquadrome. The actions are aspirational, and delivery will require considerable external funding to be obtained.

Biodiversity and sustainability

Flood risk. There were several comments regarding the flood risk implications of the proposals for properties along Uxbridge Road. Specific concerns included the installation of large woody debris in the river Colne, the proposal to investigate removal of the small weir and management of flood risk on the footpath network. Some noted a lack of detail in the action plans and a lack of prior engagement of residents of Uxbridge Road.	We acknowledge that further detail is required in relation to maintenance and proactive management of ditches and along the river Colne. This will be informed by the hydrological study, which will ensure more detailed decision-making is guided by expert advice. As this element of the management plan develops, we will further engage directly with residents of Uxbridge Road. The aim of the hydrological study is to understand and therefore improve the way water on the site is managed, which could benefit adjacent landowners as well as users of the Aquadrome. All proposals which have the potential to affect the function of the river and its flood plain will require a Flood Risk Activity Permit (FRAP) from the Environment Agency (EA), the requirements of which include demonstrating that there will be no negative impact on flood risk to properties. The EA have been and will continue to be consulted on the management plan.

	Large woody debris can be of great benefit to river habitats if carefully managed. It is important to ensure that it is secure and to assess its impact on flood risk appropriately. The feasibility of weir removal would be investigated from a technical point of view and with local stakeholders prior to any decision. This would include early consultation with the owners of the right bank and consideration of impact on the mill stream to the north. As with other areas of work, no changes will be made to the footpath network without first securing the support of the EA for the design through the FRAP process.
Woodland. Many comments supported keeping the site as natural as possible, including in relation to other proposals such as improvements to the main entrance area. There was some opposition to woodland management along the river, including the felling or monolithing of some of the large poplar trees, and to the management of dead wood close to paths in recreational areas of the site.	It is a high priority for the Council to find the correct balance between the wildlife of the Aquadrome and its visitors, and great care will be taken as more detailed proposals are produced to ensure the site is not further developed. Woodland management along the river Colne will involve some tree felling, to allow light to reach the river in places and encourage the development of valuable marginal and in-channel vegetation, important to allow water voles the opportunity to colonise the site. This approach is fully supported by the Countryside Management Service (CMS) and Herts and Middlesex Wildlife Trust (HMWT), who were involved in developing plans for the river. We acknowledge that care needs to be taken when planning this work to ensure that it does not just create additional access points to the riverbank where vegetation cannot become established due to trampling. The poplars at the Aquadrome are hybrid black poplars, a commonly-planted and extremely fast growing tree. These trees are not of special ecological value, in contrast to the

	native wet woodland in much of this area. The approach to dead wood allows it to be retained in large parts of the site. We feel that keeping to a higher standard of maintenance along key paths outside areas prioritised for biodiversity is appropriate.
Grassland. There was general support for devoting more of the amenity grassland at the Aquadrome to wildflower meadows, with some concern that there continued to be space available for picnics, and regarding nettles in grassland areas. HMWT made specific recommendations regarding meadow management and bulb planting.	We believe the balance of amenity grassland to wildflower meadow in the new management plan is appropriate, but this will be kept under review. We will take full account of HMWT's recommendations in delivering this management. Nettles are expected to be frequent in the fertile soils of the Aquadrome. They can be managed both in the verges and the grassland areas by more frequent cutting and removal of arisings.
Invasive species. Advice from the Colne Catchment Action Network (ColneCAN) is that non-native signal crayfish present a significant issue for the site but the size of the population makes it impossible to manage under existing regulations. In addition habitat enhancement proposals have the potential to aid the further proliferation of crayfish. Floating pennywort is another invasive non-native species present in the catchment and expected to appear at the Aquadrome. It has the potential for negative environmental impacts and negative impacts on fishing and navigation. ColneCAN and CVRP identified that a plan should be in place to seek to prevent it becoming established and manage its impact.	Signal crayfish control is no longer included as an action within the plan. Should regulations change, this can be reconsidered. We will liaise with ColneCAN regarding habitat management proposals to ensure these are fit for purpose regarding crayfish. It is unlikely to be possible to prevent the arrival of floating pennywort on the river Colne within the Aquadrome, as the installation and regular maintenance of a boom at the entrance from the Grand Union Canal is not thought to be practical. Regular monitoring should take place to identify its arrival as soon as possible and help manage its impact.
Sustainable travel to the site. Some respondents felt that driving to the Aquadrome should be discouraged in favour of walking and cycling. Others supported provision of improved facilities for cyclists and electric vehicle charging points.	There are no plans to discourage use of the car park, but improvements will be made to make other options for travel easier, including new cycle parking. Electric vehicle charging points will be incorporated if feasible in car park improvement works

Management of litter and sustainability of café. Several respondents wanted to see recycling bins at the Aquadrome, and for litter, including from the café, to be minimised. There were suggestions of drinking water provision around the café and the Ebury Way play area.	Litter from the Aquadrome is already sorted to enable recycling, and new bins will be labelled accordingly to make this clearer. We are also considering using larger bins in the main visitor arrival hub. TRDC will work in partnership with the café as part of the Aquadrome to continue to manage litter. People can refill their bottles within the café.

Entrances and path network

Main entrance area. Some respondents felt that improvements to the main entrance area were not a priority, either because it should be kept natural or because visitor numbers are already so high and improvements are likely to attract even more people. Most were in favour of the proposals, with specific suggestions including better signage of the dogs on leads area and support for improving the view from the café and a communal seating/meeting area.	There is an opportunity to considerably improve the visitor experience at the Aquadrome by enhancing the layout and design of the main entrance. All improvements to the site need to take into account visitor pressure, and redesigning the main entrance can help this busy part of the site absorb visitors and enhance its natural beauty. We note the need for better signage of the dogs on leads area.
Other entrances. Several comments noted that gates at entrances will not be welcoming and could impact accessibility.	These gates are intended only to enable closure of the Aquadrome site in circumstances such as high winds or flooding. They will otherwise be kept permanently open and therefore have no impact on the accessibility of the site.
Access routes. There were many comments regarding the lack of proposed improvements to the access route from Uxbridge Road. CVRP also suggested that this entrance should be enhanced in a similar way to the Riverside Drive entrance as a gateway to the Aquadrome and the Regional Park. Similar observations were made regarding the poor condition of the Grand Union Canal towpath.	The access to the Aquadrome from Uxbridge Road is on a public footpath outside the boundary of the Aquadrome. The Council are working closely with Hertfordshire County Council, who are responsible for the maintenance of this path, to coordinate improvements with other surfacing work within the Aquadrome and to enable the recommendations of the planned hydrological study to be considered. Works are expected to include replacement of the narrow footbridge. These improvements, along with improved signage, will greatly improve this entrance to the site.

	The Grand Union Canal towpath is similarly outside the scope of the plan, but we understand that improvements would benefit users of the Aquadrome and have engaged with the Canal and River Trust (CRT) as part of this consultation process.
Path surfacing. Several respondents wanted to be sure no new paths would be surfaced, and it was requested that asphalt surfacing is avoided where possible. While opinion was split on the width of paths and bridges, more of the feedback was in favour of path widening where necessary to provide sufficient width.	The management plan proposes to surface two new paths – along the south shore of Bury Lake and through the pinetum. Both are currently very wet or muddy in places and surfacing will greatly improve accessibility. Crushed stone will be favoured over asphalt as a surface type for these paths. All other minor paths will remain unsurfaced, and previous proposals to surface a new link from the north shore of Bury Lake to the Batchworth Lake path have been removed from the plan. Final surfacing decisions, including material choices for resurfacing on the main path network, will need to be made in consultation with the EA after the hydrological survey is completed.

Car park

Parking charges. Opinion was split on the need for parking charges. Many were concerned that the ambitious plans for the site were a pretext for establishing parking charges. Of those in favour of charging, most preferred to charge non-residents only, and several respondents did not want the site to be a financial burden on local residents.	In line with all Council owned car parks in the district, TRDC are continually reviewing usage, demand and viability. In addition, we intend to secure funding for improvements to the site from sources external to the council.
Car park improvements. Opinion was similarly split on the need for improvements to the car park. Of those who supported improvements, the majority focused on improvements to the surface and management of flooding issues. Several thought it was outdated to invest in facilities for drivers and that any investment should be in cycling infrastructure. There was both support and opposition for a one way	Proposals to improve the layout and design of the car park will be retained in the plan, as this could considerably improve the visitor experience at the Aquadrome. The decision on car park design, including a one way system, will follow feasibility work and further public consultation. It is not proposed to remove the trees screening the car park from the site. We do expect there to be changes along

system within the car park, with some suggesting it would bring entrance queues onto Harefield Road. Many were concerned about removing screening between the car park and site.	this boundary as we establish a more coherent route from the car park into the site, and this may involve some tree felling, but at the same time there will be tree planting in the car park, and the screening will be retained.
Car park entrance. Several consider the canal bridge entrance to be dangerous, and suggestions included traffic lights or better signage.	We do not support traffic lights at the bridge, as this would cause queuing onto Harefield Road. We are not aware of any accidents on the bridge. The nature of the entrance and the site speed limit of 5 mph should encourage drivers to be cautious.
Vehicle access to the Aquadrome site. A small number of respondents were concerned about increased vehicle movements on the site. Members of organisations who access the site by vehicle wanted to ensure existing arrangements would be maintained.	We intend to significantly reduce the number of vehicle movements and level of parking along the main access road. Section 3.3.3 of the management plan has been updated accordingly.

Facilities

General. The most frequent comments regarding improvements to facilities included a preference for no additional buildings and to leave the site as it is to avoid attracting more visitors.	We do not expect additional buildings on the Aquadrome site. The Council cannot control visitor numbers, however the actions within the Management Plan prioritise enhancing and protecting the unique habitats of the site and carefully managing human interaction so that a balance can be achieved.
Toilets. There was considerable support for improvements to the toilet facilities at the water ski club, and better signage that these are public toilets. Other comments included the need for better disabled provision and baby changing facilities, for more frequent maintenance and cleaning and for longer opening hours.	We will explore the potential for improvements to toilet facilities at the water ski club, and for a Changing Places toilet at the Aquadrome.
Ebury Play Area. The location of this play area close to a busy road junction was challenged. There were several requests for hedge planting along the roadside boundary to improve the	Hedge planting will be included in the management plan. The hedge will be kept to a low level (1.5m) to maintain visibility to the play area.

appearance of this area and provide a buffer to the road.	
Ebury Play Area refreshment kiosk. Only 40% of respondents said they would find this useful, and while there were many comments in favour, welcoming additional food and drink options, more felt this would be unnecessary, generating additional litter, causing extra cost and pressure to parents, and given the ease of access to other cafés. There was support for proposals to improve the appearance of this area, in particular the storage containers, and to replace the bridge.	Given the balance of opinion against this proposal, it is no longer supported and will not be included in the management plan. We will continue to explore the potential to improve the design and facilities at this important arrival point to the Aquadrome.
Bird hides. Several respondents suggested adding bird hides around the lakes.	Bird hides would not prevent disturbance to wildlife at other points on the lakeside paths and are likely to attract anti-social behaviour, so are not included in the management plan.

Site furniture

Interpretation and signage. Feedback to signage proposals included several suggestions of signage to encourage and engage children, and requests to highlight links to the wider area. Some were concerned about a proliferation of signage affecting the informal character of the site and suggested digital information signs.	Interpretation for children and digital signage will be considered as part of the delivery of new site interpretation, which will also include information about the area around the Aquadrome, including the Colne Valley Park. Rationalisation of signage should help reduce the number of signs across the site.
Bins. Most comments regarding bins were to request more, and that they are emptied more frequently. Some respondents wanted to be sure dog bins would not be replaced only to change their design.	Bin provision will be reassessed prior to any replacement. We aim to replace litter bins with a more suitable closed design, but dog bins will only be replaced at the end of their life.
Benches. Some respondents requested more benches, and comments noted that site furniture should either be wooden, to be in-keeping with the environment, or recycled plastic given its sustainability benefit.	Bench and picnic table provision will be reassessed prior to any replacement. The selection of designs for site furniture will take into account the advantages of sustainable timber and recycled plastic.
Outdoor gym. A number of respondents questioned whether an outdoor gym is	The outdoor fitness zone will replace the outdoor gym within the Ebury Way

needed at all, and whether its location opposite the car park entrance is appropriate.	play area, which is predominantly used by children and not for the purpose it was installed for. The new location has been carefully selected to take into account a variety of factors, such as the new zoning of the site, natural areas prone to flooding and accessibility. The new outdoor fitness zone will support those who use the site for exercise purposes and will provide a training opportunity.
Play trail. There was both support and opposition for the woodland play trail proposal, with those against the idea concerned about the habitat impact.	This will be a natural play trail using natural materials such as logs. No new pathway will be created and there will be minimal impact on the woodland.

The Aquadrome community

Conflict between user groups. The strongest theme of feedback through this consultation reflected various forms of conflict between user groups resulting from the high number of visitors to the site. For many, uncontrolled dogs are the greatest concern, and some avoid visiting for this reason. The majority favoured a dogs on leads policy for the whole site, although there were contrasting opinions on this. Several suggested provision of an additional enclosed area for dog training. The danger of cyclists using busy paths was another issue raised. Suggestions included limiting speed, segregation of paths or no cycling areas. Respondents supported stronger engagement of site users to encourage responsible shared use, including shared use signage.	There is an existing PSPO in place which specifically applies to the Aquadrome, including keeping dogs on a lead around the café area. TRDC are leading on a series of social media campaigns to encourage responsible dog control and a series of educational events. There may need to be a review of the existing PSPO should issues continue to arise. The Aquadrome is an important site for cycling and active travel and lies on the National Cycle Network. The council will continue to support cycling on the site. Risks will be managed by providing wider paths and bridges to give users space to share, and by designing ‘share with care’ signage appropriate to the Aquadrome.
Activities and events. Additional events at the Aquadrome were largely supported, on the themes of both wildlife and conservation and health and wellbeing. Lots of interesting ideas for activities and events were put forward. Many also thought it was important that	Ideas for activities and events will be reviewed. In order to manage the impact of events on the site and wildlife, the council is developing a Hire of Grounds agreement for the Aquadrome, which is included as Appendix E in the management plan. This is intended to

any events were sensitive to the needs of wildlife and did not impact general site users. There was some feedback that communications about events are insufficient.	help manage the number and the environmental impact of events held on the site. The proposed landscape plan for the main entrance will include a new welcoming entrance area which will be an excellent location to share information about upcoming events. The Three Rivers Leisure website is also a valuable source of information about activities and events.
Volunteering. There were several requests for additional opportunities to volunteer at the Aquadrome and contribute to its management.	This will evolve as the project develops with the potential for future volunteer opportunities through the Community Biodiversity work programme and links with the CMS volunteer group.
Water sports. There was general support for the water activities at BLYM, although some negative comment regarding the impact of power boats and use of inflatables on Bury Lake. Respondents felt it was important that all the organisations operating at the Aquadrome were inclusive. A number of respondents noted the impact of the water ski club on Batchworth Lake and questioned the suitability of this activity within a local nature reserve. A small number questioned the level of input from Uxbridge Rovers Angling and Conservation Society (URACS) into plans for the river Colne and Batchworth Lake, given their inevitable bias in favour of the fishery.	The council will continue to work in partnership with all organisations at the Aquadrome to ensure that their activities are beneficial to the site and the local community. The Water ski club has a current lease which allows them to use the lake for this purpose. We broadly support the draft fishery management plans developed by URACS in partnership with HMWT. The involvement of the Wildlife Trust has ensured the plans retain a strong conservation focus. We are continuing to work with URACS to ensure the final plan reflects the outcomes of this consultation.
Open water swimming. Many remain in favour of permitting open water swimming at the Aquadrome.	As detailed in the draft plan, neither the council nor BLYM, which would need to host a swimming club, support this activity.
Access to the Colne. The conflict between paddle sports and fishermen on the Colne was highlighted, with requests to remove ‘no kayaks’ signs and to help the two groups to co-exist.	The council policy is that access to the river Colne from the Aquadrome is not permitted, either for kayaks or for swimming. However, we do not control use of the river itself. It would be very difficult to physically prevent access to the river with fencing,

Some also noted the dangers of people in the river at the lower weir and proposed fencing this area. Several respondents questioned the inclusion of a dog access point to the Colne, both in terms of the practicality of restricting dog access to a particular point, and the appropriateness of doing anything other than discouraging dog access to the river.	given the number of potential access points. We will continue to use 'no swimming' signage to control this access. The dog access point has been removed from the action plan. We will instead discourage dog access to the river on the site, and provide information to support this policy, which is due in particular to the impact of anti-flea treatments on aquatic invertebrates.
Bird feeding. The majority of comments suggested that bird feeding should be discouraged across the site, rather than providing bird feeding areas which do not work particularly well to restrict bird feeding in any case. The poor condition of the bird feeding area outside the café, with an accumulation of smelly bird faeces and attraction of rats, was a concern for several. However, there was also a request for an additional bird feeding area at the water ski club.	TRDC recognise bird feeding as a family pastime. Plans will include removal of official "bird feeding" locations, which will be re-landscaped, installation of educational interpretation boards and working alongside the Royal Society for the Protection of Birds (RSPB) and Herts and Middlesex Wildlife Trust (HMWT) to advise people on the best ways to feed the birds.
Joint working in the Colne Valley. Comments from ColneCAN, the Colne Valley Regional Park Trust and the Canal and River Trust highlighted that the Aquadrome should not be considered in isolation but as part of its wider landscape, and therefore that much improved joint working on landscape-wide issues is of great importance.	TRDC understands the importance of working in partnership with organisations and the local community and the Aquadrome's place in the wider Colne Valley. As part of the project, TRDC will establish a steering group with partners to further develop the aims and aspirations of the plan and to provide support for funding applications.