

Method Statement

Ecological Protection for Construction

1.0 - Introduction

This section of the method statement will form the basis for the environmental procedures during construction work to the Westminster Kingsway College project, Kings Cross Centre, Sidmouth Street, London.

The scope of work detailed in this method statement is for environmental protection procedures for the prevention and elimination of any ecology issues with respect to construction works and to provide a mechanism to maintain and protect the ecological features along with existing habitats during the redevelopment of Westminster Kingsway College.

It is the responsibility of the site based environmental officer appointed by Kier London to ensure that all ecological procedures and protocols outlined in this method statement are carried out. This document will be made available during the site induction for all personnel onsite to review.

2.0 - Hazards The environmental and ecological hazards associated with construction works to Westminster Kingsway College are:

- I. Spillage into watercourse of substances hazardous to the environment.
- II. Storage of environmentally hazardous substances.
- III. Emissions of fumes, dust and noise into the atmosphere.
- IV. Disposal of waste.
- V. Over pumping of ground water.
- VI. Damage caused to trees that are to be retained.
- VII. The potential of serious impacts to St George's Gardens, Grade 2 listed garden of special historic interest.
- VIII. Various bird species have been seen and heard. Construction activities may drive these birds away.
- IX. Adverse impacts to bats.
- X. Declining numbers of stag beetles.
- XI. General health and safety.

3.0 - Work Plans and Control Measures

Tree and Root Protection

- Prevent damage to the mature broadleaved trees that are to be retained with a protective barrier as they are of most ecological value on site. These trees must be protected and looked after in strict accordance with BS5837, 2005.
- The roots of the retained trees must be protected. This area is known as the root protection area (RPA), and will be calculated individually for each of the trees that are to be retained.
- Work within the RPA for each tree will be avoided where possible and no plant or materials will be stored in this area. The project arboriculturist will be consulted prior to any work that has to be carried out within the RPA.
- During the mandatory site induction all operatives onsite will be made aware of the location of protected trees that are to be retained throughout the construction process, and advised on how to conduct their work with as little ecological impact as possible.
- Kier London will implement its permit to dig procedure to ensure that operators of digging equipment are made fully aware of site specific hazards and protected trees.

Pollutants

- Fuel, oil and chemical storage will be sited on an impervious base, and contained by impervious walls with a bund which will be secured and of adequate capacity to store the necessary materials.



- Storage areas will be locked or otherwise protected to reduce the risk of vandalism and theft which may result in pollution incidents.
- Only appropriate tanks and containers that will not leak or corrode should be used for storage.
- Delivery of diesel, chemicals, oils or any other hazardous substances will be supervised by a responsible person, and any spillages must be reported immediately. The volume of these substances should be kept to the minimum volumes necessary for operations.
- Washing out and cleaning of ready-mix concrete lorries and plant will be carried out in contained areas as far from any watercourse as is reasonably practical.
- Any operations that control dust will be controlled by damping down when practical. Wind direction will be considered and operations suspended if a nuisance is not controllable by the erection of screens.
- Noise will be kept to a minimum by the use of well maintained vehicles, plant and equipment. This is especially important with regards to reducing the impacts of noise and dust during demolition and construction activities for St Georges Garden through the guidance provided by the "Considerate Contractors Scheme" and the "Environment Agency Pollution Prevention Guide".

Temporary Landscape and Eco-Roofs

- The new Kings Cross 2 building has been designed to house a series of eco-roofs which will incorporate both green and brown roofing systems which have the potential to provide new habitats for a variety wildlife species.
- The majority of the demolition material from the project will be used to infill the large void in the courtyard to bring the ground floor level of the new building up to the height of the boundary pavement around the site.
- There is limited storage space onsite. Therefore it has been agreed with Camden Planning that if there is any remaining material that has not been used to infill the courtyard, it can be exported and disposed off in a sustainable manor. (TO BE CONFIRMED IN WRITING BY ADRIAN MALCOM FROM CAMDEN PLANNING)
- A soil contamination investigation has been conducted, and this report can be found in Appendix 1.1. This report contains an analysis of the soil and ground conditions.
- The substrate material to be imported from another Kier site in the vicinity of Westminster Kingsway College with a similar substrate make up will be matched as closely as possible before being placed on the brown roof.
- A combination of crushed building rubble, soil, boulders and logs will form the substrate material for the eco-brown roof system, while the green vegetated roof will be covered in turf or wildflower.
- The substrate material for the brown roof will be sourced sustainably from other Kier sites that exist locally. The brown roof will also feature boulders and logs that hope to attract a diverse range of species.
- The planting on the eco-roofs will take place after the roof has been installed and before the tower cranes are to be dismantled. According to the project program, the planting of the roofs swill be done by August 2008.
- The planting of the green roof will be designed as to minimise maintenance, upkeep and costs while creating an environment and nectar bank that is conducive to attracting a range of species.

Nesting Bids

- During the site induction (which is mandatory for all personnel onsite) the member of Kier London staff giving the induction will highlight any potential signs of bird activity. The main evidence of the presence of birds is the accumulation of bird dropping under nesting areas.
- Birds are much easily seen and heard as compared to bats, therefore all personnel onsite will be instructed to keep a look out for birds and nests, and if spotted all reasonable efforts will be made not interfere with their course.

- As the majority of broad leaved trees are to be retained, no significant impacts on birds are foreseen, however noise, dust and pollution will be minimised where reasonably practical in line with best practices.
- All trees that are required to be felled should not be done between March and July, therefore being done out of breeding season in order to minimise impact on birds.
- When working at height in the vicinity of protected trees, care should be taken not to disrupt or destroy birds nest, especially during breeding season, to do so from March to July is an offence.
- As the majority of the birds that were surveyed from St Georges Gardens are common garden species they should not be significantly affected by the construction work at Westminster Kingsway College. However to ensure that disturbances to these birds are minimised dust and noise levels will be monitored.
- A combination of bird nesting boxes will be erected on the new building and surrounding trees in an attempt to attract and sustain a number of birds, namely swifts and house sparrows. These bird nesting boxes will be installed and maintained outside of breeding season and designed so that grey squirrels can't damage them.
- The bird boxes will be erected once the majority of construction has been completed before the building is occupied. Before they are installed, the precise location and heights of these bird boxes will be submitted on a drawing to Camden planning for their review and approval.

Bats

- It is unlikely that bats will be an ecological issue onsite because in the bat survey carried out by WSP, the nearest bat recorded in the search area was over one kilometre from the site.
- As stated in the ecological report it is considered that there are no bats that roost on site at the Westminster Kingsway College or in St George's Gardens, however in the unlikely event that evidence of bats is identified then work in that area should be suspended and English Nature should be contacted for advice.
- All sub-contractors onsite will be given a copy of this ecological method statement to review before their work commences onsite.
- During the site induction (which is mandatory for all personnel onsite) the member of Kier London staff giving the induction will highlight the signs of bat activity. The main evidence being accumulation of bat droppings under roosting areas, insect wings, urine stains, scratches and marks on trees as well as bat corpses.
- Woodcrete bat boxes will be located in the area of the site adjacent to St George's Gardens. There boxes will be strategically placed facing south east through to south west at a height of greater than 5m above ground.
- These bat boxes will be constantly monitored and any signs of bat activity will be reported to a licensed bat worker. The general condition and box fixings will be assessed every two to three years by a licensed bat worker. This will be continued by Westminster Kingsway College once the college building has been commissioned and is in full operation.
- A total of 20 bat and bird boxes will be provided by Kier London, and will be strategically placed on the grounds of Westminster Kingsway College's Kings Cross centre so that their presence is maximised.
- Similarly as with the bird boxes, the bat boxes will also be erected once the majority of construction has been completed before the building is occupied, their location and heights will be submitted to Camden planning for their review and approval.

Stag Beetles (as well as other invertebrates and fungi species)

- A number of hardwood logs over 10cm in diameter arising from the felling of trees onsite will be retained.
- Kier London will use these logs to create a loggery by driving the logs up to 60cm below ground, leaving approximately 10cm of the end of the logs protruding from the ground as detailed in location 3 shown below in FIG 1.1 and 1.2:

- The sole beetle loggery will be created between the fire escape route and the temporary Kier London site offices. Special care will be taken to ensure that the loggery will be located where there will be little or no foot and plant traffic. All reasonable measures will be taken to protect the immediate area surrounding the loggery.
- The loggery to will be created will have a circular configuration and be approximately 1 meter Sq in area.

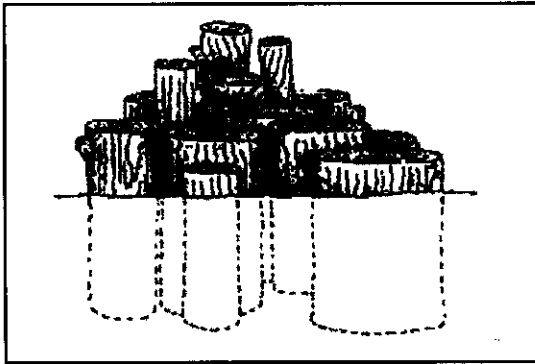


FIG 1.1: Schematic drawing of Stag Beetle Loggery

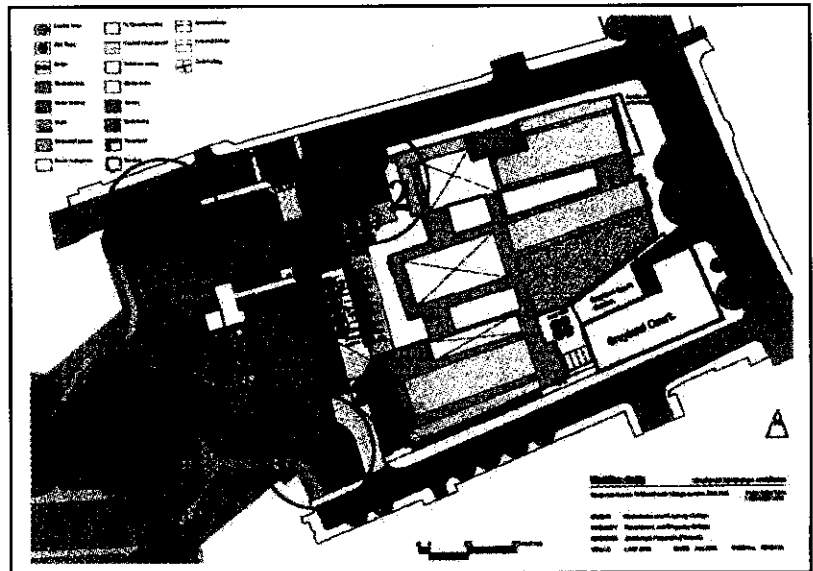


FIG1.2: Site plan indicating potential locations of Stag Beetle Loggery

- It is believed that the creation of these decaying wood loggeries will create a habitat that will attract stag beetles as well as other invertebrates' species to lay their eggs within the trunks and dead wood stumps. This will help to sustain the stag beetle and aid in the conservation of the species.

Soft Landscaping

- With St George's Gardens being of such high ecological value and its close proximity to the site, the college are keen to extend this into areas of the Westminster Kingsway College grounds. Three areas have been identified that can be seen circled in FIG 1.2 which have been ear marked for potential sites for habitat creation, (these are the same areas as potential sites for stag beetle loggeries).
- Where possible the areas marked on FIG 1.2 that are in the possession of Kier London may be planted with native species of plants as these attract a large number of invertebrates which are the key food source of bats. Once done it is believed that this will directly benefit the biodiversity of Camden.

4.0 – General

- All personnel are to be site inducted prior to commencement of work. This is to be conducted by Kier's site management.
- All foremen and operatives will have the detailed method statements and associated risks explained to them prior to commencement of the work by the construction or works manager.
- All personnel, site staff and visitors will wear safety helmets, safety footwear, gloves and either a yellow high visibility vest or jacket at all times whilst on site.
- All work will be supervised by competent persons who have experience with the type of operations being undertaken.
- Prior to the commencement of the work of all operations, the foremen involved will have the method statement for the works explained to them in detail, particularly items relating to emergency procedures.

- All personnel will sign a register to confirm that the method statement has been read and/or explained and that it has been fully understood.
- All tools and plant that are used in site activities will be in good working order and replaced if found to be defective. All the associated inspection records will be kept in the site safety file.
- Materials will be obtained from known sustainable and reputable sources where possible. A just in time ordering procedure should be implemented where possible to prevent over ordering which is environmentally and economically unfriendly.
- The hierarchical philosophy of reduce – reuse – recycle will be adopted whenever possible.
- All debris and waste that results from demolition and construction activities will be segregated in line with Kier requirements.
- Any pumping operations to be controlled by a “permit to pump” will be issued by Kier London.