

Appendix 12.1

Preliminary Ecology Appraisal



Reading Metropolitan

Preliminary Ecology Appraisal

Produced for NatWest Trustee and Depositary Services Limited as trustee of the Hermes Property
Unit Trust

By Applied Ecology Ltd

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1 Introduction

Background

- 1.1 In November 2018 Applied Ecology Ltd (AEL) was commissioned to carry out a Preliminary Ecological Appraisal (PEA) of an area of land off of Caversham Road in Reading, Berkshire, much of which is occupied by a former Royal Mail sorting office ("the Site"). The Site has a central grid reference of SU 71330 73993 and its location is shown by **Figure 1.1**.
- 1.2 The study was required in order to determine the likely ecological constraints associated with a proposal for demolition of the existing buildings and construction of a new mixed-use commercial and residential development within the Site and to establish the potential scope of further, more detailed ecological surveys which may be needed to support any future planning application(s) as necessary.

Relevant Legislation and Planning Policy

Legislation

- 1.3 The Wildlife and Countryside Act 1981 (as amended) provides the main legal framework for nature conservation and species protection in the UK. The Site of Special Scientific Interest (SSSI) is the main statutory nature conservation designation in the UK. Such sites are notable for their plants, or animals, or habitats, their geology or landforms, or a combination of these. Natural England is the key statutory agency in England for advising Government, and for acting as the Government's agent in the delivery of statutory nature conservation designations.
- 1.4 Designation of a SSSI is a legal process, by which sites are notified under the Wildlife and Countryside Act 1981. The 1981 Act makes provision for the protection of sites from the effects of changes in land management, and owners and occupiers receive formal notification specifying why the land is of special scientific interest, and listing any operations likely to damage the special interest.
- 1.5 The Countryside and Rights of Way Act 2000, and The Natural Environment and Rural Communities (NERC) Act 2006, provide supplementary protected species legislation. Specific protection for badgers *Meles meles* is provided by the Protection of Badgers Act 1992.

Habitats and species of Principal Importance in England

- 1.6 The Natural Environment and Rural Communities (NERC) Act came into force on 1 October 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list has been drawn up in consultation with Natural England, as required by the Act.
- 1.7 The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural



Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Habitats of Principal Importance

- 1.8 Fifty-six habitats of principal importance are included on the S41 list. These are all the habitats in England that were identified as requiring action in the UK Biodiversity Action Plan (UK BAP) and continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework. They include terrestrial habitats such as upland hay meadows to lowland mixed deciduous woodland, and freshwater and marine habitats such as ponds and sub-tidal sands and gravels.

Species of Principal Importance

- 1.9 There are 943 species of principal importance included on the S41 list. These are the species found in England which were identified as requiring action under the UK BAP and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework. In addition, the Hen Harrier has also been included on the list because without continued conservation action it is unlikely that the Hen Harrier population will increase from its current very low levels in England.
- 1.10 In accordance with Section 41(4) the Secretary of State will, in consultation with Natural England, keep this list under review and will publish a revised list if necessary.

National Planning Policy Framework

- 1.11 The National Planning Policy Framework (NPPF) was first published in March 2012 and replaced previous planning policy guidance (PPS 9) on biodiversity. The NPPF was updated in July 2018 and states the following in relation to biodiversity and planning:

“When determining planning applications, local planning authorities should apply the following principles:

- if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments) should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons¹ and a suitable compensation strategy exists; and*

¹ For example, infrastructure projects (including nationally significant infrastructure projects, orders under the Transport and Works Act and hybrid bills), where the public benefit would clearly outweigh the loss or deterioration of habitat.



- *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.*

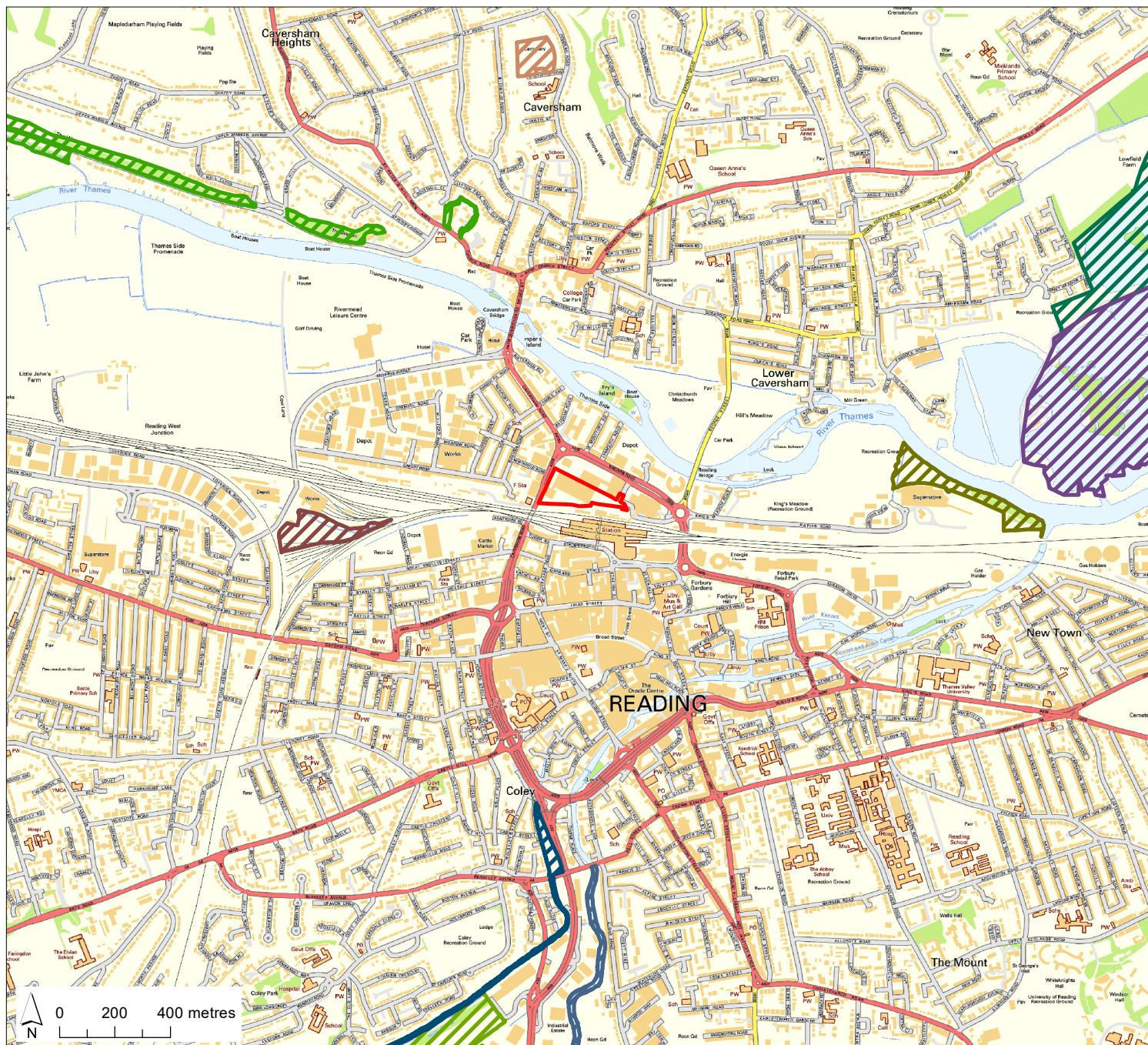
The following should be given the same protection as habitat sites:

- *potential Special Protection Areas and possible Special Areas of Conservation;*
- *listed or proposed Ramsar sites²; and*
- *sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.*

The presumption in favour of sustainable development does not apply where development requiring appropriate assessment because of its potential impact on a habitats site is being planned or determined”.

² Potential Special Protection Areas, possible Special Areas of Conservation and proposed Ramsar sites are sites on which Government has initiated public consultation on the scientific case for designation as a Special Protection Area, candidate Special Area of Conservation or Ramsar site.





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Reading Met

Site Location

- Site boundary
- Henley Road Gravel Pit LWS
- Henley Road Gravel Pit LWS (proposed extension)
- Old Cemetery, Victoria Road LWS
- The Warren Woodlands Complex LWS
- The Coal, Kennetmouth and Kings Meadow East LWS
- Cow Lane Depot LWS
- Holy Brook LWS
- River Kennet/Kennet and Avon Canal LWS
- Fobney and Kennet Valley Meadows LWS

Figure 1.1

Map Scale @ A4: 1:21,000

Surveyed by: n/a

Survey date: n/a

Drawn by: OG

Checked by: DP

Status: Final



2 Methodology

Pre-existing data records

- 2.1 The Thames Valley Environmental Records Centre (TVERC) was commissioned by AEL in November 2018 to complete a search of their databases for existing biological records. This included a search for records of statutory and non-statutory wildlife sites and ancient woodland both on the Site and within 2 km of its perimeter. It also included a search for records of protected and notable species on the Site and within 2 km of the Site boundary.
- 2.2 In addition, as the TVERC search highlighted that black redstarts have previously been recorded around Reading Railway Station to the south of the Site, further records for this species were requested from the Berkshire Ornithological Club (BOC), who hold some bird records that are not available through TVERC.

Habitats and Plants

- 2.3 A Phase 1 habitat survey of the Site was undertaken on 13 November 2018 by Robert Hutchinson MCIEEM and Oliver Glenister GradCIEEM. The methodology adopted followed the standard JNCC approach to Phase 1 habitat survey (JNCC, 1993³) by which all habitats present within the site were classified and mapped according to standard categories. Habitat patches were mapped as polygon features, and if sufficient space on the map linear features (such as walls and fences) as lines where this provided added value. Point features were recorded where there were notable isolated trees or scrub. Plant species abundance was noted using the DAFOR⁴ system.
- 2.4 The habitat map was subsequently digitised using a Geographical Information System (ArcGIS).
- 2.5 The Phase 1 habitat survey was completed late in the survey season; however, this is not considered to be a constraint given that the Site was dominated by artificial habitats of limited botanical interest that can be identified at any time of the year.

Fauna

- 2.6 The standard Phase 1 habitat survey was "extended" to include a search for evidence of or potential for the presence of protected animal species or species of nature conservation interest within and close to the Site. This was not a detailed survey for such species, but included noting the presence of habitats suitable to support specific protected species, and where seen, any evidence of presence such as droppings, mammal tracks and footprints, shelters (or nests/roosts), hair caught on fence-wire, foraging signs, and so on.

³ **JNCC (1993)** *Handbook for Phase 1 Habitat Survey – A technique for Environmental Audit*. JNCC, Peterborough.

⁴ DAFOR: whereby species occurrence may be classified as being dominant, abundant, frequent, occasional or rare. Rare in the context of a DAFOR score should not be confused with species rarity in the more widely accepted meaning of general scarcity.



Preliminary Bat roost inspection

- 2.7 Preliminary bat roost inspections of the two on-Site buildings were completed during the walkover survey on 13 November 2018 by an experienced bat surveyor, Rob Hutchinson MCIEEM (NE level 1 bat licence holder).
- 2.8 The inspection of buildings to assess their suitability for and roosting use by bats can be conducted at any time of year, according to the best practice survey guidance (Collins, 2016)⁵. However, finding evidence of bats (e.g. their droppings) on external surfaces that are unprotected from rainfall may be restricted if undertaken outside the main bat active season (May to September) and/or after periods of wet weather. Bat droppings inside buildings may also quickly disintegrate in damp conditions.
- 2.9 A systematic survey of the exterior and accessible interiors of the buildings on Site was completed from ground level using binoculars and high-powered torches to search for evidence of bats. If bat dropping evidence was found, a representative sample would be collected to enable subsequent DNA analysis to enable bat species identification at a later date.
- 2.10 Evidence of bats would include bat droppings on floors, walls and other exposed surfaces, staining (caused by bat fur oils and/or urine spots), the characteristic odour of accumulated bat droppings in confined (typically poorly ventilated) spaces, bat insect feeding remains (such as discarded moth/butterfly wings and spider exoskeletons), and live/dead bats (e.g. roosting against ridge beams and/or in cracks and crevices in brickwork and structural timbers).
- 2.11 The suitability of each building was classified according to the categories and descriptions provided in Collins (2016) as shown by **Table 2.1**.

Table 2.1: Guidelines for assessing the potential suitability of proposed development sites for bats.

Suitability	Description of roosting habitat
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger number of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain Potential Roost Features (PRFs) but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).

⁵ Collins, J (2016) *Bat Surveys for Professional Ecologists – Good Practice Guidelines – 3rd Edition*. Bat Conservation Trust, London



High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
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3 Results

Pre-existing data records

Designated Sites

- 3.1 The Site is not covered by any pre-existing statutory or non-statutory wildlife site designation and is not ancient woodland.
- 3.2 The nearest statutorily designated site to the Site is the **Lodge Wood & Sandford Mill Site of Special Scientific Interest (SSSI)**, located approximately 6.4 km to the east. This Site consists of two small wet woodlands on the banks of the River Loddon. These support large populations of the rare Loddon lily *Leucojum aestivum*.
- 3.3 There are eight non-statutorily designated wildlife sites within 2 km of the Site: **Henley Road Gravel Pit Local Wildlife Site (LWS); Old Cemetery, Victoria Road LWS; The Warren Woodlands Complex LWS; The Coal, Kennetmouth and Kings Meadow East LWS; Cow Lane Depot LWS; Holy Brook LWS; River Kennet/Kennet and Avon Canal LWS; and Fobney and Kennet Valley Meadows LWS.**
- 3.4 The closest of these to the Site is the Cow Lane Depot LWS, approximately 530 m to the west. This site consists of a mosaic of reed swamp, open water, willow scrub, mature trees, tall herb grassland and ruderal vegetation.
- 3.5 There is no ancient woodland within 2 km of the Site.

Protected and Notable Species

- 3.6 A summary of relevant CPERC records for the area of search is as follows:
 - There was a single record of great crested newt (GCN) from within the 2 km search area. This was a 2017 record (of a positive eDNA result) from a pond located approximately 610 m to the north-east of the Site.
 - There were 25 reptile records from the search area including: one record of common lizard, 15 of slow-worm and 9 of grass snake. The closest of these to the Site was a 1982 record of slow worm from 'Forbury Gardens', approximately 340 m to the south-east of the Site.
 - 19 badger records were returned by the TVERC records search, however, most of these were provided at a low resolution; so the exact locations of badger sightings within the search area could not be determined.
 - The records search returned 296 bat records, from a number of sites in Reading; they included a range of bat species including: common, soprano and Nathusius' pipistrelle, brown long-eared bat, noctule, serotine and Daubenton's bat. The closest to the Site was a 2010 record of a brown long-eared bat roost at 9 The Forbury Road, approximately 320 m to the south-east of the Site.
 - A range of bird records were provided by the TVERC search, including a variety of red and amber listed species such as red kite, kestrel, peregrine, herring gull, great black-backed gull, black-headed gull, tawny owl, swift, lesser spotted woodpecker, willow



warbler, skylark, house martin, grey wagtail, dunnoek, black redstart, fieldfare, song thrush, redwing, mistle thrush, spotted flycatcher, starling, house sparrow, lesser redpoll, linnet, brambling, bullfinch, yellowhammer and reed bunting.

- The TVERC search returned seven black redstart records from the 2 km search area including three records that related to a pair of black redstarts that nested on the Western Tower at Station Hill, Reading in 2012, approximately 100 m to the south of the Site. The Western Tower was demolished in 2015.

- 3.7 A total of 43 black redstart records from the Reading area (dating from 2007 until 2017) were returned following the BOC data request. Most of these were of birds seen from locations along three roads that are connected to one another: Friar Street, Garrard Street and Merchants Place, the nearest of which (Garrard Street) is around 150 m to the south of the Site. The most recent records from these three roads were from 2016. Other than a 2013 record of a black redstart seen 'near the station' none of the other recent BOC records appeared to be locations in close proximity to the Site.

Habitats

- 3.8 The Phase 1 habitat map is shown in **Figure 3.1** and plant species lists can be found in **Appendix A**. A selection of habitat survey photographs can be found in **Figure 3.2**.

Semi-improved Neutral Grassland

- 3.9 There were two narrow strips of rank semi-improved neutral grassland along the western boundary of the Site that appeared to have developed from neglected (unmown amenity grassland). Cock's-foot *Dactylis glomerata* was the dominant plant species, and false oat-grass *Arrhenatherum elatius* was abundant.

Ephemeral/Short Perennial

- 3.10 Ephemeral/short perennial vegetation was present in a patch of disturbed ground on the Site's south-west corner as well as scattered around the buildings and along the edges of the Site. The most abundant plant species in this vegetation were water bent *Polypogon viridis*, Oxford ragwort *Senecio squalidus*, Guernsey fleabane *Conyza sumatrensis* and butterfly-bush *Buddleja davidii*.

Scattered Trees and Scrub

- 3.11 There were seven semi-mature Norway maple *Acer platanoides* trees on the western side of the Site, within the strips of semi-improved neutral grassland. There were also six immature ornamental street trees on the eastern side of the Site and a patch of mature butterfly-bushes to the east of the old sorting office building.

Buildings

- 3.12 There was a large steel-framed warehouse building (a former Royal Mail sorting office) in the centre of the Site as well as a smaller steel-framed office building to the south-west which was connected to the sorting office by an elevated enclosed walkway.



Fauna

Great Crested Newts

- 3.13 There were no standing waterbodies within 250 m of the Site (as shown on the 1:25,000 OS map) and so the presence of terrestrial great crested newt (GCN) within the Site can be ruled out.

Reptiles

- 3.14 Although there were areas of rank semi-improved grassland on the Site these were small, isolated within an urban environment and had only recently developed from amenity grassland that had fallen into neglect. As a result the presence of reptiles on the Site is considered to be highly unlikely.

Badgers

- 3.15 There was no physical evidence of badger presence (e.g. footprints, setts, dung or foraging evidence) anywhere within the Site.

Bats

- 3.16 The findings of the preliminary building inspection are summarised below:
- 3.17 The steel-framed former sorting office on the northern side of the Site had a simple structure lacking in features that could be utilised by roosting bats. Overhanging sections of roof on the southern side of the building had been netted off for pigeons so were inaccessible to bats. There were a small number of gaps under the building's steel roof cladding but these did not appear to offer substantial opportunities for roosting bats, especially as these crevices are likely to be subject to highly fluctuating temperatures.
- 3.18 The interior of the warehouse was also inspected and no evidence of bats (e.g. droppings or feeding remains) was present. Overall this building was assessed as being of **negligible** value to roosting bats.
- 3.19 The office building was similarly devoid of features of value to roosting bats. No gaps were present in the metal cladding or associated with the roof and so it was assessed as being of **negligible** value to roosting bats.

Birds

- 3.20 A small number of bird species were seen or heard within or over the Site during the walkover survey, these included: red kite (overflying), magpie and feral pigeon.
- 3.21 It is possible that small numbers of birds breed on Site, utilising the trees and mature butterfly-bushes as nesting sites. However, the small size of the Site means that it is unlikely to support a particularly large or important breeding bird assemblage.

Black Redstart

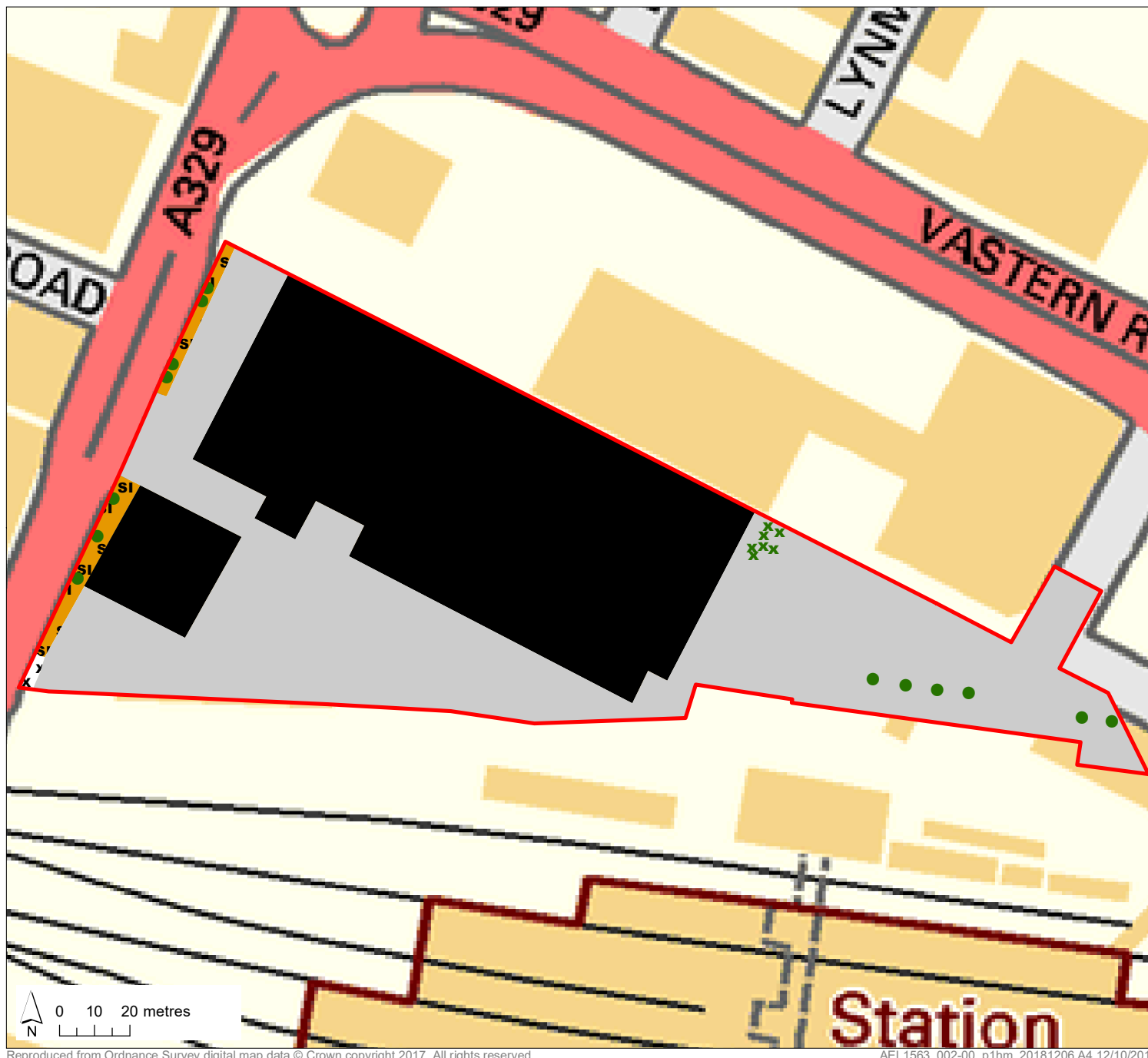
- 3.22 Neither of the buildings on Site was considered to provide suitable habitat for breeding black redstart as both lacked complex roof structures with sheltered areas, which black redstarts require for nesting. Although there were sheltered areas under an overhang on



the southern side of the warehouse building this was blocked off by pigeon netting and would not be accessible to black redstart. None of the black redstart records provided by TVERC or the BOC appeared to pertain to the Site and the recent records from the vicinity of the Site all relate to an area to the south of the Site and Reading Railway Station which contains several buildings which appear to offer better nesting opportunities than those found on the Site.

- 3.23 The Site also lacked black redstart foraging habitat, as areas of ephemeral/short perennial vegetation were highly limited and occurred mostly along the edges of the buildings or adjacent to Caversham Road (i.e. in areas where human disturbance is likely to be greatest).
- 3.24 Overall it is highly unlikely that black redstart would breed on the Site given the unsuitability of the buildings for nesting, as well as the concentration of existing black redstart records around more suitable buildings to the south of the Site. Furthermore, foraging opportunities on the Site are highly restricted.





Reading Met

Phase 1 Habitat Map

- Site boundary
- semi-improved neutral grassland
- x v x ephemeral/short perennial
- hard standing
- buildings
- individual tree (indicative location)
- x scattered scrub

Figure 3.1

Map Scale @ A4: 1:1,650

Surveyed by: OG

Survey date: 13 Nov 2018

Drawn by: OG

Checked by: DP

Status: Final



Figure 3.2: Selection of habitat survey photographs.



(a) The strip of semi-improved neutral grassland and planted Norway maples on the western Site boundary.



(b) The sorting office building in the centre of the Site.



(c) The office building in the south-west section of the Site.



(d) Sections of overhanging roof on the southern side of the Site that are netted off to prevent pigeon nesting.



4 Conclusions and Recommendations

Conclusions

Designated Sites

- 4.1 The Site is not covered by any statutory or non-statutory wildlife site designation and its re-development is highly unlikely to have an direct or indirect adverse impact on any local wildlife site as they are all completely isolated from the Site by existing urban infrastructure.

Habitats and Plants

- 4.2 The Site consisted primarily of hard standing and buildings with only small sections of the Site supporting vegetation. The trees on Site were all non-native and semi-mature/immature, and the small strips of semi-improved neutral grassland on the western boundary were species-poor and derived from neglected amenity grassland. None of the habitats on Site were considered to be of elevated ecological or nature conservation value.

Protected Species

- 4.3 The buildings on Site lacked features that could be used by roosting bats or nesting black redstarts and overall the Site was not considered to be of value to any protected animal species, other than small numbers of common birds that may breed in the trees and scattered scrub within the Site.

Recommendations

Mitigation

- 4.4 The clearance of all suitable bird nesting habitat (i.e. trees, scrub and shrubs) must take place outside of the bird breeding season (i.e. over the period September–February), or, if during the breeding season, immediately after a check by an experienced ornithologist that verifies nesting bird absence from the Site.

Enhancement

- 4.5 The provision of integrated bat and bird bricks and boxes within the new buildings should be considered as a biodiversity enhancement
- 4.6 It is also recommended that native and/or wildlife friendly plant species should be incorporated into any proposed soft landscaping.



Appendix A

Plant Species Lists



Plant Species List (Semi-improved Neutral Grassland)	Common Name	DAFOR Abundance
<i>Dactylis glomerata</i>	Cock's-foot	D
<i>Arrhenatherum elatius</i>	False oat-grass	A
<i>Conyza sumatrensis</i>	Guernsey fleabane	F
<i>Achillea millefolium</i>	Yarrow	F
<i>Lolium perenne</i>	Perennial rye-grass	F
<i>Poa pratensis</i>	Smooth meadow-grass	F
<i>Rumex obtusifolius</i>	Broad-leaved dock	O
<i>Rumex crispus</i>	Curled dock	O
<i>Stellaria media</i>	Common chickweed	O

Plant Species List (Ephemeral/Short Perennial)	Common Name	DAFOR Abundance
<i>Polypogon viridis</i>	Water bent	A
<i>Buddleja davidii</i>	Butterfly-bush	A
<i>Senecio squalidus</i>	Oxford ragwort	A
<i>Conyza sumatrensis</i>	Guernsey fleabane	A
<i>Poa annua</i>	Annual meadow-grass	F
<i>Cymbalaria muralis</i>	Ivy-leaved toadflax	F
<i>Artemisia vulgaris</i>	Common mugwort	F
<i>Sonchus oleraceus</i>	Smooth sow-thistle	F
<i>Lotus corniculatus</i>	Bird's-foot trefoil	O
<i>Festuca rubra ssp. commutata</i>	Chewing's fescue	O
<i>Chamerion angustifolium</i>	Rosebay willowherb	O
<i>Atriplex prostrata</i>	Spear-leaved orache	O
<i>Daucus carota</i>	Wild carrot	O
<i>Plantago major</i>	Greater plantain	O
<i>Polypogon monspeliensis</i>	Annual beard-grass	O
<i>Papaver dubium</i>	Long-headed poppy	O
<i>Hypochaeris radicata</i>	Cat's-ear	O
<i>Tripleurospermum inodorum</i>	Scentless mayweed	O
<i>Catapodium rigidum</i>	Fern-grass	O
<i>Euphorbia helioscopia</i>	Sun spurge	O
<i>Conyza floribunda</i>	Bilbao fleabane	R
<i>Sedum acre</i>	Biting stonecrop	R
<i>Senecio viscosus</i>	Sticky groundsel	R
<i>Solanum lycopersicum</i>	Tomato	R
<i>Eupatorium cannabinum</i>	Hemp-agrimony	R





