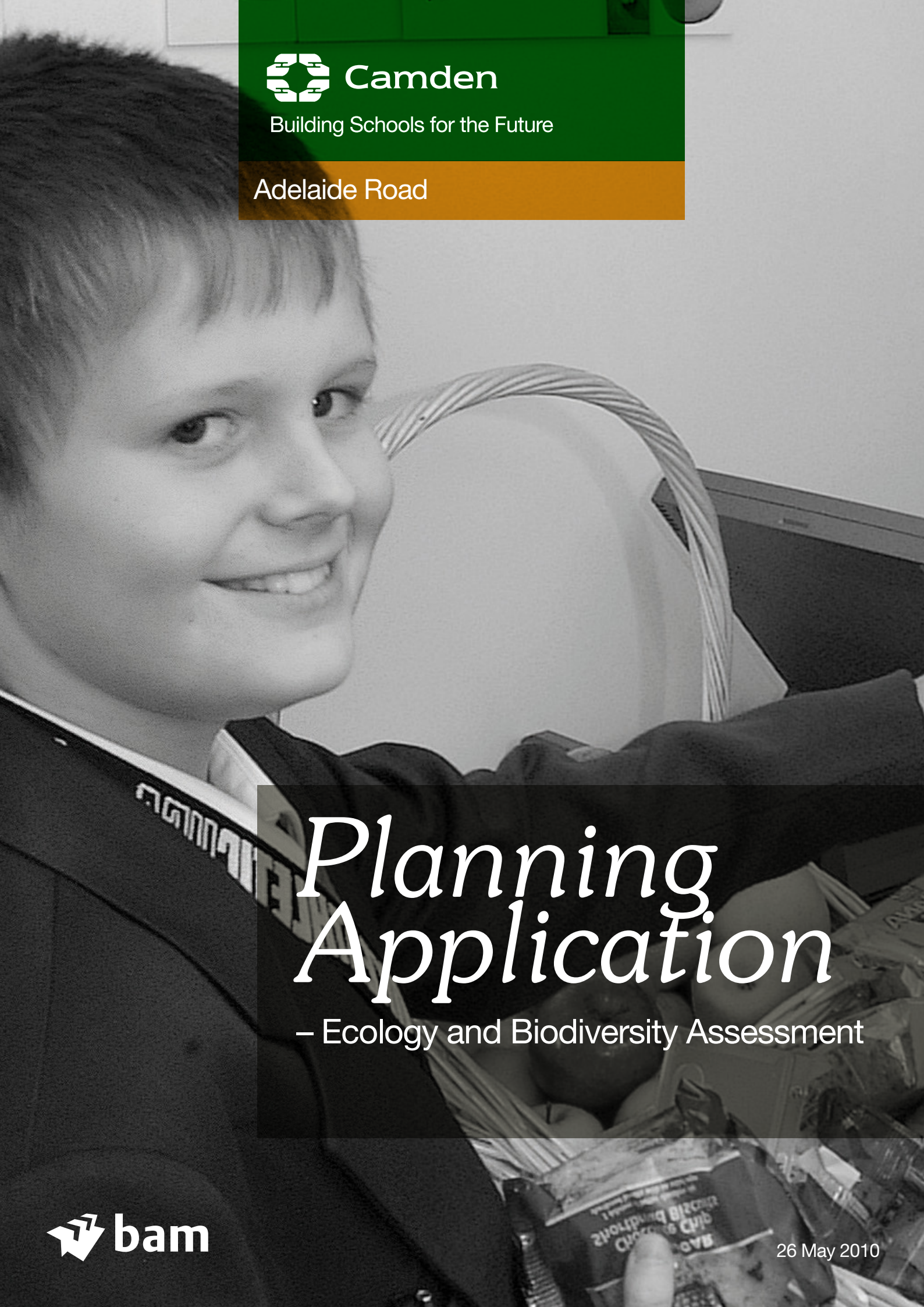

Camden

Building Schools for the Future

Adelaide Road

Planning Application

– Ecology and Biodiversity Assessment

bam

26 May 2010

London Borough of Camden BSF Programme:
Swiss Cottage Specialist SEN School
Ecology Assessment & Biodiversity Enhancement

Report by: Rosie Whicheloe BSc MSc
Checked by: Jonathan Taylor BEng(Hons) MSc MIEEM

Date: May 2010

Submitted to:
BAM Construction

Prepared by:
ADAS UK Ltd
11D Milton Park
Milton
Abingdon
Oxfordshire
OX14 4RS

Tel: 01235 438900
Fax: 01235 438909

0936648 4001349

CONTENTS

1. INTRODUCTION

BAM Construction requested ADAS UK Ltd to compile a report outlining our recommendations for biodiversity enhancement in accordance with Government policy on planning and nature conservation as set out in Planning Policy Statement 9 (PPS9).

Information has been collated from various sources, primarily from survey data gathered by ADAS (September 2009 and March 2010), but also from other surveys completed by Rummey Environmental (2009) and RPS Consultants (2008). Information of planting and building proposals has come from Bam Construction Landscape and soft work plans. Additional information on local biodiversity has been gathered from Camden Local Biodiversity Action Plan.

Planning Policy Statement (PPS) 9 states that there should be no net loss of biodiversity from the site during development and requires developers to conserve and enhance the biodiversity by influencing the design and form of development. This has been achieved by a thorough assessment of the existing ecological value of the site, including the potential for protected wildlife species and the retention and creation of new habitats, with appropriate native and or wildlife friendly planting. With this in place it should be possible to encourage a greater variety of species to use the site.

2. SUMMARY

The Adelaide Road site is currently generally of limited ecological value. The main areas of current interest, namely the boundary trees on the site, will be maintained and enhanced by the proposed new works. The planned new development will include areas of planting and management to produce a range of habitats, so increasing the opportunities for wildlife on this site. The proposed planting will provide a net increase in species on the site of more than six. The proposed development takes into account good ecological

practice and supports the London Borough of Camden's Local Biodiversity Action Plan.

3. SCHOOL DESCRIPTION

This site is to the south of Swiss Cottage underground station in a mature setting off Adelaide Road. Buildings on the site are predominantly flat roofed construction.

The site contains a number of areas of amenity grassland with mature and semi-mature broadleaved trees. There are several strips of mature trees on the boundaries of the site, and in particular, a wide band of mature and semi-mature trees bordering Avenue Road. Species present on site include Small Leaved Lime (*Tilia cordata*), Horse Chestnut (*Aesculus hippocastanum*) and Beech (*Fagus sylvatica*). Shrubs include Holly (*Ilex aquifolium*), Hawthorn (*Crataegus monogyna*) and Hazel (*Corylus avellana*). Japanese knotweed (*Fallopia japonica*) was identified in eight areas on site.

Two ponds are present on the site. One was dry at the time of the visit in September 2009 and the other, being completely enclosed within a small quadrangle, was of limited ecological interest.

Throughout the site there are small areas of amenity planting of flowering plants and some vegetables. These areas, although mainly of non-native plants, may attract invertebrates.

None of the buildings on the site appeared to have potential to be bat roosts. Of the mature trees on site none had visual signs of bat roosts. A bat survey carried out in May 2009 by Rummey Environmental, demonstrated Common Pipistrelle bats (*Pipistrellus pipistrellus*) commuting along the line of trees bordering Avenue Road and feeding on the site. It is likely that the trees on this site form a link connecting areas of bat habitat.

The trees and shrubs on the site will provide potential sites for nesting birds.

4. PLANTING PROPOSALS

The soft works proposals include provision for a wide range of habitats, including woodland, hedgerow, pond and roof areas designed to increase biodiversity. Each area has been designed to match the community of plants typically found in those habitats, with a greater proportion of plants of native origin. There are 6 distinct areas within the development site that will be enhanced for biodiversity. Each section (discussed below) describes the benefits to wildlife, the key habitat features and some of the plants of particular value.

4.1. Woodland Terraces

Planting proposals for this area include retention of existing trees and the additional planting below to provide structural diversity and interest to a wider range of species. The species included are an excellent combination of native (or naturalised) woodland species, which will resemble a natural woodland environment. Specific attention has been give to the selection of certain key native/ wildlife friendly plants that will provide a function / benefit in this area. Some of these are listed below.

Common Name	Latin Name	Wildlife benefit
Ground cover		
Woodruff	*Galium odoratum*	Attractive to a range of insects
Male Fern	*Dryopteris felix-mas*	Provide winter cover
Ivy	*Hedera helix*	Provides winter cover
Wild Angelica	*Angleica sylvestris*	Provides nectar of a range of insects
Great Woodrush	*Luzula sylvatica*	Provides cover and food for insects

4.2. Native hedgerow

Hedgerows will form part of the site boundary and so maintain a continuity of habitat around much of the site. 10 native shrub species are to be planted in a double staggered row (with approximately 6 plants per meter). This will provide an invaluable resource for local wildlife, due to the range

of fruiting and flowering species and also the nature of the hedgerow linking other habitat areas together. Specific attention has been give to the selection of certain key native/ wildlife friendly plants that will provide a function / benefit in this area. Some of these are listed below.

Common Name	Latin Name	Wildlife benefit
Ground cover		
Elder	*Sambucus nirga*	Attractive to a range of insects and birds
Blackthorn	*Prunus spinosa*	Attractive to a range of insects and birds
Holly	*Ilex aquilfolium*	Attractive to a range of insects and birds, provide winter cover.
Hawthorn	*Crataegus monogyna*	Attractive to a range of insects and birds
Honeysuckle	*Lonicera periclymenum*	Attractive to a range of insects and birds

4.3. Forest Garden

Forest gardens are a multi-layer food production system with productive tree, shrub and herbaceous planting being the focus. Although not specifically designed for wildlife, the range and type of species grown will be very beneficial to wildlife.

4.4. Tree planting

These are used in a range of areas including the productive garden area and across the site as signature trees. The use of a range of species is planned, and Common Oak (*Quercus robur)* will be added to the species list for the site. Common Oak is a tree of considerable ecological value, for example, by supporting a wide range of insect species. A range of flowering and fruiting trees are also proposed. The retained trees and the new plantings will provide nesting and foraging opportunities for birds and will attract insects, with the flowering and fruiting species and the Oaks being particularly attractive to many insects. The presence of invertebrates will maintain or enhance the area's value to foraging bats.

4.5. Open Woodland underplanting

Areas of more open shade will be planted with native herbaceous plants and grasses suited to dry shady conditions. Species proposed include some new to this site, such as Ramsons (*Allium ursinum*) and Perforate St John's Wort (*Hypericum perforatum*).

4.6. Roof Terraces – intensive / extensive

These will support a different range of plants, and potentially insects, when compared with most of the remainder of the site. It is planned to carefully match the final species choice to the type of specialist habitat.

4.7. Productive garden

A range of edible or productive trees, shrubs and herbs will be planted here with space allowance for the school to grow annual vegetables and fruit. In terms of species numbers, this area will replace a small area of existing allotment within the school grounds, although some species, such as Plum (*Prunus domestica*) will be new to the site.

4.8. Native coppiced shrub bed

This small feature introduces two further native shrubs to the site, namely Guelder Rose (*Viburnum opulus*) and Common Dogwood (*Cornus sanguinea*). Both these plants produce flowers and fruit and so may offer foraging opportunities to birds, mammals and invertebrates. Their positioning adjacent to the pond will provide shelter to the water feature and additional terrestrial habitat for pond wildlife.

4.9. Pond

This feature will be designed to have a range of depths and so will be able to support a range of native plant species. Proposals include plants of damp grassland (Lady's smock (*Cardamine pratensis*)), aquatic margins (Marsh Marigold (*Caltha palustris*)), and open water (Water Soldier (*Stratiotes aloides*)).

4.10. Other areas (Hanging Gardens, Roof Terraces)

There are several other areas; their main purpose is to give “green relive” or an educational resource. Although not specially designed for wildlife, they too have benefit to wildlife, due to the variety of native species that will be planted.

4.11. The wider environment

Although the habitats within the site as proposed will be of limited size, the site is within 0.5km of Primrose Hill open space, and within 1km of Adelaide Road Nature Reserve and Regents Park. It is feasible that mobile wildlife from these local areas of interest could utilise areas at the school site and the use of the school site by bats demonstrates its value within the network of suitable bat habitats.

The London Borough of Camden has produced a Local Biodiversity Action Plan and many of the proposals for this site support this Plan. Specifically, the Plan suggests the installation of bird boxes in open spaces, the planting of new species rich hedges of native plants, creation of wildlife friendly ponds and the incorporation of landscape planting for biodiversity in new developments.

4.12. Site Management

A 5 year management plan will be implemented, in order to ensure plantings remain healthy and to keep weeds under control. Any plants that die during this time will be replaced. Trees and shrubs will comply with the relevant provisions of BS 3936 Part 1: 1992. Nursery stock: Specification for trees and shrubs. Maintenance of trees will comply with BS5837: 2005 Section 4.

Sensitive management will be required to maintain and develop the ecological interest. This will include gentle management of the water features to maintain a balance of open water and marshy margins. The trees and shrubs in the Ecology Ribbon will need to be managed in small stages to maintain the

structural diversity without drastic intervention. The creation of dead log piles, diversity within the grassland sward and marginal vegetation will encourage a range of insects to use the area.

4.13. Wildflower seed mixes

Where it is not desirable to allow the site to regenerate naturally, then a proprietary seed mix can be used. It is recommended that native species of local origin are planted. The chosen seed mix must be appropriate to the sites location & soil conditions.

5. PROTECTED SPECIES

5.1. Bats

Rummey Environmental (2009) assessed the buildings on the site for their potential to be bat roosts. All of the buildings were surveyed internally using ladders and torches to gain access to roof spaces where possible. No evidence of bats was identified internally or externally. However bats identified commuting and foraging across the site are likely to originate from a bat roost in the wider area off-site.

In addition, Rummey Environmental (2009), also assessed the trees on site for their potential to support bat roosts. None of the trees on site contained evidence of bats and no bats were identified emerging or entering the trees with potential. The mature trees across the site do however provide good structure and resources for bats commuting to feeding grounds such as Regents Park to the south.

Ecological enhancements will be incorporated where possible into the proposed development to contribute towards the objectives of planning legislation identified below.

In accordance with Planning Policy Statement 9 (PPS9), “Plan policies and planning decisions should aim to maintain, and enhance, restore or add to biodiversity and geological conservation interests” and together with the

Natural England & Rural Communities Act 2005, places a statutory duty to promote biodiversity and minimise impacts of a development upon ecology.

Furthermore, in accordance with the principles of PPS9, developments should contribute towards the degree of connectivity between natural habitats and avoiding the effects of habitat fragmentation and isolation. These networks of habitats provide valuable routes or stepping-stones for the migration, dispersal and genetic exchange of species within the wider environment. Existing networks, where possible, should be strengthened by, or integrated within, new developments.

Bats may be active in the area and enhancements are concentrated on providing linked foraging habitat, particularly as generally there is an absence of such habitat in urban areas. The predominantly native species planting proposed in the preceding sections will increase both invertebrate diversity and numbers, significantly enhancing the availability of food in the area. As many trees as possible will be retained as part of the development.

In addition, it is recommended that the appropriate numbers of artificial bat boxes are placed in carefully chosen locations to provide roosting opportunities for bats on site.

5.2. Birds

In addition to providing increased numbers of invertebrates for bats, such increases will also provide additional food sources for birds. The additional trees and some shrubs will also increase the available bird nesting habitat.

Bird boxes are planned for parts of the development to further add to the habitat provision.

5.3. BAP Biodiversity Action Plan Species

The UK BAP is the Governments response to the 1992 Rio Summit, in which member states signed an agreement on the “Convention of Biological Diversity”. This provided the first legal framework to address biological

conservation across the world.

The London BAP is a conglomerate of statutory and non-statutory organisations, which takes forward the national objectives of the UK BAP and applies them on a local scale through priority habitat and species action plans.

The enhancements contained with the development proposals have the potential to increase the habitat for the following BAP species, for the reasons listed.

Local Species – Bats (generic)

The additional native species planting proposed, together with the installation of artificial bat boxes will increase the foraging and roosting opportunities for bats.

Local Species - House Martin

House Martins are relatively common and are mostly associated with man, found around towns and villages. They feed on aerial insects and so the increase in invertebrate density will offer additional foraging opportunities.

Local Species – House Sparrow

Like House Martins, House Sparrows also feed on aerial insects and so the increase in invertebrate density will offer additional foraging opportunities. In addition, nest boxes of the type and size suitable for House Sparrows will be located on the site to further increase the available opportunities.

Local Species – Swift

Swifts again feed on aerial insects and so the increase in invertebrate density will offer additional foraging opportunities.

6. REFERENCES

ADAS Arboricultural Constraints Report – Swiss Cottage Specialist SEN

School. September 2009.

ADAS Letter to BAM Construction, September 2009. Regarding bats and Japanese Knotweed, Camden.

BAM Construction – Soft Works Strategy, Swiss Cottage Specialist SEN School. 2010.

ADAS Enhancement of Ecological Interest Report, March 2010

ADAS Summary of Ecological Assessment Report, March 2010

Swiss Cottage Specialist SEN School Planting Strategy, Camden/BAM

www.camden.gov.uk

www.magic.gov.uk

www.ukbap-reporting.org.uk

www.wildlondon.org.uk/Naturereserves