Ecological Action Plan

Gondar Gardens Reservoir Site
West Hampstead
London, NW6 1QG

On behalf of
Linden Wates (West Hampstead) Limited

October 2010
Rev B January 2012

Odette Robson BSc (Hons) PhD MIEEM

Revision	Purpose	Originated	Checked	Authorised	Date
		OR	**OR**	**AMM**	**10/10**
Rev A	Update to para 1.5 (in light of new report); change of 'a third' of site to 'approximately half' site to be managed as wildlife area. Red line boundary on reptile plan corrected	**OR**	**RH**		**17/1/11**
Rev B	Change of layout – frontage scheme	**MD/OR**	**RH**	**OR**	**13/1/12**
Job Number: **JBA 10/35**		**Title: Ecological Action Plan at Gondar Gardens, Camden, London**			

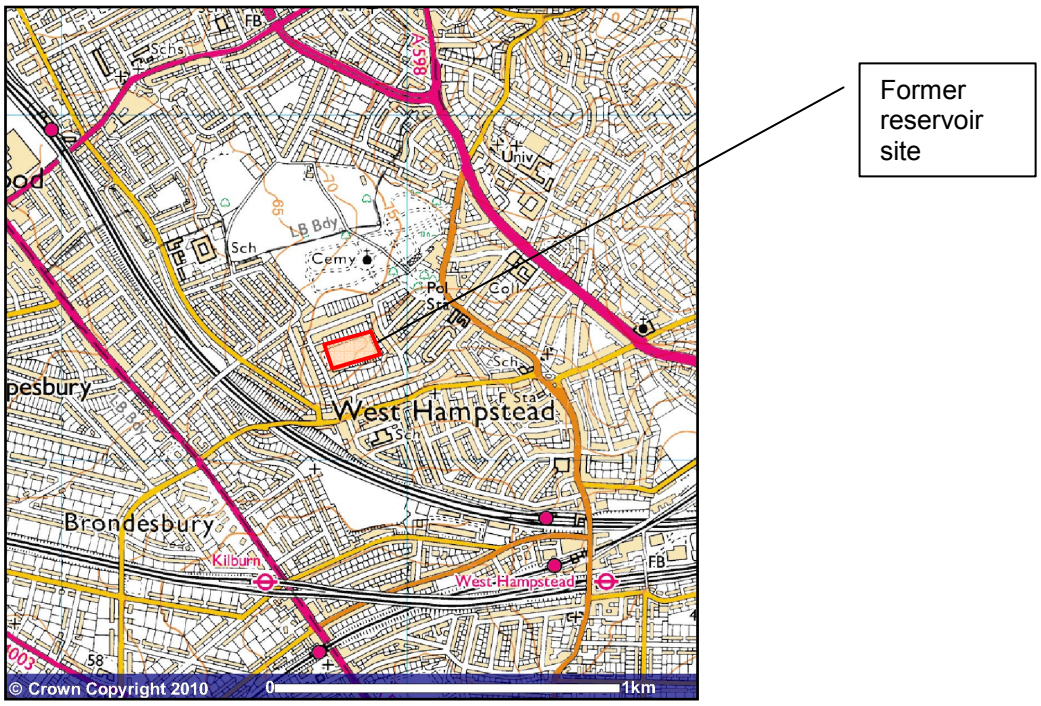
CONTENTS

The Black Barn, Hall Road, Lavenham, Suffolk CO10 9QX
tel: **01787 248216** fax: **01787 247264** email: jamesblake@jba-landmarc.com
Senior Partners: Mr B J Blake BA Hons Dip LA Hons CMLI: Mrs L C Blake BSc PGCE
Partner: Miss R Bodiam CMLI Associate: Mrs A M Mason
www.jba-landmarc.com

1 Overview of proposed development

The site, a former covered reservoir, is located within the London Borough of Camden (see figure 1).

Figure 1: OS map of site location



Key points of importance regarding the ecology at the site:

1.1 The proposed development is a residential scheme: Houses and apartments to in-fill a gap in the road frontage between existing houses along Gondar Gardens road. The construction will be restricted to the far western part of the site. The redundant reservoir roof will be removed and the existing walls re-profiled to create a bowl with sloping sides. This will be grassed and managed as structured rough grass habitat, with mown paths and a small pond for educational purposes.

1.2 The area of greatest ecological importance (diverse grassland areas and banks where slow worms have been recorded) will be retained *in-situ* and unaffected by the proposed development. At the 2005 UDP enquiry, the Planning Inspector's report acknowledged that the site is '*semi-natural grassland dominated by rye grass and false oat grass, with an area in the eastern part of the site is acid grassland, which is of greater interest.*' It is clear from this report, and from the current Phase 1 Ecology Survey Rev D (James Blake Associates 2010), that the vegetation covering the reservoir roof is of lesser importance for wildlife than the more established grassland, and associated banks, to the east. The reservoir top is shallow-soiled and dominated by coarse grasses. To the east, the grassland is more acidic in nature. Deep-rooting forbs will struggle to establish in the shallow soil on the

reservoir top, which will desiccate more quickly in periods of low rainfall.

1.3 Post development, over a half of the site to the east of the proposed residences will be retained and managed for wildlife. If the enhancement opportunities, detailed in this report, are carried out, it is considered that there should be a net gain in the value of the site for wildlife, post-development, and potentially a subsequent upgrade in the designation of the site from Borough Grade II to Borough Grade I.

1.4 Appropriate long-term management is necessary to conserve the slow worm population and retain/increase the value of the site for wildlife. Leaving the site unmanaged is not an option – without grassland management, the slow worm population, which may already be in decline, will suffer. The London Wildlife Trust will own and manage the Wildlife Area to ensure long-term protection of the habitats.

1.5 The reservoir roof is not permanent grassland, and as such it would be irresponsible to enhance this area and encourage slow worms and other species to use it: The reservoir was decommissioned due to leakage and contamination of the drinking water. The structural investigations completed on behalf of Linden-Wates, have discovered that there is deterioration in the roof of the reservoir. Excessive water penetration is occurring through the roof of the reservoir and this requires significant and costly maintenance. Structural advice is that the roof will deteriorate if the repairs to the roof are not completed.

2 Local Authority duties to protected species at Gondar Gardens:

2.1 Section 40 Natural Environment and Rural Communities (NERC) Act 2006

There is a legal duty on public bodies to have regard to the purpose of conserving biodiversity: *"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."*

Conserving also includes restoring and enhancing habitats. At Gondar Gardens, the habitat is at risk of degradation due to an uncertain future and lack of management if the development does not proceed. Through development of the site, the future of the slow worm population will be secured.

2.2 Planning policy – PPS 9 and Circular 06/2005

Under PPS 9, the LPA is obliged to avoid, mitigate and compensate for biodiversity damage.

Protected species are a 'material consideration' in planning applications. In this situation, the protected species will be at greater risk, through neglect of their habitat, if the development does not proceed: A lengthy and protracted application and uncertainty as to the site's future would result in the lack of appropriate management for the slow worms. The LPA has an obligation to ensure that the site is managed appropriately to ensure long-term habitat stability for the slow worm population.

The population at Gondar Gardens appears to be a declining population: Over ten survey visits in 2010 (James Blake Associates, 2010c), only one juvenile was observed – all other observations were of large, older adults. It is unusual during reptile surveys for adults to out-number juveniles in this way. Slow worms in urban areas are always at risk from cats, and the highly active urban foxes at Gondar Gardens are also likely to impact on the population. It is possible that the lack of natural refuges could be a contributing factor to the small and aging population, along with sporadic and non-specific management of the grassland over recent years. Action to halt this potential decline has been addressed by Linden/Wates, who have implemented a grassland management plan following consultation with ecologists and Camden's Conservation Officer. It is important that this action is sustained, and that interest is not lost over time or through changing ownership of the site.

2.3 The Mayor's Biodiversity Strategy

The former reservoir site at Gondar Gardens is designated a Site of Nature Conservation Importance (SNCI) - of Borough Grade II Importance.

The GLA recommends that '*the Sites of Importance for Nature Conservation all be afforded protection in London's Unitary Development Plans, against proposals that may harm their value'.* The Linden/Wates proposals for developing the former reservoir site do safeguard the key ecological interest at the site. However, if these proposals do not take place, then lack of a structured maintenance regime at the site could result in ruderal and scrub encroachment onto the open grassland which would endanger the survival of the slow worm population.

The proposals could also help to meet the following targets under the Camden Biodiversity Action Plan: *To enhance the built environment for biodiversity and improve ecological connectivity within the urban landscape; to encourage planners, developers and building owners to design for biodiversity and install features beneficial to wildlife.*

3 Habitats Management Plan

3.1 Principles of management.

3.1.1 London Wildlife Trust will take ownership and responsibility for the long-term management of the site. During the construction phase,

implementation of the proposals will be monitored by a suitably qualified ecologist, on a regular basis. Site inspections will identify any potential damaging activities which could result from site works. Post development, London Wildlife Trust will take responsibility for management and monitoring of the site.

3.1.2 A detailed Management Plan will be produced on receipt of planning approval. This will be drawn up by the Project Ecologist, London Wildlife Trust and Camden Conservation Officer. Community and educational involvement will be actively promoted by London Wildlife Trust. It is recommended that new residents are provided with an information leaflet that provides interpretation of the Wildlife Area adjacent to their properties, and explains how any wildlife using the whole site can be encouraged and protected.

3.1.3 The main objectives within the Wildlife Area are two-fold: To increase structure and diversity of the grass-sward; and to protect and enhance the habitat for slow worms with a view to increasing population stability and numbers. The designation of the site from Borough Grade II to Grade I is a long-term aspiration.

3.2 Management within the proposed development area.

A dedicated management plan and maintenance schedule for the new soft landscaping within the footprint of the development will be produced separately from a plan to manage the Wildlife Area.

3.3 Habitat management within the Wildlife Area

The emphasis will be on increasing native, berry-bearing species to the site boundaries and maximizing the area of appropriately managed neutral grassland under a traditional hay-meadow type regime.

3.3.1 Tree and shrub management

A programme of thinning and minimal restocking with native trees and shrubs to the site boundaries will be undertaken. The aim is to provide good cover without causing excessive shading of the adjacent properties. The band of scrub to the eastern boundary is dense and lacking diversity, being mainly blackthorn (*Prunus spinosa*). Selective thinning and replacement planting with wildlife attracting natives is recommended, to include some of the following: Hazel, hawthorn, oak, wild cherry, rowan, crab apple, wild pear, guelder rose, alder buckthorn, holly, dog rose and field rose. Trees and shrubs planted will be of local origin and preference will be given to those species that provide fruits and seeds.

Any additional tree/hedge planting must be limited to the site boundaries – to provide hibernation opportunities for slow worms whilst not reducing the area of rough, structured grassland available for foraging. Tree planting should be native and must be sensitively placed such that, in the long-term, dense tree canopies do not reduce the shrub layer to the eastern boundary. Retention of ‘habitat piles’ of

cut woody vegetation to the site boundaries will increase the abundance of invertebrates for insectivorous birds and slow worms, and provide refuges for hedgehogs, other small mammals and slow worms. There are a number of large and mature trees to the site boundary, but opportunities for roosting bats and hole-nesting birds are limited. The lack of suitable rot holes within the existing trees on site will be compensated by the provision of bird nesting and bat roosting boxes – to be erected on the mature trees that will be retained to the site boundary. Both open-fronted and traditional (holed) bird nesting boxes will be used to encourage a variety of species. The addition of bat boxes would provide bat roosting opportunities. Schwegler bat boxes are recognised as being suitable for roosting bats and are long-lasting. Schwegler 2F boxes are suitable for relatively common and widespread bat species, such as Pipistrelles which were recorded at the site during the bat surveys (James Blake Associates 2010d). Positioning of bat boxes should be carried out following consultation with a bat-licenced ecologist to ensure maximum effectiveness.

3.3.2 Grassland management

A hay-meadow type cutting regime will be instated to the grassland area within the reservoir void, as shown in blue on Figure 3. The red area will be less intensively managed on a two to three year rotation to promote a varied, mosaic structure and thus enhance the habitat for slow worms, invertebrates and small mammals, whilst managing ruderal encroachment.

Figure 3: Two general zones of grassland management: Regular hay-meadow type regime to the blue area; rotational cutting to the red area (to form a mosaic of different heights).

Main grassland (blue) area within the former reservoir bowl and slopes:

- cutting starts in spring (March): cut as often as necessary until late April (at no time should the sward height be less than 10cm).
- allow the sward to grow, uncut, from late April until late August (or until seeds have formed).
- Cut (approximately late August depending on the weather), to no less than 10cm; leave arisings to dry (2-5 days); turn twice during drying and remove arisings to a composting area on site.
- subsequent autumn cuts may be necessary – until late September – after which the plot remains uncut over winter.

Grassland to the east of the reservoir structure, banks and boundary areas (red):

This area will be selectively hand-strimmed in November on a 2-3 year rotation, to manage ruderals (encroaching from the boundaries), and create a mosaic of sward heights/structure. The cuttings will be raked into piles and composted on site to be used as a hibernaculum.

No chemicals will be used at any time. Ecological supervision will be necessary when the red area to the southern and eastern boundaries is cut in November.

A pathway through the area will be mown, as detailed on landscape plans, to ensure walkers of all ages and abilities can enjoy the area.

Visitors to the Wildlife Area will be channelled to avoid disturbance to the most sensitive areas.

3.3.3 Pond management

A small pond will be created to the north eastern corner of the bowl of the reservoir. This will be managed for wildlife, as recommended by London Wildlife Trust. Aquatic and marginal planting will be native and wildlife friendly. No fish or non-native species will be introduced. The pond will have at least one sloping side and variable depths to provide a range of thermal niches, to a maximum of 1m deep.

4 Ecological Mitigation Plan

4.1 The Wildlife Area constitutes at least three quarters of the whole site. Connectivity within a landscape context will be maximized through linear planting of native and wildlife attracting species to the site boundaries. This will encourage interchange of species between the site and off-site wildlife habitat within the adjacent mature gardens.

Cats are a threat to slow worms in urban areas; the Wildlife Area at the site will be appropriately fenced to the boundaries, reducing unauthorized access from the public and domestic animals. Provision of a high density of refuges, such as hibernacula and log piles, will increase opportunities for slow worms to avoid predation.

4.2 Overview of Slow Worm Mitigation Method Statement

In order to protect the slow worms on site during the construction phase, a programme of translocation and exclusion fencing will be undertaken. Details are given in the Mitigation Method Statement (James Blake Associates, 2010a), and summerized below:

4.2.1 Exclusion fencing will be erected around the construction zone boundaries (as shown in Appendix B), to prevent slow worms in adjacent gardens from being harmed by construction activities.

4.2.2 A relocation program will move all slow worms out of the construction zone and to a receptor area behind the exclusion fence. It is not envisaged that any slow worms will need to be translocated because all individuals observed during the reptile survey were located within the proposed receptor area (see Appendix A).

4.2.3 Post construction, the exclusion fencing will be removed to enable transfer of individual slow worms to neighbouring gardens and the whole Wildlife Area, including the newly created habitat within the reservoir void, if desired.

4.2.4 A pre-construction programme of enhancement within the receptor area will maximize the habitat quality for slow worms – providing a mosaic of different sward heights and a high number of varied hibernacula (see Figure 4) to enable safe hibernation and avoidance of predators.

Figure 4: Example of a hibernaculum

5 Conclusion

Actions set out within this report apply primarily to the Wildlife Area of the site. They are designed to enhance and safeguard biodiversity, but will additionally provide an educational and recreational resource to the local community, on a restricted access basis which will balance the needs of wildlife, local residents and public access to open spaces.

Central to the Wildlife Area Management Plan will be the establishment of an appropriate grassland management regime to increase floral diversity, reduce encroachment of ruderal vegetation, and maintain a mosaic of grassland structure to the benefit of the existing slow worm population and to improve the status of the neutral/acidic grassland sward.

5.1 The positive ecological gains that will stem from development of the site are listed below: The scheme will enable the following:-

5.1.1 Retention and long-term protection of the main area of ecological interest at the site, which will be gifted to the London Wildlife Trust to manage and protect appropriately.

5.1.2 Appropriate, long-term protection of an important wildlife site, which is currently not under regular professional management.

5.1.3 Retention and improved management of existing bank vegetation, where slow worms (protected and BAP species) have been recorded.

5.1.4 Fencing to the site boundaries will prevent access by people and dogs, and limit access to cats thus providing the slow worms and other animals and plants a secure and protected area;

5.1.5 In-fill planting to the boundaries of the site, with a combination of native and wildlife attracting trees and shrubs, will encourage movement of wildlife through the site, strengthening the conduit

function of the site for bats, birds and other animals, in addition to providing extra habitat *per se*.

5.1.6 Addition of bird and bat boxes (as detailed above) to the retained trees, and on the new buildings. Hedgehog boxes will provide cover and safe refuges for this BAP species.

5.1.7 The reservoir top is currently a 'green roof': Shallow soil over an impermeable substrate. When this is removed, a new area of grassland will be created within the reservoir void which will be seeded with a species-rich neutral grassland mix to provide additional habitat and enhance the site for slow worms post-development.

5.1.8 Preparation of management plans to ensure appropriate planting and maintenance within the landscaped, residential part of the site, and appropriate long-term management of the Wildlife Area, pond, and site boundaries.

5.1.9 Provision of a pond to diversify habitats and increase educational opportunities at the site.

5.1.10 Design of leaflets to inform new homeowners about the ecological features such as the adjacent Wildlife Area. The leaflet would illustrate the amenity value of habitats within the development and bordering it. This should encourage householders to enjoy, respect and look after the open spaces.

5.1.11 Information boards will be erected within the Wildlife Area to inform and educate visitors about the wildlife interest within the site.

5.1.12 Provision of an educational resource for the benefit of local schools/interest groups – in an area previously inaccessible to the general public due to health and safety constraints.

6 References

- Reptile Survey Report on behalf of Kennet Properties: Site near Shoot-up Hill, West Hampstead (2009) Entec UK Limited.
- Froglife (1999). Reptile survey: An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. *Froglife*, Halesworth.
- Gent, A.H. and Gibson, S.D., eds. (1998). Herpetofauna workers' manual. *Joint Nature Conservation Committee*, Peterborough.
- James Blake Associates. (2010a). Phase 1 Habitat Survey of Former Covered Reservoir at Gondar Gardens, Camden, London. On behalf of Linden Wates. James Blake Associates 2010.
- James Blake Associates (2010b). Reptile Mitigation Methods Statement, for the Former Covered Reservoir at Gondar Gardens, Camden, London, on behalf of Linden Wates. James Blake Associates 2010.
- James Blake Associates. (2010c). Reptile Survey of Former Covered Reservoir at Gondar Gardens, Camden, London. On behalf of Linden Wates. James Blake Associates 2010.
- James Blake Associates (2010d). Bat Surveys of the Former Covered Reservoir at Gondar Gardens, Camden, London, on behalf of Linden Wates. James Blake Associates 2010.
- Office of the Deputy Prime Minister (ODPM), (1994). Planning Policy Statement 9. *The Stationary Office (TSO)*, London.
- UDP (Unitary Development Plan) Inquiry. Gondar Gardens Reservoir Site. Inspector's report, 2005.

Appendix A: location of individual slow worms found - each blue number indicates a slow worm recorded; numbers relate to the survey visit number (Table 1, Reptile Survey report, JBA 2010c). Crosses show approximate locations of the refuges.

Appendix B: Proposed exclusion fencing and reptile receptor are for the duration of the construction activities.