

Our ref: 6737 / MJ / RG

Steve Scott
Project Development Manager
Children's & Family Services YMCA
Nottingham
Nottinghamshire
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19th April 2018

Dear Steve,

RE: BALDERTON LAKE – ECOLOGY

The following letter report provides details of a walkover survey to assess features of ecological interest within the above named site undertaken by an ecologist from FPCR on the 9th April 2018.

Site Context and Current Status

The site is located in the south of Newark-on-Trent (OS grid reference SK 808521). Existing residential development borders the site to the north, east and south and the Sustrans National Cycling Network borders the site to the west.

The site is located approximately 25m west of the permitted development site and comprises a lake (known as Balderton Lake). The lake forms part of Balderton Gravel Pit Site of Importance for Nature Conservation (SINC) which, is a non-statutory designated site of local importance.

Proposal

The construction of a new bank to facilitate the installation of a new pontoon into the lake, and the installation of a new boathouse to provide water sport activities such as canoeing and kayaking.

Methodology

Habitats

Survey methods followed the extended Phase 1 Survey technique as recommended by Natural England¹. This involved a systematic walk over of the site by an experienced ecologist to classify the broad habitat types and to particularly identify any Habitats of Principal Importance for the conservation of biodiversity as listed within Section 41 (S41) of Natural Environment and Rural Communities (NERC) Act 2006².

¹ JNCC. 1990. *Handbook for Phase 1 habitat survey – a technique for environmental audit*. Peterborough: JNCC

² *The Natural Environment and Rural Communities Act 2006*. [Online]. London: HMSO Available at:

<http://www.legislation.gov.uk/ukpga/2006/16/contents>

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Fauna

Throughout the walkover survey consideration was given to the actual or potential presence of protected species, such as, although not limited to those protected under the Wildlife and Countryside Act 1981 (*as amended*), the Protection of Badgers Act 1992, and the Conservation of Habitat and Species Regulations 2017. Consideration was also given to the existence and use of the site by other notable fauna such as Schedule 1 bird species, breeding birds, Species of Principle Importance under Section 41 of the NERC Act 2006 and Local Biodiversity Action Plan (LBAP) or Red Data Book (RDB) species.

Birds

The Wildlife and Countryside Act 1981 (*as amended*) is the principal legislation affording protection to UK wild birds. Under this legislation all birds, their nests and eggs are protected by law and it is an offence, with certain exceptions to recklessly or intentionally:

- Kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird while in use or being built;
- Take or destroy the egg of any wild bird species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (*as amended*) are specially protected at all times.

A number of birds feature as Species of Principal Importance for the conservation of biodiversity in England in Section 41 (S41) of the NERC Act 2006. This list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under S40 of the Act, to have regard to the conservation of biodiversity in England when carrying out their normal functions.

Some bird species are classified according to their conservation status, such as their inclusion on the Red and Amber lists of Birds of Conservation Concern (BoCC) in the UK³:

- Red list (high conservation concern) species are those that are globally threatened according to IUCN criteria; those whose population has declined rapidly (50% or more) in recent years; and those that have declined historically and not shown a substantial recent recovery.
- Amber list (medium conservation concern) species are those with an unfavorable conservation status in Europe; those whose population or range has declined moderately (between 25% and 49%) in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localized populations.
- Green list (low conservation concern) species fulfill none of the above criteria.

³ Eaton et al., 2015. *Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man.*

Results

Habitats

The majority of the site consisted of a large fishing lake (c.7.2 ha) with semi-natural broadleaved woodland, ephemeral/short perennial vegetation, dense continuous scrub and amenity grassland surrounding the lake (see **Figure 1**).

The lake itself would be considered to be a Nottinghamshire Biodiversity Action Plan (NBAP) habitat⁴ - Eutrophic and mesotrophic standing waters. The citation for these habitats acknowledges that many of these water bodies are for amenity purposes and that those with the highest value are those that are “*significant water bird habitats all year round, providing breeding, feeding and winter roosting areas for a large number of species. Particularly important are water bodies which act as staging posts for migratory birds*”. Marginal habitats are also considered to be of importance here however the lake has largely steep banks with limited marginal vegetation with the exception areas of established reedbed (also a NBAP habitat⁵) located to the east and north of the lake. Fishing platforms are present along all aspects of the lake.

Areas of mown amenity grassland had a sward length of approximately 7cm at the time of the survey. Perennial rye-grass *Lolium perenne* was the dominant grass species, with abundant white clover *Trifolium repens* and meadow grass *Poa annua* also present. Areas of ephemeral / short perennial vegetation were present towards the north and east of the site.

Willow *Salix* sp. dominated semi-natural broadleaved woodland occurs on the northern, eastern and western aspect of the lake. This habitat meets the criteria for the NBAP habitat⁶ wet woodland.

A small area of dense continuous scrub was present to the south of the site and comprised mostly bramble *Rubus fruticosus* agg. and blackthorn *Prunus spinosa*. This habitat has very limited ecological value however given its modest extent and low species diversity.

Protected Species

Badger

No signs attributable to badgers such as setts, latrines, hairs or footprints were recorded within or immediately adjacent to the site boundary during the walkover. Badgers are not considered to be resident within the Site and are not considered further in this report.

Bats

Several trees to the east of the site were identified as having potential to support roosting bats.

Areas of broadleaved woodland, scrub, ephemeral/short perennial vegetation and the lake itself provides foraging and commuting habitat for bats, whilst the amenity grassland was considered to provide limited foraging potential. Common and widespread bat species are considered likely to use the lake and boundary habitats for foraging and commuting.

⁴ <http://nottsbadg.org.uk/wp-content/uploads/2020/10/Eutrophic-and-Mesotrophic-standing-waters-HAP-version-2009.pdf>

⁵ <http://nottsbadg.org.uk/wp-content/uploads/2020/10/Reedbed-HAP-version-2009.pdf>

⁶ <http://nottsbadg.org.uk/wp-content/uploads/2020/10/Wet-broadleaved-woodland-HAP-version-2009.pdf>

Birds

A total of 14 bird species were recorded within the site boundary, of which four are either protected under Schedule 1 of the Wildlife and Countryside Act 1981 (*as amended*), or appear on the Birds of Conservation Concern (BoCC)⁷ list as declining (Red or Amber lists) or are identified as Species of Principal Importance under Section 41 of the NERC Act 2006.

The following species were recorded during the survey:

NERC/Red-listed Species

- Song thrush *Turdus philomelos*
- House sparrow *Passer domesticus*

NERC/Amber-listed Species

- Mallard *Anas platyrhynchos*
- Black-headed gull *Chroicocephalus ridibundus*
- Mute swan *Cygnus olor*

Green-listed Species

- Canada goose *Branta canadensis*
- Blackcap *Sylvia atricapilla*
- Blackbird *Turdus merula*
- Wren *Troglodytes troglodytes*
- Moorhen *Gallinula chloropus*
- Carrion crow *Corvus corone*
- Blue tit *Cyanistes caeruleus*
- Grey heron *Ardea cinerea*
- Coot *Fulica atra*
- Long-tailed tit *Aegithalos caudatus*
- Chiffchaff *Phylloscopus collybita*

A nesting pair of mallard were noted in the reed beds to the east of the lake, c.0.2km away from the proposed development area. Overall the lake supports limited suitable opportunities for breeding birds in the form of overhanging vegetation and small fishing platforms extending into the lake.

Great crested newts (GCN) *Triturus cristatus*

There are no records of GCN within 1km of the Site and no other waterbodies within 250m of the Site. The site was dominated by a large fishing lake. Due to the presence of fish and water fowl this waterbody was considered unsuitable to support great crested newt.

The terrestrial habitats that will be affected by the proposals include a small area of managed amenity grassland that lacks suitable cover and shelter for the species therefore GCN are considered to be absent from the works area and are not considered further.

⁷ Eaton MA, Aebischer NJ., Brown AF., Hearn R., Lock L., Musgrove AJ., Noble DG., Stroud D. and Gregory R.D. 2015. Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. *British Birds* 108, pp 708–746.

Reptiles

A number of existing reptile records were returned from within 1km of the site boundary including grass snake *Natrix helvetica*, adder *Vipera berus* and slow worm *Anguis fragilis*.

Whilst no evidence of reptiles was noted during the survey, the site contains habitats and features with potential to support reptiles, including scrub, broadleaved woodland and tall grasses (ephemeral vegetation) which could provide potentially suitable conditions for shelter, foraging and basking.

Recommendations

Habitat considerations

The proposals do not result in the loss of any of the NBAP habitats present (reedbeds or wet woodland), and the inclusion of kayaking activities will not impact on the ability of this lake to meet the NBAP criteria.

A small area of the amenity grassland will be lost to this development. The grassland across the Site comprised a restricted range of generally common and widespread species that is regularly managed via mowing. The loss of this habitat is therefore not a constraint to the proposals.

No loss of individual trees or areas broadleaved woodland is anticipated. Retained trees must be suitably protected throughout the construction works i.e. working methods should adhere to standard best practice guidance. This would include BS5837 Trees in Relation to Construction – Recommendations: 2012 for trees and hedgerows. An arboricultural survey of the Site will be conducted, and any recommendations made within the subsequent report will be followed.

Considerations should also be given to the protection and stabilisation of the shoreline of the lake in the area of the pontoon, for example via the use of piling to renew the bank structure, and/or native planting bundles, timber and pre-planted coir rolls with pegs anchored into the bank where applicable. The use of pre-planted coir rolls with native plants such as lesser pond sedge *Carex acutiformis*, soft rush *Juncus effuses* and yellow flag iris *Iris pseudacorus* will enable more rapid establishment of the bankside vegetation and can be used to enhance marginal vegetation and provide additional habitat for local fauna.

As a further biodiversity enhancement, additional reedbeds beds could be established to the south and east of the lake to reinforce and protect the vegetated banks and provide suitable nesting habitat for waterfowl using the lake.

Species Considerations

Bats

The small amount of amenity grassland to be removed for the proposals will not impact value of the foraging habitat for bats provided by the lake and surrounding habitats. Habitats of higher value to bats such as the woodland will be retained.

Kayaking activity will be limited to daylight hours and therefore artificial lighting is unlikely to be required for this activity. It is further recommended that all other water sport activities be limited to the daytime so as not to disturb bat behaviour via the use of artificial lighting.

If the use of artificial lighting at or after dusk cannot be avoided then this should be carefully designed to minimise the illumination of aquatic habitats, trees and other structural vegetation. This may be achieved for example via the use of directional lighting of low wattage (<70W), ideally on a short (c.1 minute) timer. LED lights should be used as these have a sharp cut-off and lower intensity. All luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats. Those with ultraviolet elements must not be used, nor metal halide or fluorescent sources.

It is recommended that consideration be given to the provision of bat boxes on selected mature trees around the lake to provide an enhanced roosting resource for local bat populations. Bat boxes should be located in unshaded spots at a height of at least 3m above ground, ideally arranged in groups of three or four facing different aspects on the same tree to provide a range of roosting options.

Reptiles

All common reptiles are protected from killing, injury and sale under the Wildlife & Countryside Act 1981 (as amended) and are priority species under the NERC Act 2006. There is a low risk that small numbers of individual reptiles may be present within the terrestrial habitats on the Site at the time of works. It is therefore recommended that any clearance of suitable habitat proceeds in a manner that will passively displace any reptiles present. Vegetation will be slowly and directionally trimmed in the direction of the appropriate retained habitats and given two cuts, the first to a height of 200mm and the second 1 to 2 hours later to 50mm height. All arisings will be removed from the working area to prevent the creation of potential refugia.

All areas of existing suitable refuge such as rubble piles and other discarded debris will be removed by hand. Any animals caught will be relocated to neighbouring suitable habitat.

Birds

There are no trees anticipated to be lost to facilitate the development. Should any works be required to the retained trees as a result of recommendations from the arboricultural report, it is recommended that any works should occur outside of the bird breeding season (i.e. avoiding November – February inclusive) to minimise the risk of disturbance to breeding birds. If this is not possible, such vegetation will be checked prior to removal by a suitably experienced ecologist to confirm the absence of active nests. If any nesting birds are present, the nest and an appropriate buffer will be retained undisturbed until the birds have fledged.

Impacts such as recreational disturbance to nesting birds could arise from future activities such as kayaking or canoeing on the lake. As such, recommended mitigation measures include the installation of a floating barriers and floating signs to limit access both across the lake and from the shore to the area around the dock and pontoon. Access should especially be prohibited in the vicinity of the reedbeds as these provide good quality nesting habitat.

The creation of additional reedbed along the south eastern aspect of the lake is recommended to provide enhanced nesting opportunities for a range of bird species.

As a further enhancement, floating habitat areas could be created along the banks of the lake to provide increase nesting habitats. Interpretation boards could also be placed around the lake to raise public awareness of the species and habitats present around the lake and explain the requirement for restricted access.

Conclusions

The proposals do not result in the loss of any of the NBAP habitats present (reedbeds and wet woodland). Furthermore, the inclusion of kayaking activities will not impact on the ability of this lake to meet the NBAP criteria.

Recommended enhancements will serve to increase the biodiversity value of the Site by increasing the floral species diversity.

No protected or notable species that will be impacted by the proposed development given adherence to the precautionary working procedures and provision of appropriate mitigation as outlined above. Additional enhancements are recommended to provide additional opportunities for a range of wildlife within the Site.

We trust the foregoing is satisfactory and sufficient for your needs, but if you have any further queries please do not hesitate to contact me at this office.

Yours sincerely,

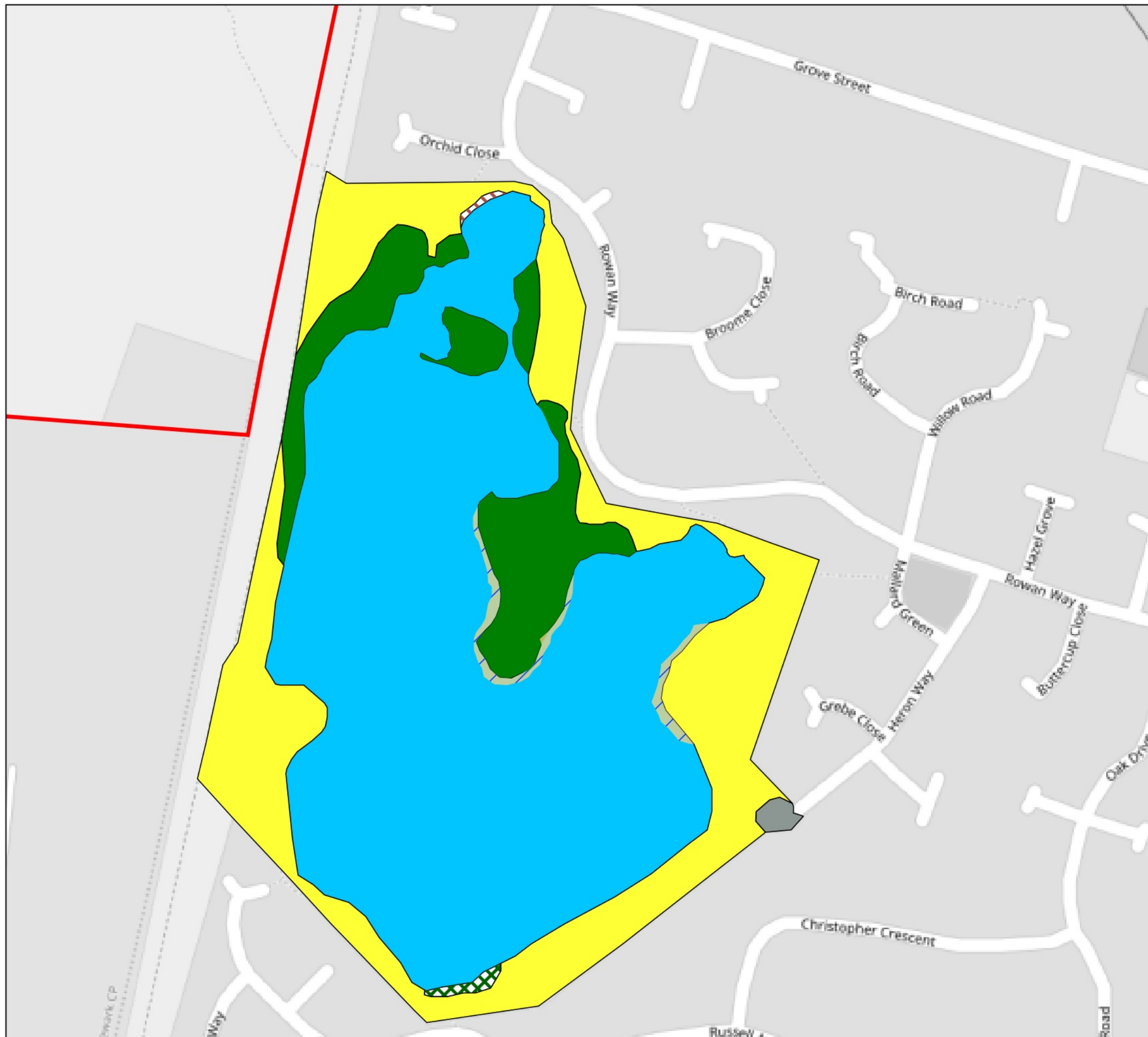


Mark Jackson

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Legend

- Site Boundary
- Built Environment: Buildings/hardstanding
- Broadleaved woodland - semi-natural
- Standing water
- Scrub - dense/continuous
- Other tall herb and fern - ruderal
- Cultivated/disturbed land - amenity grassland
- Reed beds



Nottinghamshire YMCA
Balderton Lake

Phase 1 Habitat Plan



Scale: 1:3827

AJC / RH

1/6/2018

Figure 1

6737-E-02

