

Southwark Council

Camberwell Old Cemetery,
Southwark: Phase 2 surveys for
reptiles and invasive plants

July 2014

Catherine Bickmore Associates Ltd

ENVIRONMENTAL CONSULTANCY

LFG - 5, Lafone House,
11 - 13 Leathermarket Street,
London, SE1 3HN

Tel: 020 7357 6700
E-mail: info@bickmoreassociates.co.uk
Website: www.bickmoreassociates.co.uk

CONTENTS

SUMMARY	1
1 INTRODUCTION	2
2 SURVEY METHODS	3
3 SURVEY FINDINGS.....	5
4 IMPLICATIONS.....	7
REFERENCES.....	7
APPENDIX I: PHOTOSHEET	8
APPENDIX II: SUMMARY OF LEGISLATION.....	10
APPENDIX III: JAPANESE KNOTWEED SURVEY FORMS	11

DRAWINGS

645/04 Reptile survey
645/05 Japanese knotweed survey

Prepared by: Marion Macnair
Reviewed by: Catherine Bickmore

Date: 9/07/14
Date: 11/07/14

SUMMARY

Catherine Bickmore Associates were commissioned by Southwark Council to undertake surveys for reptiles and invasive plant species in Area Z, the north western corner of Camberwell Old Cemetery, London Borough of Southwark. These follow an initial phase one survey in 2011 in connection with proposals to extend burial capacity.

Artificial refugia were set out in potentially suitable habitat on site (drawing 645/04) and checked on seven occasions to confirm presence/absence of reptiles in June-July 2014. No reptiles were recorded during the survey, therefore there are no implications with regards to reptiles for proposals to expand burial capacity in the area.

A walkover survey was undertaken on two occasions in May and June to identify and locate invasive plant species, with an emphasis on Japanese knotweed. Stands of Japanese knotweed were marked out on site with barrier tape, and plotted approximately on a plan (drawing 645/05).

Twelve areas of Japanese knotweed were recorded, including two just outside the north eastern corner of the site. Four of the stands had been affected by earthworks in the intervening period between the dates of the two invasive plant surveys.

All Japanese knotweed stands, and recently disturbed northern part of the site, should be fenced off and labelled. The fenced area should include a buffer zone of c.7m around the plants to avoid inadvertent disturbance/ spread.

A Japanese knotweed management plan should be drawn up to ensure the invasive species is not further spread, and to enable appropriate treatment/removal of the species prior to any works in the area.

1 INTRODUCTION

- 1.1 Catherine Bickmore Associates were commissioned on 21st May 2014 by Southwark Council to undertake phase 2 surveys for reptiles and invasive plant species in an area (Area Z) at the north western corner of Camberwell Old Cemetery, London Borough of Southwark.
- 1.2 The surveys were recommended following an initial ecological appraisal of the cemetery in 2011 in connection with plans to expand the burial capacity (Catherine Bickmore Associates, 2011).

Outline

- 1.3 The survey methods are described in Section 2, followed by a description of the findings in Section 3 and implications in Section 4. Photographs of the stands of Japanese knotweed are included in Appendix I, and a summary of relevant legislation is given in Appendix II. Japanese knotweed recording forms are included in Appendix III.

2 SURVEY METHODS

Desk study

- 2.1 Biological records were obtained from Southwark Council in 2011 who provided a species list for Camberwell new and old cemeteries. A description from the 1995 ecological survey of the cemetery as a site of borough importance (GLC, date unknown) was also used as a source of records.
- 2.2 Further information regarding sites of nature conservation interest was obtained from the London Borough of Southwark Biodiversity Action Plan 2006-2010 and London Borough of Southwark (2011) and Lewisham Council (2011) local plans.
- 2.3 Note: the absence of a record does not necessarily equate with the absence of a particular species, rather that no records have been submitted.

Reptile survey

- 2.4 A reptile survey was carried out to determine presence/absence of reptile populations on the site.
- 2.5 The Froglife (1999) Advice Sheet 10 outlines the best practice method for conducting a reptile survey . This suggests that surveys should be conducted between March and October (with April, May and September being the best months for survey), generally between 8.30 and 11.00am or 4.00 and 6.30 pm, although in cooler conditions reptiles are often encountered closer to midday, and conversely are found later in the evening in warmer conditions. It is generally best to search when temperatures are between 9-18°C, and there should be no rain (Froglife, 1999). Gent and Gibson (2003) suggest that grass snake will bask in temperatures between 12°C and 20°C.
- 2.6 The survey involved placing 20 refugia, consisting of bitumen roofing felt (c.0.5m x 1m), in suitable locations in the area, focusing on areas of optimum terrestrial habitat (drawing 645/04). The refugia warm up quickly in sunshine and provide good places for reptiles to bask on and shelter under. The survey area covered c.1.3ha, with c.0.2ha of open habitat within the area suitable for positioning artificial refugia. The density of refugia therefore met the recommended minimum of 5-10/ha (Frolife, 1999).
- 2.7 The site was initially visited on the 28th May 2014 and the refugia were laid out and left in situ for 10 days to allow time for any reptiles to find and begin using them. They were checked by experienced ecologists on seven separate occasions during suitable weather conditions (Table 2.1).

Survey constraints

- 2.8 The surveys were subject to seasonal and access constraints and the conditions on site at the time of the survey and only provides a snapshot in time.
- 2.9 June and July are not the optimal months for reptile surveys, however they are appropriate months for carrying out surveys (Froglife, 1999), and the weather conditions at the times of the survey were suitable. Therefore the survey was adequate for the purpose.

Table 2.1: Reptile survey times and conditions

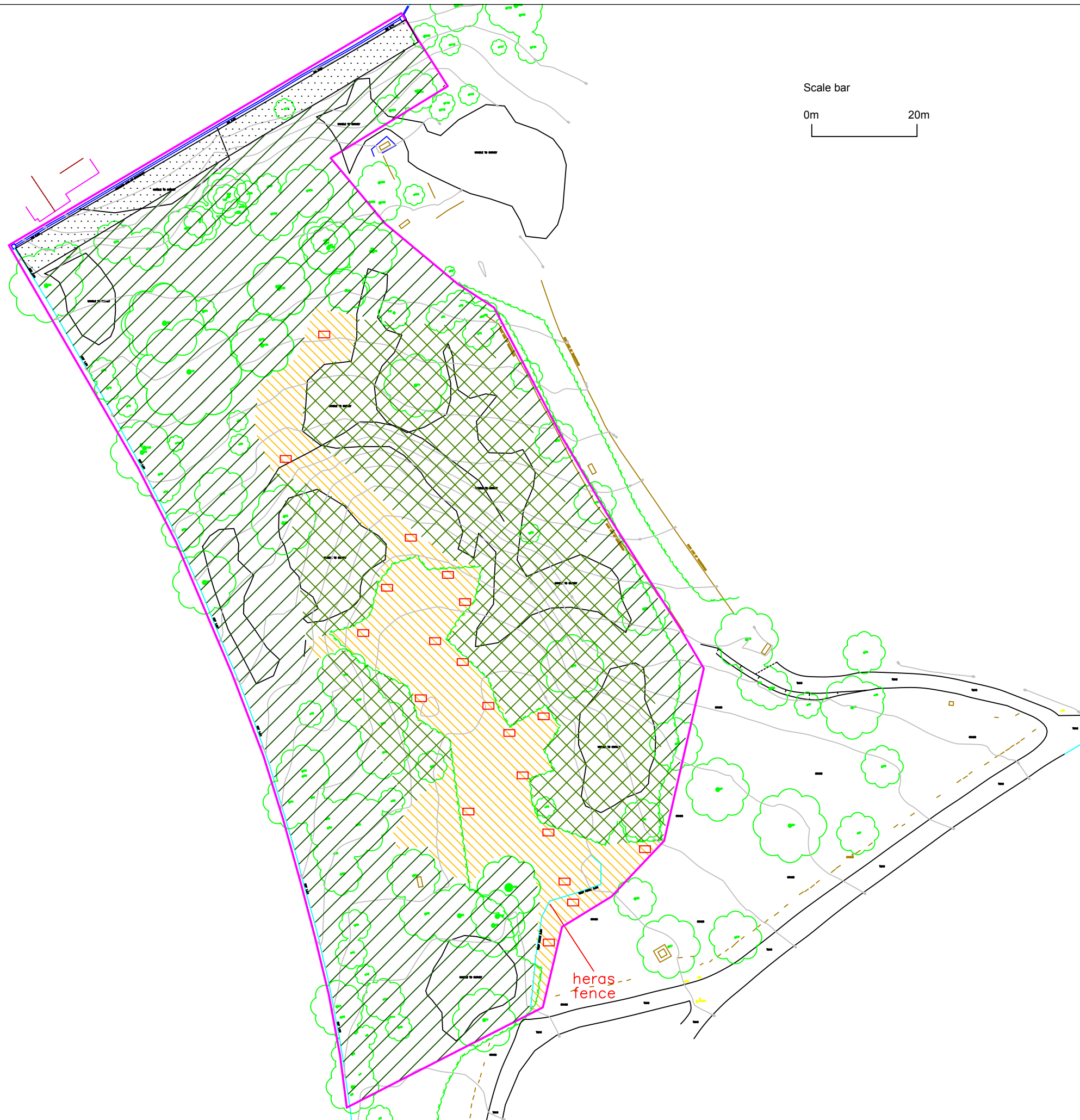
Date	Time	Weather conditions
8/06/14	0915	Sunny, calm, 18°C
24/06/14	0845	Sunny, calm, 18°C
27/06/14	0830	Overcast, calm, 18°C
30/06/14	0900	Moderately overcast with extensive sunny periods, calm, 16°C
1/07/14	0945	Moderately overcast with extensive sunny periods, calm, 18°C
7/07/14	0945	Moderately overcast with extensive sunny periods, calm, 18°C
8/07/14	0930	Moderately overcast with extensive sunny periods, calm, 17°C

Invasive plant survey

- 2.10 A walk over survey was undertaken of Area Z to identify and mark the location of invasive plant species as listed on Schedule 9 of the Wildlife and Countryside Act (Appendix II), with an emphasis on Japanese knotweed which had previously been recorded in the cemetery (Catherine Bickmore Associates, 2011).
- 2.11 All identified Japanese knotweed was marked on the ground using red and white barrier tape tied to bamboo canes to indicate the location of the recorded plants. The area was also marked approximately on a plan (drawing 645/05). A proforma was completed for each stand of Japanese knotweed (Appendix III) to record information such as size and vegetation composition of each stand and location in relation to features such as trees, walls and watercourses, as recommended in the knotweed code of practice (Environment Agency, 2013).
- 2.12 The survey was undertaken by an experienced ecologist and full member of the Chartered Institute of Ecology and Environmental Management on 28th May 2014 (an overcast, wet and calm day) and 30th June 2014 (a dry, calm day).

Survey constraints

- 2.13 The survey was subject to seasonal and access constraints and the conditions on site at the time of the survey and only provides a snapshot in time. Some areas of the site were not accessible due to the presence of impenetrable dense vegetation (trees and scrub), therefore it is possible that undetected invasive species are present in these areas. It is also possible that small areas of Japanese knotweed have been missed where other vegetation covered the ground and may have obscured small/young knotweed plants.
- 2.14 Recent earth movement works had been carried out, clearing vegetation along the wall at the northern boundary of the site prior to the start of the survey. Several small plants of Japanese knotweed were present in this area of bare earth. Therefore it is likely that new plants of Japanese knotweed will establish in this area that were not visible above ground at the time of the survey.
- 2.15 The invasive species survey provide an indication of the approximate location of the main areas of Japanese knotweed at the time of the survey as determined by the visible aerial vegetative growth.



KEY



- Survey area
- Artificial refugia (20)
- Fence
- Wall

- Approximate habitat areas**
- Established woodland
- Dense scrub/ immature woodland
- Rough grassland/tall ruderal vegetation and scattered scrub

All locations and areas approximate

Ordnance Survey Licence No. AL100036425

Drawn by	Check by	Date	Scale
MM	CB	May 2014	See bar

Area Z, Camberwell Old Cemetery

Reptile survey

Catherine Bickmore Associates Ltd
ENVIRONMENTAL CONSULTANCY

LFG 5 Lafone House, Leathermarket Street, London SE1 3HN
 Tel: 020 73576700
 E-mail: info@bickmoreassociates.co.uk
 Website: www.bickmoreassociates.co.uk

Drawing number	Revision
645/04	

3 SURVEY FINDINGS

Desk study

- 3.1 Reptile species recorded within 1km of Area Z in Camberwell Old Cemetery included common lizard recorded in the allotments to the south of Camberwell New Cemetery, c.0.9km to the east of the area (London Borough of Southwark, 2006-2010).
- 3.2 Slow worm and common lizard were also recorded in the Forest Hill to New Cross Gate Railway Cutting Site of Metropolitan Importance c.1km to the south east of Area Z.

Site description

- 3.3 Area Z is located in the north western corner of Camberwell Old Cemetery in the London Borough of Southwark. The area covered c. 1.3ha, and consisted of a relatively steep mound, rising from c. 38m Above Ordnance Datum (AOD) at the northern boundary of the site, and c.45-50m AOD at the western and eastern edges, up to c.55m AOD at the top of the mound in the central southern part of the site.
- 3.4 The area was bounded by a continuation of the cemetery to the south and east, by residential development to the north, and by Underhill Road to the west. It was reported to have previously been subject to tipping. A c.3m high brick wall ran along the northern boundary of the site, separating it from residential gardens. Recently earthworks/clearance had been carried out in a c.6m wide strip at the northern boundary of the site, which was bare soil at the time of the surveys. There were no waterbodies on or within the vicinity of the site.(private gardens excluded).
- 3.5 There were open areas of rough grassland and tall ruderal vegetation with some exposed rubble/bare ground at the top of the mound, with a surrounding area of dense scrub and recently established young stands of trees including sycamore and ash on the banks of the mound. On the lower ground at the northern and eastern and western edges of the area were more mature trees forming a more open, established wooded area.

Reptile survey

- 3.6 Area Z consisted of a large, relatively steep mound. At the top of the mound , through the central part of the site, was c.0.2ha of open habitat potentially suitable for basking and foraging reptiles, including rough grassland, tall ruderal vegetation and scattered scrub.
- 3.7 Along the northern and western edges of the base of the mound was a more established wooded area, with recently established dense stands of immature woodland and scrub on the sides of the mound. These wooded habitats, particularly the edges adjacent to the rough grassland, had potential for use as shelter by reptiles.
- 3.8 Despite the potential habitat suitability and nearby records of reptiles, no reptiles were recorded during the seven survey visits. Therefore it is unlikely that reptiles are present on the site.

Invasive plant survey

Overview

- 3.9 A total of twelve stands/patches of Japanese knotweed were recorded (drawing 645/05), and were marked out using canes and barrier tape.
- 3.10 No other scheduled invasive plant species were recorded.

Japanese knotweed background information

- 3.11 Japanese knotweed was introduced to the UK as an ornamental garden plant from Japan in the mid-nineteenth century. Since its introduction it has become widespread throughout the UK (Environment Agency, 2013).
- 3.12 Japanese knotweed is an invasive alien weed, listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), making it an offence to plant or otherwise cause to grow in the wild (Appendix II).

- 3.13 Small fragments of stems and roots are highly regenerative and will readily grow into new plants, therefore it can easily be spread following excavation or cutting, for example in boot cleats or tyre treads. Roots can extend up to 7m from the aerial parts of plant.
- 3.14 Japanese knotweed vegetative material and contaminated soil is classed as 'controlled waste' under the section 43 of Environmental Protection Act 1990 (Appendix II), and therefore any arisings not retained on site either must be destroyed on site or disposed of at a licensed landfill site in accordance with the Environmental Protection (Duty of Care) Regulations, 1991 (as amended 2003).

Japanese knotweed findings

- 3.15 The stands recorded ranged in size from c.0.1m² (a single young plant) to c.50m², and from small (< 50cm tall) young plants to larger (up to c.2.5m tall) older plants (Appendix III). All of the stands consisted of mixed vegetation, mostly with an ivy/bramble understorey and/or with other shrubs/trees growing amongst the knotweed (see photographs in Appendix I).
- 3.16 Two of the patches of Japanese knotweed (no.s 2 and 3; drawing 645/05) were just outside of the north east of the surveyed area, which was not de-lineated on the ground, around an area of recently disturbed ground including on a spoil mound. Stands 1 and 6 were small patches at the edge of the recently cleared strip in the northern part of the site. Patches 4, 5, 7, 8, 9, 10, 11 and 12 were stands within the edges of the wooded/scrub areas on/around the mound in the main part of the site (drawing 645/05; Appendix I).
- 3.17 Between the two days of survey, earth works were carried out in the northern edge of the site. As a result, four of the Japanese knotweed patches (no.s 1, 2, 3 and 6), with surrounding canes and tape that had been marked out on the ground on the 28th May, were no longer present when re-visited on 30th June. The mound of earth on which stand no. 2 was located was no longer present on 30th June. It is therefore possible that Japanese knotweed could have been widely spread over the northern edge of the site during these works.



KEY



- Survey area
- Approx. areas of Japanese knotweed
- Fence
- Wall

- Approximate habitat areas**
- / / / / Established woodland
- X X X X Dense scrub/ immature woodland
- \ \ \ \ Rough grassland/tall ruderal vegetation and scattered scrub

All locations and areas approximate

Ordnance Survey Licence No. AL100036425

Drawn by	Check by	Date	Scale
MM	CB	July 2014	See bar

Area Z, Camberwell Old Cemetery

Japanese knotweed survey

Catherine Bickmore Associates Ltd
ENVIRONMENTAL CONSULTANCY

LFG 5 Lafone House, Leathermarket Street, London SE1 3HN
 Tel: 020 73576700
 E-mail: info@bickmoreassociates.co.uk
 Website: www.bickmoreassociates.co.uk

Drawing number	Revision
645/05	

4 IMPLICATIONS

Reptiles

- 4.1 As no reptiles were recorded during the survey, it is unlikely they are present on site. Therefore there will be no implications for works in Area Z on account of reptiles.

Japanese knotweed

- 4.2 Several stands of Japanese knotweed were recorded within Area Z, therefore a Japanese knotweed management plan will need to be drawn up by a specialist to prevent spread of the species and facilitate eradication from the area.
- 4.3 As the knotweed patches are spread over several different parts of Area Z, it is possible that Japanese knotweed is present in other inaccessible/densely vegetated parts of the site and was not detected during the survey, or that it lies dormant in the soil. Therefore precautionary measures should be implemented before carrying out any works in Area Z.
- 4.4 A 7m zone around the all patches of Japanese knotweed should be fenced off and labelled to ensure no earth or other works are carried out in the fenced off area to reduce the risk of spreading it further. All of the recently cleared ground adjacent to the wall in the northern part of the site should also be fenced off and labelled as it is likely that the whole strip could be contaminated with fragments of Japanese knotweed plants.
- 4.5 The Japanese knotweed management plan could involve a combination of on site treatment techniques, for example using herbicides during the appropriate season, bunding/burial methods, and or soil screening/sieving, depending on time and space constraints (Environment Agency, 2013).

REFERENCES

Catherine Bickmore Associates (2011) *Camberwell Old Cemetery, Southwark: ecological assessment*. December 2011.

Environment Agency (2013) *The knotweed code of practice: managing Japanese knotweed on development sites*. (Version 3, amended in 2013)

Froglife (1999) *Reptile survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation*. Froglife advice sheet 10. Froglife, Halesworth

Gent, T. and Gibson, S. (2003) *Herpetofauna worker's manual* JNCC

GLC (date unknown) *Ecology handbook No. 4: A nature conservation strategy for London – woodland, wasteland, the tidal Thames and two London boroughs*

Lewisham Council (2011) *Unitary development plan* (<http://www2.lewisham.gov.uk/lbl/planning/udp/schedule2.html>; accessed 26th October 2011)

London Borough of Southwark (2006-2010) *Biodiversity Action Plan: work for wildlife*

London Ecology Unit (1989) *Nature conservation in Southwark: Ecology handbook 12*

APPENDIX I: PHOTOSHEET



P1: stand 4



P2: stand 5



P3: stand 7



P4: stand 8



P5: stand 9



P6: stand 10



P7: stand 11



P8: stand 12

APPENDIX II: SUMMARY OF LEGISLATION

Note: this summary does not represent a legal opinion

Reptile

All reptiles are protected under the wildlife legislation in the Wildlife and Countryside Act 1981 (as amended) which protects these species against intentional killing and injuring (under part of Section 9(1) and Section 9(5)).

Invasive non-native species - Schedule 9 Wildlife and Countryside Act

Japanese knotweed is one of the species listed on Schedule 9 of the Wildlife and Countryside Act 1981. It is an offence to “plant or otherwise cause to grow in the wild” any plant on this schedule. This has implications for control methods and disposal e.g. flailing can cause further spread of Japanese knotweed.

Vegetative material and contaminated soil of Japanese knotweed is classed as ‘controlled waste’ under the section 43 of Environmental Protection Act, 1990, and therefore must be disposed of at a licensed landfill site in accordance with the Environmental Protection (Duty of Care) Regulations, 1991 (as amended 2003).

APPENDIX III: JAPANESE KNOTWEED SURVEY FORMS

Japanese Knotweed Recording Sheet

Land use categories

Housing	Ho	Shops	S	Public buildings	PB	Business/Industrial	B
Garden	G	Park	Pa	Recreation ground	RG	Landscaped area	L
Farmland	F	Woodland	W	Waste ground	WG	Roundabout	Gr
Car park	CP	Road verge	RV	Railway embankment	RE	Graveyard	R
Riverbank	RB	Stream side	SS	Dock	D	Canal	C
Pond	Po	Sea front	SF	Hedgerow	He	Other	O

Soil categories

Clay	C
Sand	S
Loam	L
Rubble	R
Hardstanding	H

Area no.	area size (m ²)	Height of stems			Max stem diameter at 30cm above ground			Vegetation Composition		Proximity to watercourse		Slope			Land use 1	Land use 2	Soil	Proximity to (m)			Comments
		<1m	1-2.5m	>2.5m	<1cm	1-2cm	>2cm	JK only	Mix	Yes	No	Flat	Moderate	Steep				Walls/fences	Trees	Buildings	
1	0.5	X			X			X		X			X	W	WG	C	6	4	10	8 individual stems c.50cm apart and c.50cm tall, on cleared bank	
2	20	X			X			X		X			X	W	WG	C	10	4	15	c.30 stems scattered either side of earth mound	
3	15	X			X			X		X			X	W	WG	C	22	5	-	c.15 stems growing in low soil mound	
4	50		X			X		X		X		X	W			C,R	26	0	-	Many c.1-2m tall stems spread around mature trees (marked at northern edge)	
5	10		X				X	X		X		X	W			C,R	21	8	-	c.2.5m tall dense stand within scrub/immature trees (northern edge inaccessible - marked at southern edge)	
6	0.1	X			X			X		X			X	W		C	5	6	6	1 small stem on cleared bank	

Date: 28/05/14

Site name: Area Z, Camberwell Old Cemetery

Surveyor: MM

Catherine Bickmore Associates

ENVIRONMENTAL CONSULTANCY

Japanese Knotweed Recording Sheet

Land use categories

Housing	Ho	Shops	S	Public buildings	PB	Business/Industrial	B
Garden	G	Park	Pa	Recreation ground	RG	Landscaped area	L
Farmland	F	Woodland	W	Waste ground	WG	Roundabout	Gr
Car park	CP	Road verge	RV	Railway embankment	RE	Graveyard	R
Riverbank	RB	Stream side	SS	Dock	D	Canal	C
Pond	Po	Sea front	SF	Hedgerow	He	Other	O

Soil categories

Clay	C
Sand	S
Loam	L
Rubble	R
Hardstanding	H

Area no.	area size (m ²)	Height of stems			Max stem diameter at 30cm above ground			Vegetation Composition		Proximity to watercourse		Slope			Land use 1	Land use 2	Soil	Proximity to (m)			Comments
		<1m	1-2.5m	>2.5m	<1cm	1-2cm	>2cm	JK only	Mix	Yes	No	Flat	Moderate	Steep				Walls/fences	Trees	Buildings	
7	6		X			X		X		X		X		W		C	25	10	-	c.3 largish stems within bramble and sycamore saplings, next to fallen log (marked at northern edge)	
8	1		X			X		X		X		X		W		C	25	10	-	2 stems c.1m tall, within bramble	
9	6	X			X			X		X	X			W		C	35	3	-	c.5 separate, relatively small stems, under mature tree	
10	0.5	X			X			X		X	X			W		C	35	2	-	c.3 stems positioned along a 1m length under mature tree (marked along centre of line of plants)	
11	25		X			X		X		X	X			W		C	25	5	-	Large stand of tall stems within dense bramble (southern edge inaccessible, marked along northern edge)	
12	5	X			X			X		X	X			W		C	0	1	-	Line of c.4 stems along c.5m length, next to heras fence (marked along western edge)	

Date: 30/06/14

Site name: Area Z, Camberwell Old Cemetery

Surveyor: MM

Catherine Bickmore Associates

ENVIRONMENTAL CONSULTANCY