



Hampstead School

Ecological Management Plan

For

Wates Construction Ltd

Project No.:BWAT114 / 002 / 002 /001

April 1016

London & South East
Compass House
Surrey Research Park
Guildford
GU2 7AG . UK
t: +44 (0)1483 466 000

North & Borders
Calls Wharf
2 The Calls
Leeds
LS2 7JU . UK
t: +44 (0)113 247 3780

Wales & South West
Williams House
11-15 Columbus Walk
Cardiff
CF10 4BY . UK
t: +44 (0)2920 020 674

Scotland
20-23 Woodside Place
Glasgow
G3 7QF . UK
t: +44 (0)141 582 1333

Enquiries

e: enquiries@thomsonecology.com

w: www.thomsonecology.com



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001	29/04/16	Sarah Hawes	Gianpaolo Pontiggia	Gabrielle Graham

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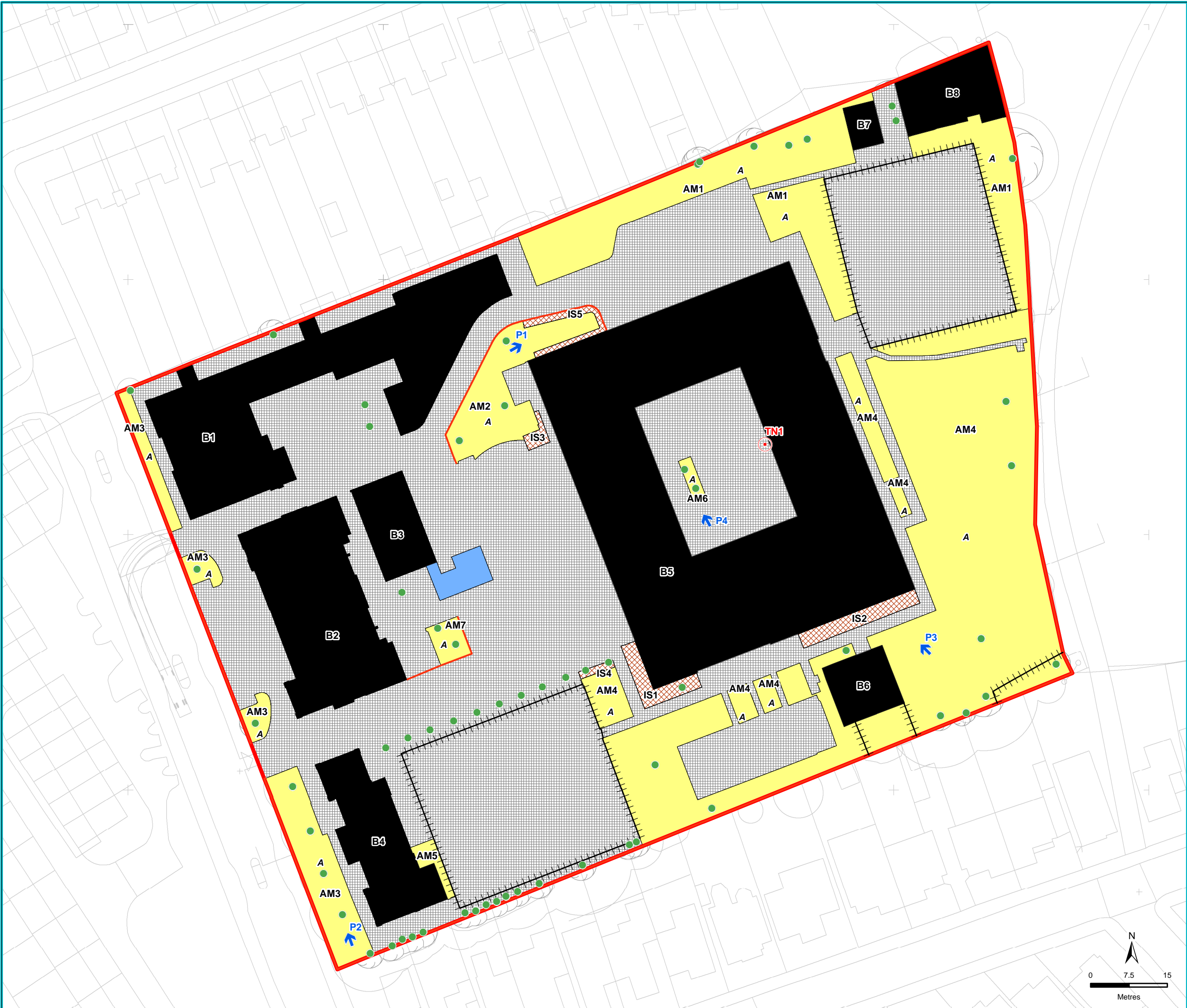
FIGURE 1: SITE LOCATION

FIGURE 2: EXTENDED PHASE 1 HABITAT SURVEY RESULTS

FIGURE 3A: PROPOSED DEVELOPMENT SITE PLAN - GROUND LEVEL

FIGURE 3B: PROPOSED DEVELOPMENT SITE PLAN - ROOF LEVEL

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Legend

- ➔ Photograph Location and Direction
- Scattered Broadleaved Tree
- ⊙ Target Note
- Fence
- Wall
- Standing Water
- Amenity Grassland (A)
- ▨ Introduced Shrub
- Building
- ▤ Hard Standing
- Site Boundary

Site Grid Reference: 524,391 185,606

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a Phase 1 baseline habitat survey. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning.

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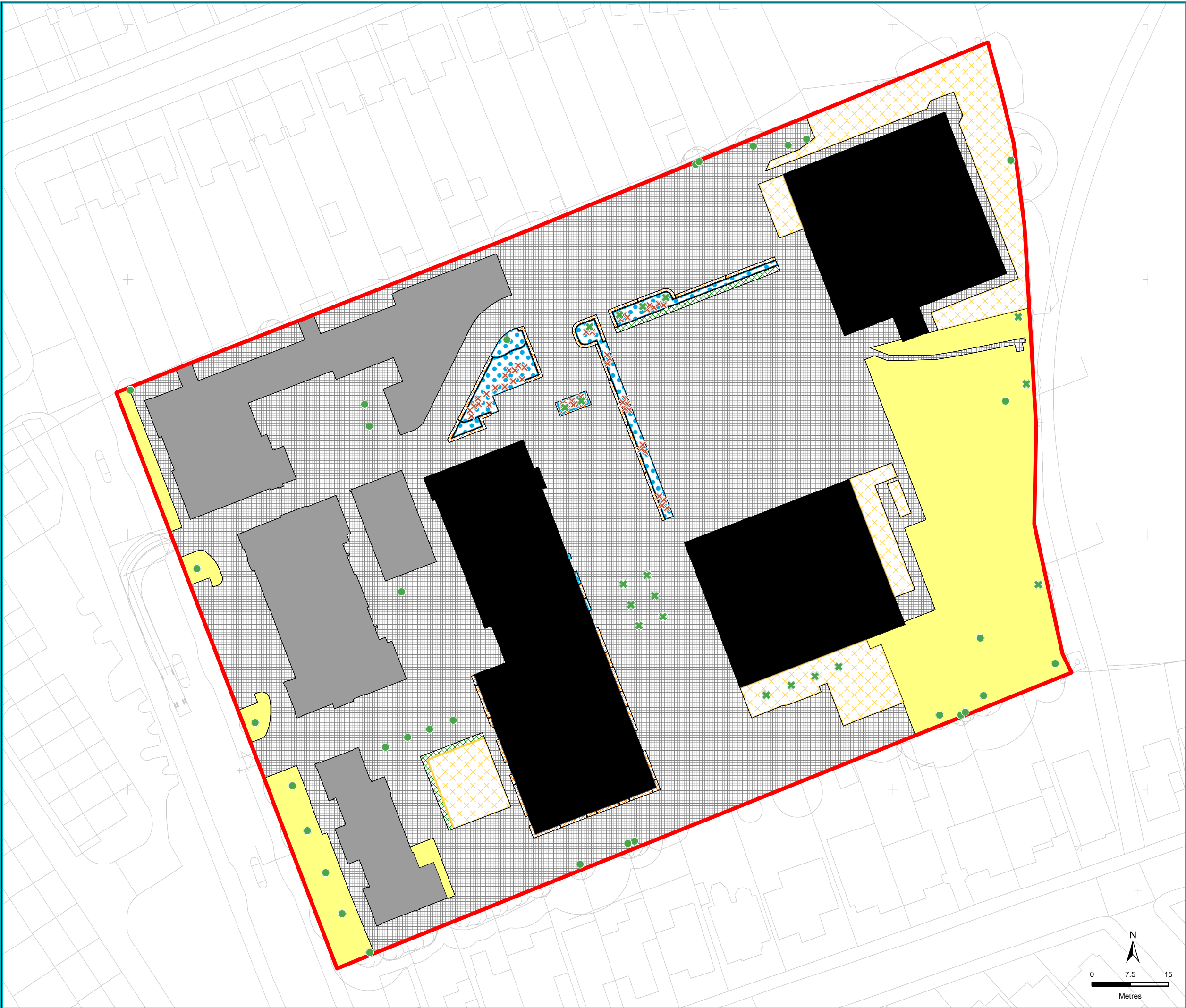
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Client			
Wates Construction Ltd.			
Figure Number		2	
Figure Title			

Extended Phase 1
Habitat Survey Map

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Legend

- Existing Tree Retained
- Proposed Tree
- Specimen Shrub

Existing Features Retained

- Existing Amenity Grassland
- Existing Building

New Features

- Groundcover Planting Area
- Groundcover Planting Rows
- Hard Standing
- Proposed Amenity Grass Lawn
- Proposed Building
- Proposed Hedges
- Site Boundary

Site Grid Reference: 524,391 185,606

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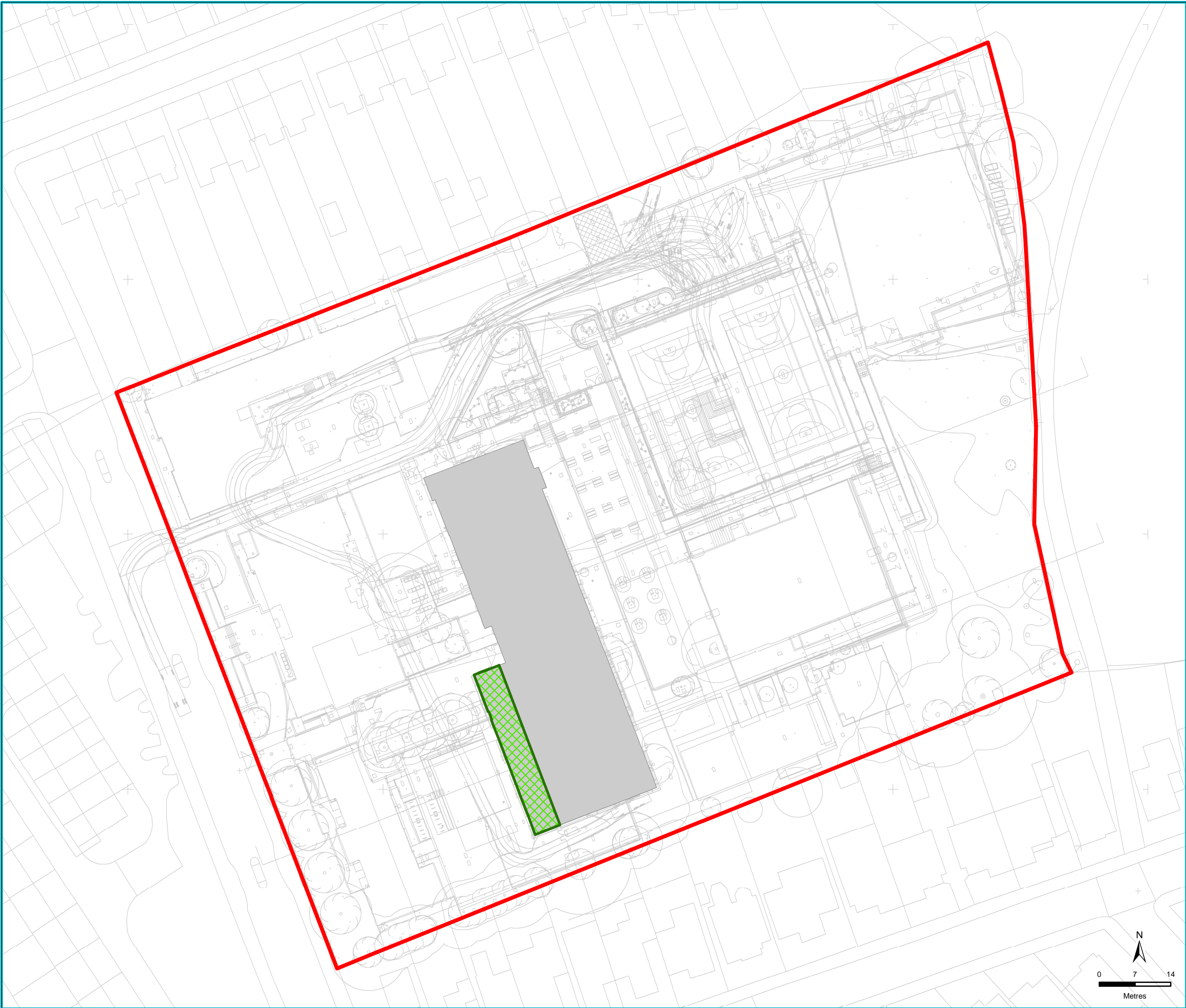
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Date	14/04/2016	Date	14/04/2016
Client			
Wates Construction Ltd.			
Figure Number		3a	




Figure Title

Proposed Development
Site Plan - Ground Level

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Legend

-  Green Roof
-  New Teaching Block
-  Site Boundary

Site Grid Reference: 524,391 185,606

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Scale at A3		1:700	
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Date	15/04/2016	Date	15/04/2016
Client			
Wates Construction Ltd.			
Figure Number		3b	

Figure Title

Proposed Development
Site Plan - Roof Level

1. Introduction

1.1.1 Wates Construction Ltd is in the process of constructing a new sports hall and teaching block at Hampstead School, Westbere Road, London (Figure 1). The proposed project includes the demolition of the existing buildings B5-B8. The new sports hall will be situated in the north-east of the site, on an area that is currently hardstanding (Figure 2). The new teaching block is proposed to be built where the current building B5 is situated (Figure 2).

1.1.2 The development proposal includes the retention of landscaped areas, where possible, with proposed ornamental planting and hedges. Of the 63 trees on site 31 trees are proposed to be removed (Wates, 2016), including those situated in the courtyard of B5. The amenity grassland and trees present in the courtyard of B5 require removal as the building is to be demolished and a new teaching block constructed in their place (Figure 3).

1.1.3 An extended Phase 1 Habitat Survey of Hampstead School was carried out on the 28th of January 2014 by Jacobs (Jacobs, 2014). This original ecological assessment carried out by Jacobs was used to gain planning permission. The planning permission was granted by the Local planning authority (LPA) under the following condition:

"Prior to first occupation of the development, details of proposals for the enhancement of biodiversity, with particular reference to bats, and a plan showing details of bird and bat box locations and types and indication of species to be accommodated shall be submitted to and approved in writing by the local planning authority. The boxes shall be installed in accordance with the approved plans prior to the occupation of the development and thereafter retained."

1.1.4 This condition in the planning permission secures appropriate features to conserve and enhance wildlife habitats and biodiversity measures within the development, in accordance with the requirements of the London Plan (Consolidated with Alterations Since 2004), Camden Planning Guidance 2006 and policy CS15 of the London Borough of Camden Local Development Framework Core Strategy.

1.1.5 The site is to be assessed using BRE, 2014 which considers whether a proposal will enhance or damage the ecological value of the site.

1.2 The Ecological Management Plan

1.2.1 This Ecological Management Plan (EMP) is based on the recommendations for ecological enhancement given in the ecology report (Thomson Ecology Ltd, 2016) being implemented and is divided into sections covering the recommended features and habitats. These sections are as follows:

- Amenity grassland;
- Shrub and hedge planting;
- Tree planting;
- Green roof;
- Insect boxes;

- Bird boxes: and
- Bat boxes.

1.2.2 The buildings (excluding the green roof and B5) and areas of hard standing are not subject to specific management under this plan as they have negligible ecological value.

1.3 Legal and Planning Policy Considerations

1.3.1 The following legal and planning policy considerations should be taken into account during subsequent management to ensure compliance.

Birds

1.3.2 All wild birds in the UK are protected from killing and injury under the Wildlife and Countryside Act 1981, as amended. Furthermore, this legislation also protects the eggs and active nests (i.e. those in use or being built) of birds from damage or destruction.

1.3.3 To avoid offences being committed it is recommended that:

- Pruning and/or trimming of trees and shrubs is conducted between early September and late February (which is outside of the breeding bird season).

Bats

1.3.4 All bat species are protected by the Conservation of Habitats and Species Regulations 2010, as amended. The Regulations make it an offence, with very few exceptions, to:

- Deliberately capture, injure or kill a bat;
- Deliberately disturb a bat in such a way as to be likely:
 - i. to impair its ability to survive, to breed or reproduce, or to rear or nurture its young; or
 - ii. to impair its ability to hibernate or migrate; or
 - iii. to affect significantly the local distribution or abundance of the species to which they belong.
- Damage or destroy a breeding site or resting place of a bat;
- Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead bat, or any part of, or anything derived from a bat.

1.3.5 Bats are also partially protected in under the Wildlife and Countryside Act, as amended, which adds the following offences (with certain exceptions):

- Disturbance while it is occupying a structure or place which it uses for shelter or protection; or
- Obstructing access to any structure or place used for shelter or protection.

1.3.6 To avoid offences being committed it is recommended that:

- Bat boxes are left undisturbed unless damaged to the extent that it is obvious that no bats are roosting within them (i.e. large holes allow the inside of the box to be viewed from the ground).

1.4 Aims and Objectives

1.4.1 The aim of this EMP is to ensure that the habitats and features of the plan are established and sustained over the first five years after project completion.

1.4.2 The objectives of this management plan are:

- To maintain the number of different species of trees, shrubs, grasses and flowers across the site; and
- To ensure that the bat, bird and insect boxes are successfully installed and maintained.

1.4.3 According to the BS 42020:2013 Section 11.1 and 11.2, a post-development check should be carried out by an ecologist in order to assess if the development complies with the recommendation provided in the BREEAM Assessment and in the EMP.

2. Habitats and Features of the Landscape

2.1 Amenity Grassland

2.1.1 An amenity grassland species list has been provided in the development proposals (Wates, 2016).

2.1.2 Standard management will require regular mowing.

2.2 Shrub and hedge planting

2.2.1 A shrub and hedge species list has been provided in the development proposals (Wates, 2016).

2.2.2 Shrubs and hedgerows may require occasional trimming (likely to be needed at least once per year) to ensure they do not become overgrown. If planting a hedgerow from whips (more successful than planting from cuttings), then once it has been successfully established it is best to cut the hedge back in order to stimulate bushy basal growth. After approximately four years the hedgerow should be tall enough to trim on an annual basis.

2.2.3 Trimming of shrubs and hedgerows should be undertaken outside of the bird breeding season to avoid the risk of damage to active bird nests. In practice, trimming and pruning should be undertaken in the period early September to late February inclusive. This will avoid the breeding season of most bird species. If trimming is required within the bird breeding season, then a check by an ecologist beforehand should be carried out to confirm no nests will be affected.

2.2.4 If gaps develop in the hedge for any reason (e.g. disease, wind-damage or other problems) they will need to be filled by replanting with similar native species. Replanting should always aim to maintain a range of diversity among the woody species growing in the hedgerow.

2.2.5 A summary of the management of the shrubs and hedgerows are given in the following table 2:

Table 2 shrubs and hedgerow management

Location:	All shrubs	All hedgerows
Objective:	To maintain at least nine native species within the planted shrub areas.	To maintain at least three native woody species within the hedgerows.
Management:	Prune in autumn or winter if necessary.	
Monitoring:	Count the number of native species during the summer.	
Remedial Action:	Replace dead or dying individual plants like-for-like.	

2.3 Tree Planting

2.3.1 A tree species list has been provided in the development proposals (Wates, 2016).

- 2.3.2 Trees should not require much management beyond occasional trimming of branches as necessary (e.g. if they become unhealthy or obstructive). In addition, dead or diseased specimens should be replaced with new stock using the same or similar native species.
- 2.3.3 As with shrubs and hedgerow, the trimming or pruning of trees should be undertaken outside of the bird breeding season to avoid the risk of damage to active bird nests. In practice, trimming and pruning should be undertaken in the period early September to late February inclusive. This will avoid the breeding season of most bird species. If trimming is required within the bird breeding season, then a check by an ecologist beforehand should be carried out to confirm no nests will be affected.
- 2.3.4 Should it be necessary to prune or trim trees within the period when birds are likely to be nesting then a simple check immediately beforehand should be carried out to confirm no nests will be affected.
- 2.3.5 A summary of the management of trees are given in the following table 3:

Table 3 scattered broadleaved trees

Location:	All scattered trees
Objective:	To maintain at least five native tree species across the site.
Management:	Prune in autumn or winter if necessary.
Monitoring:	Count the number of native species during the summer.
Remedial Action:	Replace dead or dying individual plants like-for-like.

2.4 Green Roof

- 2.4.1 The installation and maintenance of the green roof will dependent on the type of green roof that will be selected. Generally spring or autumn are the best times to install a green roof and ensure successful establishment. For further information please refer to GRO, 2014.

2.5 Insect boxes

Installation

- 2.5.1 For mounted insect boxes they should ideally be fixed to a tree trunk or fence post which catches the sun in the morning, however generally it needs to be placed in cool and dark conditions away from predators (RSPB, 2016 and British Bird Food, 2016).

Maintenance

- 2.5.2 The insect boxes will require clearance and removal of debris yearly in order to avoid build-up of detritus.

2.6 Bird Boxes

Box Types

- 2.6.1 The installation of at least two bird boxes and at least one bat box in suitable locations around the site is recommended. A number of designs of both bird and bat boxes are commercially available. It is recommended that a few different types are chosen (particularly for birds) to encourage a range of species.

Bird Box Types

- 2.6.2 Type of bird boxes recommended are:
- The installation of one sparrow terrace under the eaves of the building or at a height of 2-6m from ground level.
 - The installation of a classic apex style bird nest box with a 25mm entrance hole in order to exclude larger species and aim at smaller species such as blue tit.
- 2.6.3 Bird boxes should not be moved during the bird breeding season between March and August.
- 2.6.4 Suitable boxes are:
- Sparrows the 1SP Schwegler Sparrow Terrace
 - Apex classic nest box
- 2.6.5 Further information on installation, location and maintenance is given below.

Bird Box Installation

- 2.6.6 The bird boxes should be fixed 2m to 6m from ground level in order to protect the birds from predation. The boxes should not be placed above doorways or windows where droppings could cause health concerns. The boxes should have removable lids or bases so that old nesting material can be discarded over winter by the BREEAM Biodiversity Champion or an interested party using the new office building, where applicable.

Bird Box Maintenance

- 2.6.7 Where possible the bird boxes should be cleaned out once a year (particularly with regards to sparrow boxes) and replaced within 24hrs ready for the following nesting season. Sparrow boxes are best cleaned in October after the bird breeding season but before winter, as sparrows will roost in boxes overnight.
- 2.6.8 Any old nests should be removed entirely and the box cleaned with boiling water to kill-off any remaining parasites. Any damaged boxes should be repaired or replaced as necessary. The boxes should then be replaced in their original positions.

- 2.6.9 If a bird box remains unused for three consecutive years, it may be located in an unsuitable position. If this occurs, the box should be moved to a new suitable location in order to encourage birds to utilise the box for breeding. Monitoring of the bird-boxes in the spring and summer (without causing disturbance) is a worthwhile exercise and could be undertaken by the BREEAM Biodiversity Champion or an interested party using the new office building. Monitoring would ensure that the bird box is being used and by what species. The records could then be sent to the British Trust for Ornithology (BTO 2015) via email. A summary of the management of the bird boxes is given in table 4.

Table 4. Bird box management summary.

Type:	Bird Boxes
Objective:	To maintain two types of bird nest box in good condition around the walls of the building.
Management:	Clean out the sparrow boxes on a yearly basis.
Monitoring:	Check all bird boxes from ground level with binoculars in the winter for damage.
Remedial Action:	Replace any damaged boxes between September to February.

2.7 Bat Box

Bat Box Types

- 2.7.1 An option is the Ibstock Enclosed Bat Box 'C'. This bat box can be incorporated into the new building design. It has several roosting zones and is design particularly for pipistrelle species (Common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*) and Nathusius pipistrelle (*Pipistrellus nathusii*)).

Bat Box Installation

- 2.7.2 Bat boxes should be installed in positions where they are out of reach from the ground (so as to limit interference) and high enough to deter cats and other predators. It is best not to place them too high as this makes maintenance more difficult and can leave the boxes exposed to weather, particularly strong winds. In practice, placing them between 3m and 4.5m from the ground on trees or buildings should give an optimal height.
- 2.7.3 The direction should be chosen to avoid facing boxes into the prevailing weather. It is preferable to position boxes facing in a southerly direction (i.e. south-west through south to south-east).

Bat Box Maintenance

- 2.7.4 Bat boxes will not require any maintenance other than replacement or repair if damaged. Roosting bats are protected from disturbance, loss and damage under UK and EU legislation,

therefore if any of the boxes need to be removed, this must be done by a licensed bat worker if there is a possibility of bats being present. Advice on the setting of bat boxes can be found in Bat Conservation Trust's 'Encouraging Bats- A guide for bat-friendly gardening and living' (BCT, 2013).

3. Key Responsibilities

3.1 Responsible for the implementation of the plan

- 3.1.1 Personnel should be appointed to take key responsibility for implementing the management plan. Obvious candidates include the persons in charge of taking care of the grounds.

3.2 Funding resources

- 3.2.1 The proposed landscape will be part of Hampstead School which will actively manage the site and provide the necessary funding to ensure sustainable long term delivery of the proposed management.

4. References

- 4.1.1 Baines, C. Smart, J (1991). *A guide to habitat creation*. A London Ecology Unit Publication, London.
- 4.1.2 Bat Conservation Trust's (2013) Encouraging Bats- A guide for bat-friendly gardening and living.
- 4.1.3 British Bird Food (2016) www.britishbirdfood.co.uk/bug-box-positioning
- 4.1.4 Entwistle, A C, Harris, S., Hutson, A., Racey, P., Walsh, A., Gibson, S., Hepburn, I., and Johnston, J. (2002) *Habitat management for bats: A guide for land managers, land owners and their advisors*. JNCC, Peterborough.
- 4.1.5 GRO (2014) The GRO Green Roof Code: Green Roof Code of Best Practice for the UK 2014.
- 4.1.6 Landlife (2004). Wildflowers work - a guide to creating and managing new wildflower landscapes. Landlife, Liverpool.
- 4.1.7 RSPB (2016)
www.rspb.org.uk/makeahomeforwildlife/advice/gardening/insects/building_homes.aspx
- 4.1.8 Thomson Ecology Ltd (2016) BRE Assessment Process
- 4.1.9 Wates (2016) General Arrangement Plan: Drawing no. 0220-101.
- 4.1.10 Wates (2016) Ornamental Planting Detail Plan 01: Drawing no. 0220-303.
- 4.1.11 Wates (2016) Ornamental Planting Detail Plan 02: Drawing no. 0220-304.
- 4.1.12 Wates (2015) Soft works Plan 01: Drawing no. 0220-301.
- 4.1.13 Wates (2016) Soft works Plan 02: Drawing no. 0220-302.
- 4.1.14 Wates (2016) New Teaching Building Second Floor GA Plan: Drawing no. 2657-GA-132.

Appendix 1- Five Year Schedule

The following table summarises the management activities over a five-year cycle.

Table 1: Five Year Management Schedule

Year	Feature	Spring	Summer	Autumn	Winter
1	Grassland	Cut flowery lawns every 10 to 14 days and remove trimmings	None required	Cut hay meadow type grasslands after mid-September and remove trimmings Cut flowery lawns every 10 to 14 days and remove trimmings	None required
	Shrubs and hedgerows	Shrub and hedgerow establishment	None required	Pruning (if necessary)	Pruning (if necessary)
	Trees	Tree Planting	None required	Trimming and pruning (if necessary)	Trimming and pruning (if necessary)
	Bird and bat boxes	Installation of bat and bird boxes	None required	Clean out hole-fronted bird boxes (if necessary)	Clean out open-fronted bird boxes (if necessary)

Year	Feature	Spring	Summer	Autumn	Winter
2-5	Grassland	Cut flowery lawns every 10 to 14 days and remove trimmings	None required	Cut hay meadow type grasslands after mid-September and remove trimmings Cut flowery lawns every 10 to 14 days and remove trimmings	None required
	Shrubs and hedgerows	If trimming is required ensure that shrubs and hedgerows are checked for nesting birds by an ecologist if within the bird breeding season (March-August inclusive)		Pruning (if necessary)	Pruning (if necessary)
	Trees	If tree trimming is required ensure that trees are checked for nesting birds by an ecologist if within the bird breeding season (March-August inclusive)		Trimming and pruning (if necessary)	Trimming and pruning (if necessary)
	Bird and bat boxes	None required	None required	Clean out hole-fronted bird boxes (if necessary)	Clean out open-fronted bird boxes (if necessary)