

Preliminary Ecological Appraisal and Preliminary Roost Assessment

Survey site:

62 London Road, Reading, RG1 5AS

Client:

Trinity College Cambridge

Survey date:

1st March 2024

Project:

This report is prepared to inform a planning application with the Reading Borough Council. The proposal is described as:

The conversion of the ground floor into a school

[Unsubmitted]

Survey methodology and legislation can be found in the Arbtech Supplement: [PEA Methodology and Legislation - 2024.](#)

The site survey was undertaken by Beth Ellison-Perrett BSc (Hons) MSc, MRSB, Consultant (2023-11066-CL17-BAT)					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (mph)	Rain
01/03/2024	6	71	100	16	None

Ecological Survey Factor	Detailed using desk study and site survey (carried out under good weather conditions). Any specific limitations noted within relevant section. This table may include further work you will need to commission (if any) to obtain planning permission or comply with legislation for other consent. All clients are expected to read and understand this section, or to contact the lead surveyor for advice.
Conclusion, Impact or Recommendations	
Habitats and plants (see habitat map in Appendix 1, location plan in Appendix 2, photos in Appendix 3 and proposal plan in Appendix 4). Botanical species are described with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).	
<i>Summary of Survey Findings</i> UKHab codes: - Buildings (u1b5) - Developed land; sealed surface (u1b) - Vegetated garden (u1 828) - Scattered trees (u1 32) - Built linear features – brick wall (u1e 853)	Site Context The site is located at National Grid Reference SU 72679 73046 and has an area of approximately 0.16ha comprising one building, hard standing, vegetated garden and scattered trees. It is surrounded by residential dwellings within the town of Reading and tree lined boundaries along the roads. The river Thames is located to the north of the site, the river Kennet and A33 dual carriageway to the west, pockets of woodland interspersed between buildings to the south and the town of Woodley to the east. Limitations The PEA survey was completed outside of the optimal survey period (April to October) limiting the identification of ground flora species. A biological records data search has not been undertaken. However, given the location of the site, the nature of the habitats present and the assessed suitability of the site for protected or notable species, it is not anticipated that the purchase of biological records data will add any significant weight or alter the conclusions and recommendations outlined in this report. These limitations have been taken into account during the evaluation of the site and requirement for further surveys and mitigation.

	The habitats present onsite include: • Buildings (u1b5) • Developed land; sealed surface (u1b) • Vegetated garden (u1 828) • Scattered trees (u1 32) • Built linear features – brick wall (u1e 853) On-site habitat descriptions <u>Developed land; sealed surface with buildings</u> The majority of the site is comprised of developed land. The hard standing is comprised of tarmac and is of negligible habitat value. There is one building onsite, a two-storey dwelling with a pitched and flat roof. The building will not be affected by the proposed plans. <u>Vegetated garden</u> To the south of the site and extending north along the western boundary is an area of vegetated garden which is subject to mowing, resulting in a sward of approximately 3-5cm in length. Species composition is comprised of perennial ryegrass (D), green alkenet (F), common mallow (O), small-flowered cranesbill (O), daisy (O), dandelion (O), creeping buttercup (R) and cleavers (R). There are also areas of bare ground which makes up approximately 20% of the vegetated garden. <u>Scattered trees</u> Present onsite are four individual scattered trees which are comprised of horse chestnut, sycamore, beech and cypress. The horse chestnut, located to the west of the site, is approximately 20m tall. The other three trees are located on the south-eastern boundary and are approximately 6-8m tall. The trees are semi-mature to mature in age and represent a fair to good structural
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	condition, with the exception of the horse chestnut which has multiple roosting features. Trees are assessed for their suitability for roosting bats and nesting birds in the relevant sections below. Individual trees condition assessment: a) >70% of the trees are native species. b) The tree canopy is predominantly continuous. c) >50% of the trees are mature. d) There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). e) Only for the horse chestnut: Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark. The other three trees have no ecological niches. f) <20% of the tree canopy is oversailing vegetation beneath. <u>Built linear features- brick wall</u> With the exception of the northern boundary, as it is adjacent to the road, the remaining boundaries are enclosed by a brick wall. These walls are in excellent condition and have no cracks or missing mortar in which species could utilise. Local habitats Further notable habitats are present within 2km of site, with the closest being deciduous woodland located 140m south-east of site, with other habitats including woodpasture and parkland, ancient woodland and coastal and floodplain grazing marsh. The intervening habitats between the site and closest notable habitat is comprised of amenity land, main access roads, and urban dwelling areas – as such, the deciduous woodland is not considered to have suitable connectivity to the site.
<i>Foreseen Impacts</i>	On-site habitats

	Only internal alterations to the building onsite are proposed. The vegetated garden, developed land and scattered trees will not be affected by the proposed plans. Notable habitats No impacts to any notable habitats are anticipated due to the small scale and distance of the proposed development from such habitats as well as the urban location of the site with surrounding physical barriers.
<i>Recommendations</i>	On-site habitats Retained trees should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012). Notable habitats None. Suggested biodiversity enhancements The planting of native tree and shrub species would be beneficial for wildlife, through the provision of sheltering and foraging habitats.
Locality and Designated Sites	
<i>Summary of Survey Findings</i>	On-site designations and Statutory designated sites (within 2km) The site is not subject to any designation. There are no statutory designated sites within 2km of the site. The presence of non-statutory designated sites within 2km of the site cannot be established without data from Thames Valley Environmental Records Centre.
<i>Foreseen Impacts</i>	On-site designations No impacts foreseen.

	Statutory and non-statutory designated sites No impacts to designated sites are anticipated due to the small scale and distance of the proposed development from such sites (where known).
<i>Recommendations</i>	On-site designations None required. Statutory and non-statutory designated sites None required.
Invasive / Non-native species	
<i>Summary of Survey Findings</i>	No problematic invasive and non-native species (as listed under Schedule 9 of the Wildlife and Countryside Act 1981) were recorded on site.
<i>Foreseen Impacts</i>	N/A
<i>Recommendations</i>	No further surveys but remain vigilant.
Invertebrates	
<i>Summary of Survey Findings</i>	No habitat for protected or notable invertebrates is found on site. The site will provide habitat value for common assemblages of invertebrates which could exploit the trees onsite.
<i>Foreseen Impacts</i>	None foreseen.
<i>Recommendations</i>	No further surveys. Suggested biodiversity enhancements The following habitat creation and enhancement opportunities could be incorporated into the proposed development to provide additional opportunities for invertebrates on site: • beetle banks • dead wood piles

	floral borders
Bats	
<i>Summary of Survey Findings</i>	EPSL data A search of the magic.gov.uk database for granted EPSLs within a 2km radius of the site has been completed. Displaced bats from licensed sites <2km away from the survey site will find alternative habitat either within the mitigation measures implemented as part of the licence or will relocate to other known roosts sites in close proximity to the licensed site. There are nine EPSL licences within 2km of the site, with the closest record located 595m east involving the destruction of a resting place for common pipistrelle. Roosting habitat Buildings and trees are assessed for their suitability to support roosting bats below. <u>Building B1- Exterior</u> B1 is a detached part two-storey, part single storey brick-built building with a cross-pitched and gabled roof clad in clay roof tiles. The roof tiles are in relatively poor condition with raised and missing tiles under which bats could roost. The missing tiles are located on the main roof on the northern and eastern elevations. There are flat roof sections located on the eastern elevation of the building. The flat roofs are lead flashing lined and are in very good condition with no gaps in which bats could roost. The doors and windows are wooden framed and appear in excellent condition with no suitable bat roosting sites. The brickwork around the building appears in excellent condition with no gaps or cracks within which crevice-dwelling bats could roost. The brick gable ends are in very good condition with no gaps around the tops of the gable ends. There are timber soffits and bargeboards around the building which are generally in good condition. There are hanging tiles on the northern, eastern and southern elevations which are in relatively poor condition with raised tiles under which bats could roost. Additionally, there are missing hanging tiles on the southern elevation of B1.

	There are three skylights on the main roof of B1 on the southern elevation and a further skylight on the western elevation of the single-storey section. The skylights are very well sealed with no gaps or missing tiles around the edges. Furthermore, there are three dormers on the northern elevation and three on the eastern elevation. The dormers are well-connected to the main roof. However, they also have raised roof tiles. <u>Building B1- Interior</u> There are three lofts within B1, two within the main roof, although most of the loft space has already been converted into liveable accommodation. The third is located within the single storey extension which extends south of B1. The roof structure is built from modern timber beams including the ridge beam within all three lofts. The roof is lined with bitumen felt which is in very good condition with no gaps or tears. The floor of the loft space is lined with mineral wool insulation and there are timber boards in places. There are cobwebs around the ridge beam and roof to floor cobwebs which could indicate a lack of internal flying activity from void dwelling bats, such as brown long-eared bats. No daylight enters the loft space which indicates that it is well sealed. <u>Scattered trees</u> All trees within the curtilage of the property were subject to a Ground Level Tree Inspection (GTLA). Details of the trees (approximate) are summarised below. Tree locations are shown in Appendix 1. • T1 = Horse chestnut, Height = 21m, Diameter at Breast Height (DBH) = 1350mm • T2 = Sycamore, H = 8m, DBH = 150mm but multi-stemmed • T3 = Beech, H = 8m, DBH = 200mm • T4 = Cypress, H = 6m, DBH = 250mm There were no roosting features on the sycamore, beech and cypress. However, the horse chestnut had multiple knot holes which could be utilised by roosting bats. On the north elevation of T1, there were two knot holes, located at 5m and 8m, both of which were on limbs located off the main trunk. On the southern elevation, there was a knot hole located 5m on the main trunk.
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	Foraging and commuting habitat Bats could use the scattered trees onsite and tree lined boundaries within the local landscape for foraging and commuting. These could also be used by bats dispersing from nearby roosts outside of the site and commuting around the area.
<i>Foreseen Impacts</i>	Roosting habitat [B1] The proposed development will not affect any of the features that could be used by roosting bats which were noted on the building during the survey and therefore no impacts to bat roosts are anticipated. However, the proposed development could result in disturbance to any bats present in the building at the time of the works due to noise, vibration or lighting. Roosting habitat [Trees] The proposed development will not affect any of the features that could be used by roosting bats which were noted on the tree during the survey and therefore no impacts to bat roosts are anticipated. However, the proposed development could result in disturbance to any bats present in the building at the time of the works due to noise, vibration or lighting. Foraging and commuting habitat No trees are proposed to be felled during the development. Artificial lighting The proposed development may lead to an increase in the amount of current lighting of surrounding habitats or the retained building without mitigation. This may disturb commuting bats.
<i>Recommendations</i>	Roosting habitat [Buildings] No further surveys are required, unless plans change and B1 will be affected by either external renovation, extensions or demolition. If B1 becomes affected, then two bat emergence and re-entry surveys are required during the active bat season (May – September) to confirm presence or likely absence of a bat roost in the building. Both of the surveys should be completed during the optimal survey period mid-May to August inclusive. Surveys should be a minimum of three weeks apart. Four

	surveyors are required to provide full coverage of the building. If bat roosts are confirmed in the building one additional survey will be required to inform an EPSL application to Natural England. The EPSL application requires that surveys have been undertaken within the most recent active bat season and planning permission must have been granted and all relevant wildlife-related conditions have been discharged prior to submission. Roosting habitat [Trees] In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licensed ecologist contacted for further advice. Foraging and commuting habitat No further surveys are required. Artificial lighting A low impact lighting strategy will be adopted for the site during post-development which outlines the areas of the site that will be retained as dark corridors. Parameters can be found on the Bat Conservation Trust website: https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting-2 Suggested biodiversity enhancements The installation of one bat box at the site will provide additional roosting habitat for bats. The bat box will be installed on a retained tree. Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance, away from artificial light. The bat box will be a specification suitable for crevice dwelling species such as Woodstone bat box or a similar alternative brand.
Birds	
<i>Summary of Survey Findings</i>	Buildings

	No bird nests were directly identified on or within B1. Trees No evidence of nesting birds was identified within the trees during the survey; however, birds could use the scattered trees for nesting. No habitat for schedule 1 birds was observed. Barn owls The site does not appear to provide any suitable nesting sites for barn owls.
<i>Foreseen Impacts</i>	The proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.
<i>Recommendations</i>	Precautions should be taken with machinery and noise levels when working close to any retained nests so as not to disturb any nearby nesting birds during construction works. At least a 3-5m buffer should be created between any machinery and active nests until the young have fledged. Suggested biodiversity enhancements The installation of one bird box at the site will provide additional nesting habitat for birds. The bird box will be installed on a retained tree. General purpose bird boxes should be positioned 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight. Species-specific bird boxes should be installed in line with manufacturers specifications.
Reptiles	
<i>Summary of Survey Findings</i>	A review of the MAGIC database returned no granted EPSL records for protected reptiles within 2km of the site. The site is predominately hard standing with a small area of vegetated garden which is not considered suitable to support reptiles due to a lack of sheltering and foraging opportunities. Furthermore, the site is enclosed by brick walls on three boundaries and a busy, main road on the final boundary.
<i>Foreseen Impacts</i>	None foreseen.
<i>Recommendations</i>	<i>None.</i>

Amphibians	
<i>Summary of Survey Findings</i>	Great crested newts exist in metapopulations and are known to utilise ponds and their connecting terrestrial habitat during their life cycle; great crested newts are typically found within terrestrial habitats up to 500m from breeding ponds (Langton et al. 2001). No suitable habitat on site for amphibians, and there are no ponds within 500m of the development area. Additionally, there are no GCN licenced sites within 2km of the site on the magic.gov.uk database, reducing the likelihood of them being present on site.
<i>Foreseen Impacts</i>	Minimal impacts to the site are proposed. Only internal changes to the ground floor of B1 is proposed. When completing the rapid risk assessment published by Natural England (Natural England 2015), the proposed development produces a Green risk score , which states: Offence Highly Unlikely .
<i>Recommendations</i>	No further surveys are required. Suggested biodiversity enhancements The site could be enhanced for amphibians post-development through creation of amphibian hibernacula using rubble and logs from site clearance. Information on how to construct a hibernaculum can be found here: https://www.wiltshirewildlife.org/hibernaculum
Badger	
<i>Summary of Survey Findings</i>	No evidence of badgers (e.g. latrines, snuffle holes, hairs) or badger setts were identified on or within influencing distance (30m radius) of the site. Furthermore, the topography of site (and surrounding area as viewed by google earth) is broadly level and so does not present suitability for sett construction. Furthermore, the site itself is mainly hard standing which is suboptimal for badgers. The remainder of the site, i.e. the vegetated garden could be utilised by foraging badgers, however, the presence of the brick wall around the site is likely to restrict badgers from accessing the site.
<i>Foreseen Impacts</i>	Minimal impacts to the site are proposed. Only internal changes to the ground floor of B1 is proposed. However, construction activities could result in the death or injury of badgers, if present.
<i>Recommendations</i>	A basic precautionary mitigation during works is recommended:

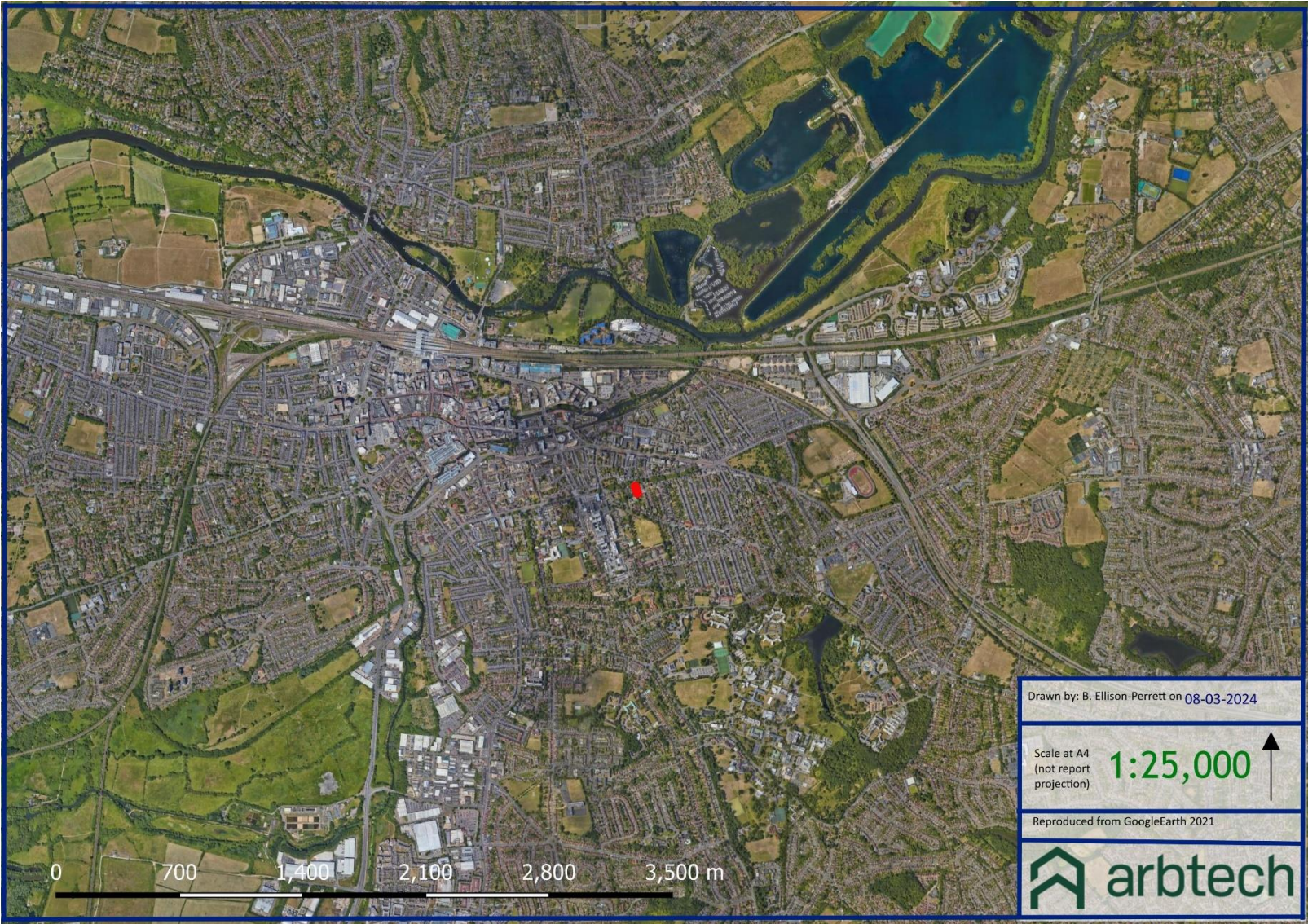
	- Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. - The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to habitats which badgers could use. South and west boundaries. - Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. - In the unlikely event that a badger sett is identified within 30m, works must cease and advice must be sought from a suitably qualified ecologist.
Riparian animals	
<i>Summary of Survey Findings</i>	The river Kennet is located 395m north. However, due to the urban barriers in place isolating the site, this river is not connected to the site.
<i>Foreseen Impacts</i>	No impacts are anticipated on riparian animals as a result of the proposed development.
<i>Recommendations</i>	None.
Hazel dormouse	
<i>Summary of Survey Findings</i>	A review of the MAGIC database has returned no EPSLs for dormice within a 4km radius of the site. No evidence of dormice was found within the site. It is not anticipated that dormice are present on the site due to the lack of suitable habitats present. For isolated habitats in the UK, research indicates that dormice require 20ha of woodland habitat to support a viable population (Bright et al. 1994). There are no areas of woodland on the site that are big enough (20ha) to support a dormouse population.
<i>Foreseen Impacts</i>	No impacts are anticipated on hazel dormice as a result of the proposed development.
<i>Recommendations</i>	None.
Hedgehog	
<i>Summary of Survey Findings</i>	The site provides no opportunities for hedgehogs to shelter or hibernate, due to a lack of sheltered areas and ground flora/shrubs. Commuting hedgehogs may travel across the site but is unlikely as the site is enclosed by brick walls on three boundaries and a busy, main road on the final boundary.

<i>Foreseen Impacts</i>	Minimal impacts to the site are proposed. Only internal changes to the ground floor of B1 is proposed. However, construction activities could result in the death or injury of hedgehogs, if present.
<i>Recommendations</i>	Similar to the badgers, a precautionary working method will be implemented during construction, including the following measures: • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which hedgehogs could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • If any hedgehogs are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance.

Appendix 1: Survey/Habitat map



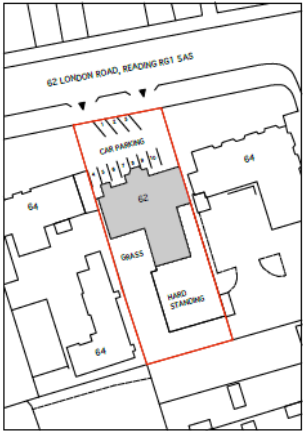
Appendix 2: Location map



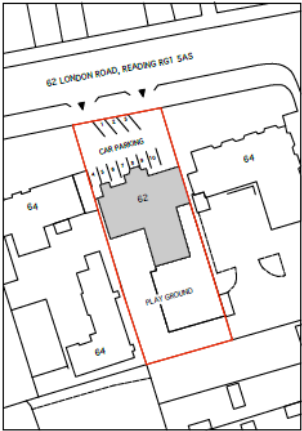
Appendix 3: Proposed plan



LOCATION PLAN
SCALE 1:1250 @ A1



EXISTING BLOCK PLAN
SCALE 1:500 @ A1



PROPOSED BLOCK PLAN
SCALE 1:500 @ A1

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Appendix 4: Photos



Photo 1: Rear of the site, looking south-west. Showing the developed land; sealed surface.



Photo 2: Close up of the vegetated garden, to the south and west of the site.



Photo 3: Large horse chestnut along the western boundary of the site.



Photo 4: Brick wall along the eastern, southern and western boundaries.



Photo 5: Northern elevation of B1.



Photo 6: Eastern elevation of B1.



Photo 7: Southern and western elevations of B1.

Legal

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