



Station Hill, Reading

Environmental Impact Assessment Scoping Report

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Contents

1. Introduction	1
1.1 Environmental Impact Assessment.....	1
1.2 Consultation	3
2. The Site and Potentially Sensitive Receptors	4
2.1 Site Location, Setting and Existing Land Uses Within the Site.....	4
2.2 Existing Land Uses Surrounding the Site	4
2.3 Potentially Sensitive Receptors	5
3. The Proposed Development	9
3.1 Proposed Development Phasing	10
4. General Approach to EIA	11
4.1 Scenarios to be Assessed	11
4.2 Comparison with the 2016 Consented Scheme	12
5. Key Issues to be Addressed by the EIA	13
5.1 Introduction	13
5.2 Alternatives	13
5.3 The Proposed Development	13
5.4 Development Programme and Construction.....	14
5.5 Socio Economics & Health.....	14
5.6 Townscape and Visual Impacts	16
5.7 Historic Environment.....	17
5.8 Air Quality.....	19
5.9 Noise and Vibration.....	20
5.10 Ground Conditions and Contamination.....	22
5.11 Wind	23
5.12 Daylight Sunlight and Overshadowing	24
5.13 Cumulative Effects	26
6. Topic Areas to be “Signposted” in the ES.....	31
6.1 Greenhouse Gases and Climate Change	31
7. Topics to be Scoped Out	32
7.1 Transport and Access	32
7.2 Flood Risk	32
7.3 Ecology	33
7.4 Risk of Major Accidents or Disasters	33
7.5 Waste	33
8. Defining the Significance of Environmental Effects	35
9. Proposed Structure of the Environmental Statement	37

9.1	Environmental Statement Volume 1: Main Text	37
9.2	Environmental Statement Volume 2: Figures	37
9.3	Environmental Statement Volume 4: Appendices	38
9.4	Non-Technical Summary	38

Figures

Site Location Plan (Fig. 1)

Existing Site Layout and EIA Boundary Plan (Fig. 2)

TVIA Viewpoint Locations assessed in the 2015 ES (Fig. 3)

Noise Monitoring Locations (Fig. 4)

Cumulative and Future Baseline Schemes to be considered in the EIA (Fig. 5)

Tables

Table 1:	Potentially Sensitive Receptors	5
Table 2:	Future Potentially Sensitive Receptors	8
Table 3:	Proposed Structure of the ES	37

Appendices

Appendix A Review of Viewpoint Locations

Appendix B Update Preliminary Ecology Appraisal

Appendix C Bat Survey, 2018

1. Introduction

In March 2013 an Outline Planning Application for the redevelopment of approximately 2.14 hectares (ha) of previously developed land at Station Hill was submitted by Sackville Developments Reading Ltd (SDRL) (Planning Reference: 130436). The development was known as the Station Hill 3 Scheme (SH3) and included the demolition of all the existing buildings and structures within the SH3 Site, excluding the multi-storey NCP car park, and replacement with four new commercial buildings (referred to as Building Plots A - D) and two new primarily residential buildings (referred to as Building Plots E and F). The existing NCP Car-Park would be reconfigured and refurbished.

The Planning Application was subsequently granted planning consent in January 2015 and is hereafter referred to as the '2015 Consented Scheme'.

In August 2015, SDRL submitted two further planning applications to extend and amend Plot E of the 2015 Consented Scheme to incorporate an adjacent site referred to as the Telecom House Site. The applications comprised:

- (i) an application pursuant to section 73 of the Town and Country Planning Act 1990 to amend the 2015 Consented Scheme (this section 73 application was submitted under planning reference 151427); and
- (ii) an outline planning application for a new Plot E incorporating the areas of both the 2015 Consented Scheme Plot E and the Telecom House Site (planning reference 151426).

These two applications were granted planning consent in July 2016 and are together referred to in this report as the '2016 Consented Scheme'.

Following acquisition of the site from SDRL in 2018, SH Reading Master LLP (the Applicant) made changes to the 2016 Consented Scheme in respect of Plots E and F (also now known collectively as Phase 1 or the Southern Site) to respond to a series of design alterations. This was undertaken by way of applications pursuant to section 73 of the Town and Country Planning Act 1990 (hereafter referred to as "the 2019 Section 73 Applications", planning application references 190441 and 190442). At the same time, reserved matters applications and applications for condition discharge were submitted for approval for Plots E and F (reserved matters application references: 190465 and 190466).

These applications were submitted in March 2019 and are currently pending a decision from Reading Borough Council.

The Applicant is now seeking to make amendments to the 2016 Consented Scheme for the area to the north of Garrard Street (known as the Northern Site). As a result of the changes proposed to this area, the amendments will be sought by means of a new planning application. The planning application will be a hybrid application with Plot G, which is intended to form Phase 2 of the Station Hill Development, being submitted in detail and the remaining part of the Northern Site, which is intended to form Phase 3 of the Station Hill Development, being submitted in outline.

A Site Location Plan is presented in **Figure 1**.

1.1 Environmental Impact Assessment

Environmental Impact Assessment (EIA) is a formal process of identifying, predicting, evaluating and mitigating the likely significant environmental effects arising from a project. It is a requirement of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017¹ (the 'EIA Regulations') for developments of a certain size and scale. EIA is an iterative process, allowing for the evolution of the most practicable environmentally sustainable design and ensures that, if deemed necessary, measures are considered and implemented at the design stage, where feasible, to prevent, reduce and where possible,

¹ HMSO, 2017. The Town and Country Planning (Environmental Impact Assessment) Regulations

offset potentially adverse significant environmental effects. The EIA process also aims to ensure that beneficial effects of redevelopment are maximised.

The EIA process ensures that decision makers consider the likely environmental effects of new development when determining a planning application. Where an EIA is required, all relevant assessment information must be provided by the Applicant in a document referred to as an Environmental Statement (ES). The ES must accompany the submission of the subject planning application.

1.1.1 EIA History

In 2013, an EIA was undertaken of the SH3 Scheme and an ES prepared to accompany the planning application. An ES Addendum was subsequently prepared and submitted in September 2013 to address additional environmental issues that had come to light during the determination period. Together, the ES and ES Addendum are hereafter collectively referred to as the '2013 ES'.

In 2015, an ES was prepared to accompany the applications to revise Plot E to incorporate the Telecom House Site (planning references 151426 & 151427). This ES was a full update of the 2013 ES and covered the entire SH3 Scheme as amended by Telecom House. During the determination period, amendments were made to the planning application for Plot E incorporating the Telecom House Site and a letter setting out the EIA implications of the design amendments was submitted to RBC in December 2015. Together, the ES and EIA implications of design amendments letter are referred to as the '2015 ES'.

Due to the amendments to the Southern Site made in 2019, an ES Addendum was prepared to consider the implications of the amendments on the findings of the 2015 ES. The ES Addendum was submitted with the Section 73 Applications (planning references: 190441 / 190442). Reserved Matters Applications for Plot E (190442) and Plot F (190466) were also submitted in 2019.

1.1.2 Proposed EIA

As it is proposed to submit a new hybrid application for the Northern Site, a new EIA will be undertaken, and an ES submitted to accompany the application. Whilst the planning application will pertain to the Northern Site only, as the Southern Site is still considered to form part of the overall development, the EIA will consider the effects of the entire Station Hill Development (hereafter referred to as the Proposed Development). However, the assessment will be considered in phases as set out in further detail in Section 4. A plan showing the boundary of the area to be considered by the EIA (hereafter referred to as the Site) is shown in **Figure 2**.

1.1.3 EIA Scoping

In the context of the EIA process, 'Scoping' refers to the process of identifying those environmental aspects that may be significantly affected by the proposed Development. In doing so, the potential significance of effects associated with each environmental aspect becomes clearly defined, resulting in the identification of a number of priority issues to be addressed in the EIA (i.e. these aspects are 'scoped in' to the ES).

Defining the scope of an EIA is therefore an important part of the overall EIA process, and is recommended by best practice. In accordance with Regulation 15 of the EIA Regulations and current EIA best practice, this EIA Scoping Report, prepared by Waterman Infrastructure & Environment Ltd, sets out the following information to assist RBC in formulating its EIA Scoping Opinion:

- Site location and description;

- Brief description of the nature, purpose and technical capacity of the development;
- The general approach to the EIA Methodology;
- A summary description of the likely significant environmental effects of the development, together with the approach and methodology for assessing them; and
- The intended structure of the ES.

1.2 Consultation

Consultation with relevant bodies assists in ensuring that all relevant environmental issues are identified, together with the likely significant environmental effects of the development. This enables the EIA to operate as part of an iterative process whereby environmental issues are identified and considered as part of the design process. In this way, the development design can be refined through the incorporation of mitigation measures serving to limit its adverse effects and enhancing its beneficial effects. Consultations have been and will continue to be undertaken as part of the design and EIA process, and will include (but not necessarily be limited to) the following organisations:

- Reading Borough Council (RBC);
- The Environment Agency (EA);
- Natural England (NE);
- Historic England (HE); and
- Berkshire Archaeology (BA).

2. The Site and Potentially Sensitive Receptors

2.1 Site Location, Setting and Existing Land Uses Within the Site

The Site is centred on National Grid Reference 47137, 17369 and is located within the administrative boundary of Reading Borough Council (RBC). As illustrated in **Figure 1**, the Site is located in the northern part of Reading town centre, immediately to the south of Station Hill and Reading Mainline Station, forming an important gateway to Reading town centre.

The Site occupies an area of approximately 2.5ha and can be split along Garrard Street into a Northern and Southern Site. The Northern Site is bound by Station Hill to the north, Thames Tower to the East and Greyfriars Road forms the western boundary. South of Garrard Street, the Southern Site is bound to the east and west by retail units and offices. Merchants Place runs parallel to the eastern boundary of the Site and connects Friar Street with Garrard Street. A number of retail units, offices and residential apartments are located on Merchants Place. Friar Street, which is lined by a combination of leisure, office and retail units, forms the southern boundary of the Site.

The Southern Site is currently occupied by Telecom House and Friars Walk Shopping Centre both of which are vacant. The Northern Site is occupied by Xafinity House, a vacant office building, the NCP car park, which is still in use, and a Temporary Events Space used for market stalls, temporary ice rinks and other similar temporary events. The central part of the Northern Site is currently open land behind construction hoardings following the demolition of the Mecca Bingo Hall, Bus Station, Western Tower and the associated retail arcade in 2016. A plan showing the existing layout of the Site is presented as **Figure 2**.

Since the closure of Friars Walk and Friars Walk Shopping Centre, there has been limited pedestrian access across the Site between Reading Mainline Station and Reading town centre. However, the Site is recognised by RBC as an important gateway between the two. Consequently, the Site and immediate surrounding area have been identified by RBC as an area for redevelopment in the Draft Local Plan² and the extant Reading Central Area Action Plan (RCAAP)³, Reading Station Area Framework Supplementary Planning Document (SPD)⁴ and Station Hill South Planning and Urban Design Brief⁵.

2.2 Existing Land Uses Surrounding the Site

The Site is surrounded by a mix of commercial, retail, residential and leisure uses, including small-scale high street retail units with offices or residential apartments above, restaurants, public houses and hotels along Station Road to the east of the Site and Friar Street to the south of the Site. A supermarket is located adjacent to the south-western part of the Site between Garrard Street and Friar Street, whilst student accommodation, serviced apartments, a public house and a number of office buildings are located along Greyfriars Road, which runs parallel to the western boundary of the Site.

Modern residential apartment blocks are located immediately to the north and east of the Site on Garrard Street and Merchants Place. Terraced housing is also located on Stanshawe Road and Vachel Road, approximately 50m west of the nearest point to the Site. Malcolm Place, a modern residential apartment block, is located further afield, approximately 130m west of the Site on Caversham Road (A4155).

Reading Mainline Station, which forms a major transport interchange, is located approximately 40m north and north-east of the Site. Bus stops and taxi ranks are located both north and south of the station with the main bus and taxi interchange on Station Road.

² Reading Borough Council (March, 2018) Submission Draft Reading Borough Local Plan, Regulation 22 of the Town and Country Planning (Local Planning) (England) Regulations 2012

³ Reading Borough Council, 2009, Reading Central Area Action Plan (RCAAP), RBC, Reading

⁴ Reading Borough Council, 2010, Reading Station Area Framework, RBC, Reading

⁵ Reading Borough Council, 2007, Station Hill South Planning and Urban Design Brief, RBC, Reading

2.3 Potentially Sensitive Receptors

A number of receptors have been identified that would be potentially sensitive to adverse effects resulting from the Proposed Development. The list of sensitive receptors to be considered as part of the EIA are presented in Table 1. These include residential properties within 100m of the Site and heritage assets within 500m of the Site. Individual technical assessments may identify additional receptors that require assessing beyond these distances and this will be confirmed within the Environmental Statement.

Table 1: Potentially Sensitive Receptors

Category	Existing Sensitive Receptor/Land Use	Nearest Approximate Distance from the Site Boundary
Residential Properties	Garrard House, 30 Garrard Street	Immediately adjacent to the site
	The Gateway Public House, 31 Greyfriars Road, with residential use at first floor level	15m west
	Malthouse Public House, 53 Greyfriars Road/Tudor Road junction, residential uses above the pub.	15m west
	Summit House, 49-51 Greyfriars Road – serviced apartments	20m west
	Projection West, Merchant's Place (flats and serviced apartments)	20m south east
	Projection East, Merchant's Place (flats and serviced apartments)	30m south east
	Icon House, Merchant's Place	50m east
	7-11 Station Road	80m east
	25a-25b Friar Street	100m south east
	32-34 Friar Street	35m east
	1 st Floor Flat, 125 Friar Street	20m south
	136-137 Friar Street (Building to the rear of)	50m south east
	144 Friar Street	80m south east
	Bridewell House/Samuel House (student accommodation), junction of Friar Street/Greyfriars Road	60m west
	Terrace Housing Stanshawe Road	35m west
	Terrace Housing, Vachel Road	65m south east
Hotels	5 to 21 Tudor Road	60m west
	Malmaison, Station Road	70m east
	Novotel, Friar Street	85m east
Commercial properties	Ibis, Friar Street	85m east
	Occupants of existing office and retail premises adjacent to the Site, including on Station Road, Friar Street and Greyfriars Road.	Adjacent east, south and west.
Educational	Forbury Gardens Day Nursery	600m east

Category	Existing Sensitive Receptor/Land Use	Nearest Approximate Distance from the Site Boundary
Local Views	Views to and from the Site, (including those associated with listed buildings, conservation areas, Scheduled Monuments and historic parks and gardens).	Not applicable.
Places of Worship	Greyfriars Church (Church of England).	120m south-west.
	St Laurence's Church.	280m east.
Built Heritage	Reading Abbey Scheduled Monument and associated Forbury Gardens Historic Park and Garden.	300m east.
	High Bridge Scheduled Monument	480m south-east
	Forbury Gardens Historic Park and Garden	300m east
	Market Place/London Street Conservation Area.	120m east.
	St. Mary's Butts/Castle Street Conservation Area.	250m south-west.
	Russell Street/Castle Hill Conservation Area.	350m south-west.
	St Peter's Conservation Area	850m north
	Grade I listed Reading Abbey and Associated Forbury Gardens	400m east
	Grade I listed Greyfriars Church.	120m south-west.
	Grade I Church of St Laurence	280m east
	Grade II listed Abbey Mill ruins in Abbey Square.	495m south-east.
	Grade I listed St. Mary's Church in St. Mary Butts.	245m south-west
	Grade II* listed Town Council Chamber and Offices with Clock Tower	280m east
	Grade II* listed Church of St Peter	950m north
	Grade II listed St Giles' Church	700m south
	Grade II listed (Three Guineas Public House) Reading General Station, Station Hill.	30m north
	Grade II Listed High Bridge, London Road	450m south east
	Grade II listed statue of King Edward VII.	30m east
	Grade II listed Great Western House	50m south-east.
	Grade II Listed 13 & 15 Station Road	60m east
	Grade II Listed Quadrant Walls and Railings to Former No.64 (Greyfriars Vicarage)	100m south-west
	Grade II listed The Mitre Inn	125m south-west

Category	Existing Sensitive Receptor/Land Use	Nearest Approximate Distance from the Site Boundary
	Grade II listed Regent Place	130m west
	Grade II listed WI Palmer Memorial Hall	130m south-west
	Grade II Listed 11, 12, 13, 14 & 15 Friar Street	230m east
	Grade II listed 147 Friar Street.	150m south-east
	Grade II listed 154 Friar Street	230m east
	Grade II listed 155 Friar Street	230m east
	Grade II listed 1-31 & 2-32 Queen Victoria Street, 148, 149 & 150 Friar Street and 24-28 & 35-38 Broad Street	220m east
	Grade II listed Reading Prison	690m east
	Grade II listed Church of St James	690m east
	Grade II listed 29 & 31 Caversham Road	160m west
	Grade II listed 35 and 37 St Mary's Butts	240m south-west
	Grade II listed 55 and 55a St Mary's Butts	240m south-west
Archaeology	Potential archaeological remains beneath the Site; the southern part of the Site between Garrard Street and Friar Street is located within an Archaeology Priority Area.	On-Site.
Transportation	Users of Reading Mainline Railway Station together with the buses and the taxi rank on Station Road.	Adjacent north and north-east.
	Pedestrian, cyclists and other road users in the local area.	Adjacent in all directions.
	Users of buses including the bus interchanges located on Station Hill, Station Road and to the north of Reading Station.	Adjacent to the north and east.
Controlled Waters	Principal Aquifer (Seaford Chalk Formation)	Beneath the Site.
	Secondary A Aquifer (Alluvium and the Taplow Gravel Formation)	Beneath the Site
	River Thames.	400m north-east.
	River Kennet / Kennet and Avon Canal.	500m south-east.
Habitats and Species	Black Redstart.	On-Site.
	Peregrine Falcon.	On-Site.

Table 2 provides a list of future potentially sensitive receptors. These are receptors that are not yet present but planning applications have been consented for developments surrounding the Site that would introduce sensitive receptors.

Table 2: Future Potentially Sensitive Receptors

Category	Future Sensitive Receptor/Land Use	Nearest Approximate Distance from the Site Boundary
Residential Properties	Proposed: Residential Uses within the Site itself	On Site
	136-137 Friar Street Reading RG1 1EX (Application Ref: 150068) – change of use to provide residential units	50m east
	30-31 Friar Street, Reading (Application Ref: 150829) – change of use to provide residential units	35m east
	52-55 Friar Street and 12 Greyfriars Road, Reading (Application Ref: 162210) - residential and retail redevelopment	Immediately adjacent to the west of the Site

3. The Proposed Development

The Proposed Development includes for the demolition of all buildings and structures within the Site and construction of a mixed residential and commercial led scheme. The Proposed Development is currently estimated to deliver up to 1,300 residential units, 85,000sqm of commercial floor space and 7,000sqm lifestyle led ground floor space such as leisure and retail uses. Given the stage of the development design, the actual floor space areas may be subject to change but they are not likely to exceed the above quanta. The potential to deliver a hotel is also currently being considered.

The design of the Southern Site (Plots E and F) would remain in accordance with the current Section 73 planning applications for those Blocks (Planning Application References: 190441 / 190442), namely two buildings above a basement level providing up to 550 residential units together with some ground floor retail / leisure uses and 165 car parking spaces. The buildings range in height from a minimum of 50m above ordnance datum (AOD) to a maximum of 85.5m AOD.

The design of the Northern Site is still evolving but is likely to comprise of four buildings located above a podium providing predominantly residential and office floor space with some ground floor retail and leisure uses. The building heights within the 2016 Consented Scheme ranged from a minimum of 67m AOD to a maximum of 125m AOD. Options are currently being explored to increase the heights of the buildings with the overall maximum height increased by up to 40m compared with the 2016 Consented Scheme although this would still be below previous historic consents. The review of heights is being undertaken in conjunction with relevant technical assessors to identify if such changes may result in additional or significantly different environmental effects compared with the 2016 Consented Scheme. These assessments will feed back into the evolving design. Car parking would be provided within the podium levels with approximately 840 parking spaces currently proposed. Public realm would be provided in the form of a series of linked public squares. Enhancements to the public realm outside the station are also proposed and would include a pocket park and redesign of the existing steps on Station Hill.

Compared with the 2016 Consented Scheme, the Proposed Development will:

- Deliver a similar range of land uses comprising residential, commercial, retail and leisure uses although the split of the land uses and the maximum and minimum areas of each land use will be different. Residential, commercial, retail, leisure and potentially hotel uses are now proposed on the Northern Site whereas the 2016 Consented Scheme proposed only commercial, retail and leisure uses on the Northern Site;
- Deliver a similar number of car parking spaces (a maximum of 1,000 spaces was included in the 2016 Consented Scheme) although for the Northern Site these will now be provided in podium levels rather than in the existing NCP car park. The existing NCP car park would be demolished as part of the Proposed Development and a new building for commercial use constructed in its place. Creation of the podium levels will result in a greater level of excavation than previously proposed as part of the 2016 Consented Scheme;
- Deliver level access between the Northern and Southern Sites through the introduction of the podium levels on the Northern Site and a new link across Garrard Street. The 2016 Consented Scheme proposed a fall in levels from the northern boundary down to the Garrard Street level and then ramped or stepped access back up to Friar Street in the south. The Section 73 Applications for Plots E and F have already applied for level access along the new walkway from Friar Street to Garrard Street (Friars Walk) and it is proposed that the link across Garrard Street would join Friars Walk at the same level;
- Deliver less buildings but of a greater height compared to the 2016 Consented Scheme; and

- Deliver a greater area of public realm.

3.1 Proposed Development Phasing

The Proposed Development would be constructed in phases with Plots E and F forming Phase 1, Plot G and the surrounding area of the podium to link the station with Phase 1 (including public realm enhancements to Station Hill) forming Phase 2 and the remainder of the Site forming Phase 3. Demolition of the buildings within Phase 1 has already commenced and construction of this phase is anticipated to be complete by 2022. Demolition of the NCP Car Park in Phase 2 is programmed to commence in late 2019 / early 2020 with construction of Plot G programmed to follow thereafter. The programme for demolition of Xafinity House and delivery of Phase 3 is currently uncertain although it is anticipated to commence in 2023 following the completion of Phases 1 & 2. There is potential for a pause in the construction works between Phases 2 and 3, therefore temporary works including 'meanwhile uses' are proposed to define the edges of the Phase 2 Development to ensure that the buildings and public realm can function independently to construction of Phase 3.

4. General Approach to EIA

The EIA will be undertaken in accordance with the requirements of the EIA Regulations and current good practice guidance. The legal minimum requirements for the content of an ES are set out in Regulation 18 and Schedule 4 of the EIA Regulations. However, there are a number of key issues regarding the general approach to the EIA that are described below.

As described above, the ES will be submitted alongside the planning application for the Northern Site only. However, as the Southern Site is considered to form part of the overall Station Hill Development, the EIA will consider the whole of the Station Hill Development albeit assessment of certain phases will be undertaken as described below.

4.1 Scenarios to be Assessed

4.1.1 Baseline Scenario

It is recognised that, as part of a vibrant city, the baseline conditions both on and surrounding the Site are constantly evolving. However, for the purposes of the EIA, it is necessary to agree the baseline conditions against which the Proposed Development will be assessed. As a result, it is proposed that the EIA baseline will be defined as:

- The Site as existing in April 2019 comprising Telecom House, Friars Walk Shopping Centre and Xafinity House which are vacant, together with the NCP car park and the Temporary Events Space which are both currently in use. The existing undeveloped land behind construction hoardings within the central northern area of the Site will also be considered as part of the existing baseline;
- The existing surrounding baseline conditions with the exception of the following scheme which has consent and is in the process of being implemented:
 - Former Coopers BMW site, Napier Road / Kings Meadow Road Reading RG1 8BN (Planning reference: 162166).

This scheme will be assumed to be completed as part of the baseline scenario.

For the air quality and noise assessments, the baseline year will be the same as the last full year of air quality monitoring data to allow comparison with monitoring data. In addition, in accordance with the method of calculating traffic data, all cumulative schemes will be added to the baseline scenario and will therefore be included in the baseline scenario for the air quality and noise assessments.

4.1.2 Completed Development Scenarios

As described in Section 3.1, the Proposed Development will be undertaken in phases. As there may be a pause in the Proposed Development following completion of Phase 2 and prior to construction of Phase 3, the EIA will consider the effects of an 'Interim Development Scenario' comprising Phases 1 and 2 of the Development plus temporary works and Xafinity House as well as a Completed Development Scenario.

4.1.3 Summary of Scenarios to be Assessed

In summary, the following scenarios will be assessed as part of the EIA:

- The Baseline Scenario;

- An Interim Development Scenario comprising Phases 1 and 2 of the Proposed Development plus temporary works. Xafinity House will also remain in existence in this scenario as it is not intended to demolish this building until after completion of Phase 2;
- A Completed Development Scenario comprising Phases 1, 2 and 3;
- A Cumulative Scenario comprising the Completed Development plus cumulative schemes (as described in Section 5.13).

4.2 Comparison with the 2016 Consented Scheme

In order to enable Reading Borough Council, Statutory Consultees and other interested parties to identify differences between the effects of the Proposed Development and those of the 2016 Consented Scheme as amended by the Section 73 Applications, it is proposed to provide a comparison of effects within the ES. This may be a qualitative or a quantitative assessment, depending upon the technical study in question.

5. Key Issues to be Addressed by the EIA

5.1 Introduction

It is recognised that for the ES to fulfil its primary objective of enabling environmental considerations to be incorporated into the decision-making process, it must be focused on the most potentially significant environmental issues. These key issues were identified during the Scoping Study described in this report and are set out in **Sections 5.5 to 5.13** below. The following sections therefore define the focus, or scope, of the EIA.

5.2 Alternatives

In accordance with the EIA Regulations, the ES will present a description of the main alternatives to the Development that were considered by the Applicant prior to selection of the final scheme, which may include a description of the following:

- **‘Do nothing’ scenario:** The consequences of no development taking place. Due to the planning context of the Site (refer to Section 2.1), this scenario is considered unlikely. However, with respect to the current state of the environment (the baseline conditions) the EIA Regulations stipulate that an ES must provide “...an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed...”;
- **Alternative designs:** The ES will provide a summary of the main alternatives considered, comprising the previous consented schemes and how the Proposed Development has evolved from the 2016 Consented Scheme as amended by the Section 73 Applications; and
- **Alternative structural options and energy strategies:** This will summarise the various structural and energy strategy options that have been considered to identify how the Proposed Development design has evolved to manage the effects of climate change.

Given that the Proposed Development is bespoke to this Site, the Applicant has not considered, and will not consider, any alternative sites for the Development. Accordingly, ‘alternative sites’ will not be considered within the ES.

5.3 The Proposed Development

As required by the EIA Regulations, the ES would include a comprehensive description of the Development as described by the planning application drawings and other documents submitted for approval, in a level of detail appropriate to the respective outline and detailed elements of the hybrid application. The description of the development would include a factual description of:

- Building layout and siting;
- Building height and massing;
- Building façade treatments and finishes (including materials and lighting proposals where available);
- Quantum and distribution of proposed land uses;
- Location and nature of public spaces and pedestrian routes;
- Proposals for soft and hard landscaping (including proposals for ecological enhancements);
- Highway works, access, servicing, and parking arrangements;
- Site-wide Servicing and Energy Strategy; and

- Surface water drainage strategy.

The description of the Development, together with the planning application drawings and accompanying area schedule, comprise the details that will be assessed and reported in the technical chapters of the ES.

5.4 Development Programme and Construction

The ES will include a description of the following aspects in relation to construction of the Development:

- Programme and sequencing of Site works;
- An outline of the proposed methods of construction including types of piling and foundations likely to be employed;
- Resource use and waste minimisation;
- Access and routing of construction vehicles and estimated number of demolition and construction vehicle movements; and
- General site management in relation to environmental management and protection.

This Chapter of the ES will also consider the potential environmental effects associated with the construction works, not otherwise covered in the technical chapters, and where appropriate, will outline mitigation measures to eliminate, reduce or offset adverse effects. It is intended that such measures would include implementation of a Construction Environmental Management Plan.

Where relevant, the technical chapters of the ES will also give detailed consideration to construction effects specific to the topic area being assessed. Such assessments will be based on available information pertaining to the construction timetable and description of works as outlined above.

5.5 Socio Economics & Health

5.5.1 Key Issues

The Site is currently occupied by vacant commercial and retail properties together with an NCP Car Park and Temporary Events Space, both of which are currently in use. Redevelopment of the Site would provide an important regeneration opportunity through the provision of new homes and the creation of new jobs which would provide long term socio-economic benefits. The Proposed Development will increase the local population, which would place additional demand on local recreational spaces, healthcare and educational facilities in the vicinity of the Site.

The relevant detailed socio-economic baseline conditions will be assessed using established statistical sources such as the Census of population, Office for National Statistics, National Health Service, Business Register and Employment Survey as well as relevant evidence-based studies from Reading Borough Council. Where necessary, consultation will be undertaken with the planning authority, the Education Department and Clinical Care Commissioning Group to test the findings. Full details of the methodology including all sources and references will be provided as part of the ES chapter.

Potentially sensitive receptors to be assessed within the baseline are identified as:

- Existing population and demographic characteristics;
- Existing housing supply (including the provision of private and affordable housing);
- Existing total employment (across all sectors) and employment within the construction sector;

- Existing educational facilities and capacity (Early Years, Primary and Secondary);
- Existing healthcare facilities and capacity (GPs and Dentists); and
- Existing open space provisions (children's play space and open space).

5.5.2 Potential Effects

Following establishment of the existing baseline conditions, the socio-economic assessment will examine the following likely potential effects:

Temporary

- The generation of temporary employment opportunities during the demolition and construction phase.

Permanent

- The creation of net additional long-term employment opportunities from the commercial uses of the Proposed Development;
- The effects of additional expenditure resulting from additional employees and residents;
- The provision of new homes and the contribution of the new homes, including affordable homes, to local policy housing targets;
- Implications of the Site's new residential population on early years, primary and secondary school places; and
- Implications of the site's new residential population upon primary healthcare facilities and open space provisions including children's play space.

5.5.3 Approach and Methodology

Socio Economics

There are no published standards or technical guidelines that set out a preferred methodology for assessing the likely socio-economic effects of a development. However, there are a series of commonly used methodologies for quantifying economic effects both during the construction of a development and following its completion. Where possible, the likely significant socio-economic effects will be quantified, but where this is not feasible, a qualitative assessment will be provided using professional judgement and experience.

The following section summarises the approach that will be used to conduct the assessment likely effects:

Demolition and Construction Phase

- An estimation of the FTE jobs generated during the construction phase. This will use data on construction spend estimates and use Communities and Local Government (CLG) / Offpat Labour co-efficient ratios to derive estimates of the likely number of temporary construction workers per annum during the construction works.

Completed and Operational Phase

- An estimation and quantification of the FTE jobs created by the completed and operational Proposed Development will be undertaken using established employment density ratios. Off-site jobs will be estimated using standard HCA Additionality Guide multipliers⁶;
- An estimation of the new residential population arising from the Proposed Development will be made based on the proposed mix of units applied to existing average household sizes within the local area;

⁶ Homes and Community Agency, Additionality Guide, 4th Edition, 2014

The child yield arising from the Proposed Development will be calculated based on the Cognisant Model in line with the approach used by Reading's Brighter Futures for Children, Children's Social Services;

- An estimation of the additional expenditure created by the completed and operational Proposed Development will be based on data from the Family Expenditure Survey (FES);
- An appraisal of the likely effects of the Proposed Development's additional population on existing early years provision, local primary and secondary schools, primary healthcare facilities, open space and children's play space will be undertaken using recognised standards for local provision.

Following the assessment of potential effects, mitigation measures will be considered should any significant adverse effects be identified.

An assessment will also be undertaken of the potential effects of an agreed list of cumulative schemes including the likely population, employment and housing effects.

Health

The Proposed Development will have implications for the health and wellbeing of both the existing and future users of the site and local area. Health effects may be short-term or temporary and related to construction on the site or related to the operation and maintenance of the Proposed Development. The Healthy Urban Development Unit (HUDU) recommends that for large scale development proposals a Health Impact Assessment (HIA) be undertaken. The HIA will be based on the HUDU's rapid HIA tool. The tool is widely used and recognised and covers all topics set out in the healthy urban planning checklist. Based on HUDU's recommended process of undertaking an HIA, the assessment will include the following:

- A brief baseline assessment of the local context including the demographic profile and any already identified health and well-being needs of the local population following a review of the latest available Joint Strategic Needs Assessment (JSNA);
- Review of relevant supporting planning documents for the Proposed Development: this will include, but not be limited to, the Design and Access Statement, Sustainability and Energy Statements and the Noise and Air quality assessment. These documents will be referenced within the HIA as supporting evidence. The process of review will begin at drafting stage in order to allow the opportunity for any potentially negative health effects to be identified at an early stage, so that where necessary, any further mitigation measures can be included;
- The HIA will comprise a standalone report appended to the Socio Economics and Health ES Chapter;
- Where relevant, significant health effects identified in the HIA will be cross-referenced within the ES Chapter.

5.6 Townscape and Visual Impacts

5.6.1 Key Issues

The Proposed Development would bring about a significant change in the land uses, built form and spaces on Site. In particular, the new massing would change the existing townscape character and quality together with views and pedestrian routes to, from and through the Site.

5.6.2 Potential Effects

The potential effects considered in the Townscape and Visual Impact Assessment (TVIA) of the EIA will be:

- Temporary effects of demolition and construction works upon the character and quality of the local townscape in the area;
- Permanent changes to the character and quality of development on Site and, thereby, to the local townscape;
- Permanent changes to the character and quality of local, mid and distant views; and
- Future changes to the character and quality of the townscape and views that are likely to occur as a result of consented cumulative development in the area.

5.6.3 Approach and Methodology

The TVIA methodology has been informed by the Guidelines for Landscape and Visual Impact Assessment⁷. In order to assess the nature and quality of the potential effects, the TVIA will:

- Appraise the history and existing quality and character of the townscape and views through desk-based analysis and field study;
- Identify and make reference to relevant local, regional and national planning policy and guidance;
- Identify sensitive and representative views, in agreement with RBC, to enable an assessment of the Proposed Development. A number of viewpoints were assessed as part of the 2015 ES and these are shown in **Figure 3** together with three additional views (referenced 33, 34 and 35) that were identified by RBC in the Scoping Opinion received in relation to the Section 73 Applications. A review of these viewpoints has been undertaken to identify those viewpoints which are considered relevant to the assessment of the Proposed Development. This review is provided in **Appendix A**;
- Provide accurate verified representations (wirelines) of the Proposed Development in the views in conjunction with a professional visualisation company;
- Assess potential effects on the views as a result of the Proposed Development;
- Evaluate changes to the character and quality of the townscape on Site and in the surrounding area through consideration of the views; and
- Assess potential effects on the cumulative schemes through the insertion of the agreed cumulative schemes in the views (wirelines) and consideration of their cumulative effects on the townscape and on views.

5.7 Historic Environment

5.7.1 Key Issues

There are no recorded designated heritage assets within the Site or World Heritage Sites and Registered Battlefields within the study area (500m surrounding the Site). However, there are two Scheduled Monuments, 126 Listed Buildings (4 Grade I, 8 Grade II*, 114 Grade II), 3 Conservation Areas and 1 Registered Park and Garden within the study area.

The Scheduled Monuments represent the remains of Reading Abbey [1007932] and a possible medieval bridge [1005388], which are located within the eastern extent of the study area, approximately 250-500m to the east of the Site. The Grade II Registered Park and Garden of Forbury Garden [1000586] is located within the grounds of Reading Abbey, approximately 300m to the east of the Site.

⁷ Guidelines for Landscape and Visual Impact Assessment⁷, Third Edition (2013) (GLVIA3).

The Listed Buildings are spread out across the study area to the south of Reading Railway Station. The majority of buildings are located within the boundaries of the Market Place/London Street Conservation Area, approximately 150m to the east of the Site, St Mary's Butts/Castle Street Conservation Area, approximately 250m to the south and Russell Street/Castle Hill Conservation Area, approximately 280m to the south-west.

There are 4 non-designated heritage assets recorded within the Site of which the post-medieval Civil War defences [MRD15703] running along Garrard Street is the most significant.

Archaeological desk-based assessments have previously been undertaken of the Site with the latest prepared in 2015, and archaeological evaluation of parts of the Site was also undertaken in 2009 and 2016. An archaeological watching brief of ground investigations undertaken within the Southern Site has also recently (2018) been undertaken.

5.7.2 Potential Effects

Any pre-construction and construction phases involving excavation in the ground including piling, basement and foundation excavations and service trenching have the potential to truncate or wholly remove surviving below ground archaeological remains. Previous EIAs have highlighted the potential for early-medieval remains, especially those associated with the Vikings and the Civil War defensive ditch [MRD15703], which is yet to be located. The recent archaeological watching brief of ground investigations within the Southern Site also identified archaeological finds dating to the prehistoric period, although detailed analysis of found features has not yet been completed⁸.

There is also potential for the Proposed Development to impact the settings of designated heritage assets within the wider study area, especially to those which will have visibility to and from the Site.

5.7.3 Approach and Methodology

The Historic Environment assessment will include:

- Review of data held on the Berkshire Historic Environment Record (BHER) for non-designated heritage assets and Historic England's *The National Heritage List for England* for designated heritage assets together with information held by Reading Borough Council on Conservation Areas and locally listed buildings within the Site and 500m study area;
- Consultation of historical sources including online databases. A historic and archaeological background of the Site will be outlined in the ES chapter.
- A review of previous assessments for the Site and immediate surrounds;
- A walk-over survey of Site and surrounds;
- A review of national and local planning policy;
- An appraisal of designated/non-designated heritage assets and recorded features of heritage significance within the Site and its immediate environs which may be impacted by the proposed Development;
- An assessment of the potential for archaeological remains of heritage significance within the Site including previously unknown below ground archaeology;
- Identification of settings of heritage significance which may be impacted by the proposed Development;

⁸ The archaeological watching brief report is pending and information used here is based on pers. comm. with Oxford Archaeology.

- Review of the Townscape and Visual Assessment (TVIA) Chapter in particular the results of the viewpoint assessments to identify those designated heritage assets that may experience setting impacts due to the proposed Development; and
- Development of mitigation measures where appropriate.

The study area focuses on a 500m radius surrounding the Site, however, the results of the TVIA may identify further designated heritage assets that fall outside of the study area but may also experience setting impacts. Should such heritage assets be identified they will be assessed in the historic environment Chapter.

5.8 Air Quality

5.8.1 Key Issues

In accordance with the UK Air Quality Strategy⁹ and Part IV of the 'Environment Act'¹⁰, Reading Borough Council (RBC) has and will continue to review the ambient air quality within its administrative boundary. To date, air quality monitoring and modelling work completed by RBC has concluded that levels of nitrogen dioxide (NO₂) and fine particulate matter (as PM₁₀) are not meeting the Air Quality Strategy (AQS) Objectives. As such, in 2009 RBC declared an Air Quality Management Area (AQMA) for an area covering: Reading Town Centre; major radial road routes into Reading (including J11 of the M4); and railway lines where they pass through built-up areas. The AQMA has been declared for exceedance of the annual mean NO₂ AQS Objective. Accordingly, an Air Quality Action Plan¹¹ has been produced by RBC setting out policies and measures to be implemented to improve air quality in the borough.

Construction of the Proposed Development has the potential to result air quality issues associated with a temporary increase in Heavy Goods Vehicles on the local road network and dust generation via physical construction processes. For these reasons, the EIA will consider the potential construction effects of the Proposed Development upon local air quality.

It is anticipated the complete and operational Proposed Development would generate additional traffic and potentially would introduce a building plant emissions source (such as a centralised boiler), which could affect local air quality. In addition, the Development would introduce new residential users to the AQMA. Consequently, the effect of traffic-derived and building plant emissions associated with the operation of the Proposed Development will be assessed as part of the EIA.

Pollutant concentrations can be elevated alongside railway lines due to diesel locomotive movements. As above, RBC has declared an AQMA along the railway line, however, in accordance with DEFRA's Technical Guidance on Local Air Quality Management¹² given that the buildings within the Proposed Development would be over 30m from the closest track at Reading Mainline Station, pollutants from diesel locomotives are not anticipated to be an issue requiring consideration as part of the EIA.

5.8.2 Potential Effects

Potential effects on local air quality to be addressed by the EIA are as follows:

- Effects on sensitive receptors of dust emissions during construction activities;
- Short-term localised increases in traffic borne emissions during the construction works and as a result of any temporary construction related vehicles operating on the Site, and/or local road network;

⁹ Department of the Environment, Food and Rural Affairs (DEFRA) (2007). The Air Quality Strategy for England, Scotland, Wales & Northern Ireland. DEFRA.

¹⁰ Office of the Deputy Prime Minister (ODPM), 1995, 'The Environment Act' 1995. OPA.

¹¹ Reading Borough Council, 2016, Air Quality Action Plan Update

¹² DEFRA, 2016, Local Air Quality Management, Technical Guidance LAQM.TG(16), DEFRA, London

- Long-term changes in local air quality particularly in relation to NO₂ and PM₁₀ levels, due to emissions from vehicles associated with the operation of the completed Development;
- Effects on local air quality from any building plant emissions; and
- Air quality conditions for future residents within the Development.

5.8.3 Approach and Methodology

The air quality assessment will comprise the following:

- Confirmation of potentially sensitive existing and future (e.g. with the Proposed Development) receptor locations which could be affected by changes in air quality that result from the construction and operation of the Proposed Development. The receptor locations would be agreed with RBC;
- A review of baseline conditions through a review of RBC air quality review document and data from the RBC monitoring network;
- A qualitative assessment of air quality effects from construction works using the Institute of Air Quality Management Construction Dust Guidance¹³;
- An assessment of the effects of the operational Proposed Development from traffic using the ADMS-Roads atmospheric dispersion model. In particular, this will assess the likely effects of NO₂ and PM₁₀ at existing and future sensitive receptors in proximity to the road network affected by the Proposed Development, and to assess the likely air quality conditions that would be experienced at the proposed residential units introduced as part of the Proposed Development;
- Application of the ADMS 5 air quality dispersion models, using data from the project Building Services Consultant, to assess the likely effects of emissions from building plant combustion sources (where relevant) generated by the complete and operational Proposed Development on local air quality. This will assess the likely effects at existing and future sensitive receptors in proximity to the Proposed Development and would consider conditions at the proposed residential units introduced as part of the Proposed Development;
- Model verification using adjusted RBC monitoring data;
- Comparison of the predicted pollutant concentration with the AQS Objectives;
- Comparison of the predicted pollutant concentration with the Air Quality Strategy Objectives and determination of the significance of effects upon nearby residents based on the Environmental Protection UK (EPUK) and IAQM significance criteria¹⁴; and
- Formulation of appropriate mitigation measures, where necessary. In particular, consideration will be given to measures for controlling dust as set out in the IAQM Construction Dust Guidance. Furthermore, where significant adverse air quality effects are identified as a result of the complete and operational Proposed Development, consideration will be given to appropriate mitigation measures to safeguard sensitive receptors.

5.9 Noise and Vibration

5.9.1 Key Issues

The dominant source of noise at the Site and surrounds arises from the surrounding road network. To the north of the Site, Reading Mainline Station and railway line also contribute to the noise environment.

¹³ Mayor of London (2014) Sustainable Design and Construction Supplementary Planning Guidance

¹⁴ Environmental Protection UK and Institute of Air Quality Management (2017). Land-Use Planning & Development Control: Planning for Air Quality

Apart from the railway line, there are no proximate sources of vibration. The railway line is however considered to be of sufficient distance from the buildings within the Proposed Development, being greater than 30 metres away, such that vibration is unlikely to be perceptible.

Noise and vibration arising from demolition and construction works has the potential to cause temporary disturbance to existing surrounding sensitive receptors including future residential receptors which form part of the Proposed Development (in a phased build-out).

Once the Proposed Development is complete and operational noise associated with new building services plant, changes in road traffic, any proposed commercial uses and ancillary servicing areas all have the potential to change the existing noise levels associated with the Site. This could affect existing occupants at neighbouring properties.

5.9.2 Potential Effects

The potential noise and vibration effects would be dependent on various stages of the Proposed Development. Effects to be assessed within the EIA are summarised below:

- Temporary noise and vibration disturbance to existing sensitive receptors surrounding the Site as a result of demolition and construction works (the Works);
- Temporary noise and vibration disturbance resulting from the physical processes of the Works to future residents of the earlier phases of the Proposed Development (i.e. those living on the Site ahead of the completion of the entire Proposed Development);
- Temporary noise effects resulting from changes in road traffic flows and composition during the Works;
- Permanent change in road traffic noise levels at existing sensitive receptors as a result of the Proposed Development once completed and operational; and
- Noise generated from new proposed building services plant, commercial, retail, leisure and community uses and public open space forming a part of the completed and operational Development on existing noise sensitive receptors surrounding the Site and those which form part of the Development.

There are no significant sources of vibration that would be introduced as part of the Proposed Development. Accordingly, the assessment of vibration in relation to the complete and operational Proposed Development would be scoped out of the EIA and the ES.

It should be noted that the determination of the acceptability of internal noise and vibration levels within the Proposed Development itself is considered a design issue. On this basis, such issues together with assessment of the suitability of the site for residential amenity, will not be dealt with as part of the EIA process but will be provided in a separate standalone report.

5.9.3 Approach and Methodology

The noise and vibration assessment will incorporate the following:

- Identification of the existing and future potentially noise and vibration sensitive receptors within and surrounding the Site;
- Review of baseline daytime and night-time noise monitoring undertaken by Hoare Lea in September 2018. The noise monitoring was undertaken at three locations around the Site as shown in **Figure 4**;

- Assessment of temporary noise and vibration effects during the Works, in line with BS 5228-1:2009+A1:2014¹⁵ 'Noise and Vibration Control on Construction and Open Sites Part 1 - Noise' and BS 5228-2:2009¹⁶ 'Part 2 - Vibration';
- Assessment of the likely significant effects of changes in road traffic noise levels resulting from traffic generated by the completed and operational Development upon existing sensitive receptors surrounding the Site. The calculations will be carried out in accordance with the Calculation of Road Traffic Noise (CRTN) memorandum¹⁷ with assessment against the significance criteria detailed within the Design Manual for Roads and Bridges (DMRB)¹⁸;
- Specification of appropriate noise limits to which future on-Site plant installations, should not exceed. These limits will be based on surveyed ambient (L_{Aeq}) and background (L_{A90}) representative noise levels at local sensitive receptors, the guidance contained in BS 4142:2014¹⁹ and the requirements of RBC.

Where likely significant adverse effects from any of the aforementioned sources are identified, consideration will be given to appropriate mitigation measures in safeguarding amenity and ensuring compatibility with adjoining land uses.

5.10 Ground Conditions and Contamination

5.10.1 Key Issues

The Site has historically been used for a range of activities, including a timber yard, factory, car-park, bus station garages and a coal yard. In addition, a number of industrial uses were present in the area surrounding the Site. As such, there is potential for some contamination to be present. Whilst the existing layer of hardstanding and low permeability Alluvium inhibits the vertical migration of any contamination to the aquifers, pathways could be created during construction through the installation of new piles.

An updated desk based Geotechnical and Geo-Environmental Desk Based Assessment of the Site has been undertaken by Ramboll²⁰ and ground investigation work is currently ongoing. The desk based assessment and ground investigation reports will be included as appendices to the Environmental Statement, where available at the time of submission.

5.10.2 Potential Effects

Potential effects to be addressed by the EIA include:

- Health and safety risks to workers during Site demolition and excavation works from existing contamination or hazardous materials;
- Potential risks to groundwater and surface water resources from the release of existing contamination and new sources of accidental contamination during the construction works;
- The creation of new pollution pathways (for example via piling) through which existing ground contamination may migrate to underlying aquifers;
- The appropriate management of contaminated soils or hazardous materials that require treatment or removal from the Site;

¹⁵ British Standards Institute, (2014) BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites. Part 1 - Noise. BSI

¹⁶ British Standards Institute, (2009) BS 5228-2:2009 Code of practice for noise and vibration control on construction and open sites. Part 2 -Vibration. BSI

¹⁷ Department of Transport, 1988. Calculation of Road Traffic Noise (CRTN), HMSO, London.

¹⁸ Highways Agency, (2011). Design Manual for Roads and Bridges (DMRB), Volume 11 Environmental Assessment, Section 3 Environmental Assessment Techniques, Part 7 Noise & Vibration, HA

¹⁹ British Standards Institute, 2014. BS4142: 2014 Methods for rating and assessing industrial and commercial sound. BSI.

²⁰ Ramboll (October 2018) Station Hill, Geotechnical and Geo-Environmental Desk Based Assessment referenced 1620004761-SHR-RAM-GE-001-Desk Study

- Risks to future Site users, residents, and vegetation from residual contamination; and
- Effects upon buried concrete and underground infrastructure from residual contamination.

5.10.3 Approach and Methodology

The assessment will include:

- A review of the desk based assessment prepared by Ramboll in 2018 and ongoing and historical ground investigation data, where available;
- The specification of measures to protect Site workers, the general public and the groundwater reserves from contamination throughout the duration of redevelopment works;
- The formulation of procedures for the appropriate handling, licensing and disposal of contaminated and hazardous materials that are removed from the Site (if necessary); and
- Liaison with the project team in relation to the incorporation of pollution prevention measures within the design of the completed Development.

The ES will describe the baseline conditions with reference to the likely pollution sources, assess the effects and outline the proposed mitigation measures including the need for remediation and those to protect Site workers, the general public, controlled waters and any future Site users from any potential contamination sources identified.

5.11 Wind

5.11.1 Key Issues

The construction of new buildings can have the potential to cause adverse wind conditions at ground level including turbulence and funnelling. This can lead to potentially adverse effects on pedestrian comfort and safety. The likely wind microclimate will need to be quantified in order to ensure that the conditions are both safe and comfortable for pedestrians within and around the Site, particularly within the existing and proposed public realm, at building entrances and within new areas of amenity space. During the design process, advice and guidance will be provided by specialist wind consultants to mitigate any foreseeable adverse wind effects as far as practicable through design.

5.11.2 Potential Effects

The wind assessment will focus on the relative safety and comfort of Site users on completion of the Proposed Development although a qualitative assessment of wind during the construction works will also be undertaken. The following specific potential effects have been identified:

- Temporary changes in the local wind environment during the construction works;
- A change in the wind conditions on surrounding roads and pavements, such as Station Hill, Greyfriars Road, Station Road, Garrard Street and Friar Street; and
- The safety and comfort of pedestrians within the Proposed Development, notably within new areas of public realm, private amenity spaces and building entrances.

5.11.3 Approach and Methodology

There are widely accepted methodologies for the assessment of wind impacts of new developments. The Lawson Comfort Criteria²¹ are a 'standard' against which the wind conditions can be compared. The Criteria define different pedestrian activities from sitting, which require low wind speeds in order for people

²¹ Lawson, T.V. 2001. 'Building Aerodynamics', Imperial College Press.

to be 'comfortable', through to more transient activities such as walking, for which pedestrians will tolerate stronger wind conditions and still remain 'comfortable'.

The effects of the demolition and construction works will be assessed using professional judgement. However, the effects of the completed development will be based on a wind tunnel test. The assessment will focus on the comparison of the wind microclimate with the intended pedestrian use of the Site. On surrounding streets, the assessment will also consider the change in wind conditions from the existing conditions. The assessment will consider all wind directions and will be based upon long-term meteorological data for the Site. A full statistical breakdown of the wind microclimate at locations on main thoroughfares, likely seating areas, main building entrances and other potentially sensitive locations (such as roof top amenity space) will be provided.

The assessment will identify mitigation measures to ensure that the conditions within the completed Proposed Development would be suitable for the desired use.

The conclusions of the wind tunnel testing will be summarised in the ES chapter and the full wind tunnel test results appended to the ES.

5.12 Daylight Sunlight and Overshadowing

5.12.1 Key Issues

Given the scale and design of the Proposed Development, along with its proximity to potentially sensitive receptors, it is anticipated to result in changes to the quantity and quality of daylight and sunlight experienced by occupants of residential buildings surrounding the Site and overshadowing of amenity areas and public space around the Site.

The Proposed Development is also likely to include highly glazed commercial buildings where extensive artificial lighting is used and therefore an assessment in terms of light pollution will be undertaken.

Owing to the proximity to Reading Station and the railway lines that serve it, an assessment on the likely significant effects of solar glare will also be undertaken.

5.12.2 Potential Effects

In consideration of the key issues above, likely effects to be considered within the ES are as follows:

- Changes to the duration, quantum and quality of daylight and sunlight to existing residential properties surrounding the Site during the construction works;
- Changes to the duration, quantum and quality of daylight and sunlight to existing residential properties surrounding the Site once the Proposed Development is complete and operational;
- Change in the overshadowing experienced in amenity areas as a result of the Proposed Development;
- Light pollution to existing and proposed residential receptors; and
- The incidence of solar glare to the railway line.

5.12.3 Approach and Methodology

Daylight and Sunlight

In terms of the daylight and sunlight analysis, the scope will focus on the adjoining residential properties where the occupants have a reasonable expectation of daylight and sunlight as per the Building Research Establishment (BRE) Guidelines 'Site Layout Planning for Daylight and Sunlight 2011: A Guide to Good Practice', Second Edition (hereafter the BRE Guidelines)²². Changes in levels of daylight and sunlight will be assessed using a scaled three-dimensional model of the Development proposals.

The following residential receptors have been identified as sensitive in relation to daylight and sunlight and will therefore be included within the assessments:

- Properties along Tudor Road;
- Properties along Stanshawe Road;
- Properties along Vachel Road;
- Properties along Sackville Street;
- Properties along Greyfriars Road;
- Properties along Friar Street;
- Properties along Station Road;
- Properties along Garrard Street; and
- Properties along Merchants Place.

Only neighbouring residential properties which have windows facing towards the Proposed Development will be included in the assessment. If a nearby property has no windows facing the Proposed Development, these properties would not be affected in terms of light.

Overshadowing

Areas of amenity space are considered most sensitive to overshadowing effects resulting from the Proposed Development. Owing to the southerly location of the sun path, only open space areas located from north west through to north east of the Proposed Development require consideration in relation to overshadowing.

The following areas of amenity space have been identified as sensitive receptors in relation to the Proposed Development:

- Station Hill Square;
- Rear gardens serving properties along Tudor Road;
- Rear gardens serving properties along Stanshawe Road; and
- Rear gardens serving properties along Vachel Road.

Light Pollution

The relevant residential receptors to be assessed for light pollution effects are as follows:

- Garrard House;
- Residential uses within the Proposed Development including Plots E and F (detailed consent) and Plots within the Northern Site (outline application).

²² BRE, Site Layout Planning for Daylight and Sunlight: a Guide to Good Practice (BR 209) Second Edition, BRE Press, September 2011.

Solar Glare

The BRE guidelines provide that '*glare or solar dazzle can occur when sunlight is reflected from a façade or area of metal cladding*'. This is considered an issue in relation to road users whereby an instance of reflection can obscure the view of traffic or rail signals and thus have the potential to cause an accident.

At this stage, the details of the façade treatment for the Proposed Development have not yet been finalised however the façade design is expected to include areas of glazing and/or reflective cladding, therefore, a solar glare assessment is considered necessary.

Considering the number of train tracks passing in the close proximity to the north of the development, it is likely that a train glare assessment will be required. The common practice for this type of study would be investigating the location and orientation of mounted train signals to identify sensitive viewpoints to be assessed along each track.

5.13 Cumulative Effects

5.13.1 Key Issues

The EIA Regulations require that, in assessing the effects of a particular development proposal, consideration is also given to the cumulative effects that may arise. Cumulative effects can be categorised into two types:

- **Type 1 Effects:** The combined effects of individual effects resultant from the development upon a set of defined sensitive receptors, for example noise, dust and visual effects on a single residential receptor; and
- **Type 2 Effects:** The combined effects arising from another development site or sites, which individually might be insignificant, but when considered together, could create a significant cumulative effect.

Such effects will be identified, and mitigation measures will be proposed where necessary.

5.13.2 Approach and Methodology

Type 1 Cumulative Effects

Potential Type 1 effects for the Development will be assessed qualitatively on the basis of the residual effects identified within each technical chapter of the ES.

Type 2 Cumulative Effects

A set of criteria have been identified in order to guide the identification of 'other' schemes to be included within the Type 2 cumulative effects assessment. The criteria are:

- Schemes within 1km of the Site which have been granted planning permission or for which there has been a resolution to grant planning permission where there is a net change in floorspace above 10,000m² and which are considered to have the potential to result in some cumulative effect; and
- Schemes close to the Site that have been granted planning permission, but fall below the floorspace threshold stated above. These schemes will be considered where their proximity to the Site is such that the potential for cumulative effects with the Proposed Development cannot be ruled out.

The above criteria will be applied to consented schemes for which construction has not yet commenced and 'reasonably foreseeable schemes' identified in conjunction with RBC. Schemes currently under construction have been identified and included in the Baseline Scenario.

The schemes detailed in Table 17.1 have been identified for inclusion in the cumulative assessment. These are shown on **Figure 5**. Note: schemes included in the baseline scenario have not been included in Table 17.1.

Table 17.1 Schemes Proposed for Consideration within the Type 2 Cumulative Assessment

No.	Site	Application Reference	Proposal	Decision / Date	Distance and direction from the Site (at its closest point)
1.	80 Caversham Road	182252 / OUT	Outline application considering access, landscaping, layout and scale involving the demolition of all existing buildings and structures (Classes B1a & B2) and erection of new buildings ranging between basement and 2 – 25 storeys in height, providing 658 (79 x studio, 227x1, 335x2 & 17x3-bed) residential units, office accommodation (Class B1a), flexible ground floor Class A1-3 uses, a community centre(Class D1), health centre uses (Class D1) and various works including car parking, servicing, public and private open space, landscaping, highways, pedestrian and vehicular access and associated works.	Decision Pending	150m north
2.	29-35 Station Road, Reading, RG1 1LG	181930	Demolition of existing building and the erection of a 22 storey building (at 121m AOD) for hotel accommodation, office accommodation and ground floor retail uses. No parking is proposed on site although servicing will be provided for to the rear of the site accessed from Garrard Street.	Decision Pending	45m south-east
3.	52 to 55 Friar Street and 12 Greyfriars Road, Reading RG1 1DX	162210	Demolition of existing building and structures (Class A1) and erection of 3 new buildings ranging between 6 - 12 (and basement) storeys in height to provide 135 (1xstudio, 54x1, 73x2 & 7x3-bed) residential units (Class C3), a flexible Class A1-A5 use at ground floor level fronting onto Friar St, a flexible Class A1-5, B1(a) or D2 (gym only) use at ground floor level fronting onto Greyfriars Rd, with associated access, parking, servicing, landscaping and engineering works (amended description).	Approved 20/03/18	Immediately adjacent to the west of the Site.
4.	Bristol and West Arcade, Market Place	180358	Demolition of vacant former Bristol & West Arcade (173 – 175 Friar Street) and erection of an eight storey mixed-use building (plus basement) to provide 35 residential units, 4,212 sqm of B1 office floorspace, and 5 retail units (A1/A2/A3), demolition of rear parts of 29 – 31 and 32 Market Place, the change of use of the retained units	Approved 09/01/19	300m to the east.

No.	Site	Application Reference	Proposal	Decision / Date	Distance and direction from the Site (at its closest point)
			at 27 – 28, 29 - 31 Market Place at first, second and third floors to provide 8 residential units, change of use at ground and basement level of 32 Market Place from A2 to flexible retail use (A1/A2/A3), retention of 260.4 sqm of A4 use at ground and basement at 29-31 Market Place, change of use at ground and basement of 27 - 28 Market Place to flexible retail use (A1/A2/A3), and associated internal and external works to the Listed Buildings, landscaping, refuse, plant, cycle stores and substation at basement level.		
5.	Land between Weldale Street and Chatham Street	170326	Demolition of all existing buildings (including 3 retail units) and structures, and erection of new buildings ranging between lower ground & 4 storeys to lower ground & 11 storeys in height, providing 427 (233x1, 182x2 & 12x3-bed) residential units (Class C3) and 1 flexible ground floor retail shop (Class A1) or restaurant and café (Class A3) unit, together with new public realm, landscaping, accesses, parking and associated works (amended description).	Approved 15 March 2018	180m to the west of the Site.
6.	Kenavon Drive	170509	Demolition of the two existing retail (Homebase and former Toys R Us) structures and the erection of new buildings ranging between 2 and 11 storeys in height, providing 765 (18 x studio, 302x1, 409x2 and 36x3-bed) residential units (Class C3), 5 commercial units (1x flexible Class A1-A4, B1 or D1-D2, 1x flexible D1 or D2, 1x flexible Class A1- A5, 1x flexible Class A3 or A4, 1x flexible A1-A5 or D1-D2 uses), various works to the public realm, including a new riverside square, landscaping, accesses, parking and associated works	Approved October 2018	700m east
7.	Former Scottish and Southern Electricity Site, North	No application submitted to date – anticipated in June 2019. Public	Residential development in five buildings of up to 11 storeys. No further details such as unit numbers are currently available.	N/A – application not yet submitted	300m north

No.	Site	Application Reference	Proposal	Decision / Date	Distance and direction from the Site (at its closest point)
	of Vastern Road	consultation only.			

The final list of cumulative schemes to be assessed will be agreed with RBC. The Type 2 Cumulative Effects will be assessed quantitatively or qualitatively depending upon the technical assessment.

6. Topic Areas to be “Signposted” in the ES

There is one topic area which substantially overlaps with other proposed ES Chapters and documents to be submitted in support of the planning application. This is Greenhouse Gas Emissions and Climate Change. At the time of authoring this EIA Scoping Report, there was no government guidance as to how this topic area should be approached. As such, due to the considerable overlaps with other planning application documentation, it is proposed that information relating to this topic areas is signposted within the ES, as opposed to preparing a separate chapter / assessment. Further specific details are set out below.

6.1 Greenhouse Gases and Climate Change

The EIA Regulations relate to a very broad range of development types. The potential to generate significant quantities of greenhouse gases and the potential to significantly affect climate change would be far more apparent and fundamental to the consideration of, for example, the construction of a new power station which would have very high fuel demands compared to a project such as the Proposed Development. In addition, greenhouse gas emissions and climate change act in a global context, and as such the Proposed Development could be considered as insignificant because of its scale. However, it is nevertheless recognised that the Proposed Development will contribute greenhouse gas emissions and is able to take steps to mitigate this through design, as discussed further below.

Greenhouse gases arising from the demolition and construction phase and the completed and operational Development would likely be carbon dioxide (CO₂) and nitrogen dioxide (NO₂). With respect to NO₂, such emissions would most likely arise from road traffic and plant both during the demolition and construction works and once the Development is completed and operational. An assessment of the potential of the Development to contribute to such emissions and the resultant effects upon air quality will be addressed within the air quality assessment already scoped into the ES.

In respect to climate change adaptation, a Drainage Strategy prepared and submitted in support of the planning application will, in accordance with relevant guidance, account for the effects of climate change. In terms of flood risk, recent modelling undertaken by the Environment Agency has taken account of climate change and has shown that the Development is still within an area of low flood risk.

In addition, to the above, Chapter 4: Alternatives of the ES would include for a description of the options considered for the building structures and energy strategy and the reasons for the choice of the preferred option taking into account the environmental effects, including the generation of greenhouse gases. Such information would be drawn from several stand-alone reports that are to be prepared to support the planning application including the Sustainability Statement and Energy Strategy. Both would be prepared by the Applicant's Building Services Consultant, Hoare Lea. Information on the building structure options will be provided by the Applicants Structural Consultant, Ramboll.

In view of the above, the proposed scope of the ES already makes provision for the inclusion of information and assessments which can be used to judge the likely effects of the Proposed Development upon greenhouse gases and climate change. It is therefore proposed that ES Chapter 2: EIA Methodology explains this approach and provides appropriate 'sign-posting' as to where the ES deals such matters. This will negate the need for a separate ES Chapter dealing with the greenhouse gases and climate change, which would be unnecessarily repetitious.

7. Topics to be Scoped Out

The aim of this Scoping Report is to focus the EIA on those environmental issues that may be significantly affected by the Development. In doing so, issues may be 'scoped out', in that the potential for significant effects has been deemed unlikely. The following sections provide details of the issues which are proposed to be 'scoped out' of the EIA.

7.1 Transport and Access

Whilst the effects of traffic flow changes resulting from the Proposed Development have knock-on effects for air quality and noise, it is not considered an environmental discipline itself. Whilst there are Guidelines for the Environmental Assessment of Road Traffic (the 'Guidelines') these were published in 1993 and have not subsequently been replaced or updated. The Transport Chapter of the 2015 ES considered the various potential effects of road traffic identified within the Guidelines for the Environmental Assessment of Road Traffic and found that the completed Proposed Development would have a negligible or minor beneficial effect. Whilst some minor adverse effects were identified during demolition and construction works, standard measures can be implemented to mitigate these effects and these will be set out in the Development Programme and Construction Chapter. It is therefore considered that a Transport Chapter can be scoped out of the EIA. However, the Applicant's transport consultants (Peter Brett Associates) will provide the necessary data to assess the effects of transport changes on air quality and noise, and will prepare a separate, stand-alone Transport Assessment (TA) for submission alongside the planning application to enable the effects of the Proposed Development on the highway network to be assessed.

7.2 Flood Risk

The Environment Agency's (EA) Flood Map for Planning shows that the Site is located Flood Zone 1, denoting a low probability of fluvial flooding. The Flood Zones shown on the Flood Map for Planning are based on the 2011 River Thames (Mapledurham to Sonning Modelling). However, as part of the FRA Addendum, submitted in support the Section 73 Applications, the updated 2018 River Thames (Sandford to Mapledurham) modelling was obtained. The EA have confirmed that at present this is the best available data. The 2018 River Thames Modelling indicated that the extent of flooding reaches the railway embankment approximately 160m to the northwest of the Site and extends no further south. This confirms that the Site is located within Flood Zone 1 and is at lower risk than currently shown on the Flood Map for Planning.

The potential for surface water and sewer flooding was assessed within the 2015 ES and it was found that there were some areas with low to high risk of ponding within the highway. However, the majority of the Site was found to be at very low risk of surface water flooding. Additionally, Reading Borough Council and Thames Water have confirmed that they have no records of surface water or sewer flooding at or within 500m of the Site. The risk of flooding from other potential sources, including groundwater and artificial sources, was assessed for the entire Site as part of the 2015 ES and found to be low.

Therefore, it is proposed to scope out Flood Risk and Drainage from the EIA. An FRA would be provided as an addendum to the ES and will consider all sources of flooding, as noted above, including for the impacts associated with climate change. The Drainage Strategy for the Development would be appended to the FRA with a summary of the drainage and SuDS strategy included in the FRA report.

7.3 Ecology

An update Preliminary Ecology Appraisal (PEA) was undertaken in 2018 across the whole of the Site. The PEA noted that buildings at Friars Walk Shopping Centre and a building on Merchants Place contained roosting bat potential, however subsequent surveys in 2018 were undertaken and confirmed the absence of any roosts. The PEA also noted that the Site was still of value to black redstarts with the species historically recorded at the NCP car park on Gerrard Street. A single survey was undertaken in July 2018 at the end of the season for the species however no evidence was recorded. Further surveys for this species would be carried out between April and July 2019 to confirm if birds are on Site and how they are utilising it. Should a significant population be identified, an assessment of ecological impacts would be included within the scope of the EIA and an Ecology Chapter prepared. However, on the basis of the survey data to date it is considered unlikely that any significant ecological effects would be apparent that cannot be mitigated/compensated for within the scheme design and it is therefore considered, at this stage, that an Ecology Chapter will not be required as part of the ES.

The update PEA and bat survey are included as **Appendices B and C** of this EIA Scoping Report.

7.4 Risk of Major Accidents or Disasters

In accordance with the 2017 EIA Regulations the potential for a proposed development to have significant environmental effects resulting from major accidents or disasters need to be considered. Previous studies undertaken have not identified historic or current notable hazards or risks at the Site. The Proposed Development will be constructed in line with current industry standards including for building, fire and drainage regulations. It is therefore considered that further consideration of the Risk of Major Accidents or Disasters can be scoped out of the ES.

7.5 Waste

It is inevitable that waste would be generated from the construction and operation of the proposed Development. However, this would be the case for any redevelopment project and the critical aspect is how this waste is managed. All relevant contractors would be required to investigate opportunities to minimise waste arisings at source and, where such waste generation is unavoidable, to maximise the recycling and reuse potential of demolition and construction materials. Wherever feasible, such arisings would be dealt with in a manner that reduces environmental impact and maximises potential re-use of materials. Records would be maintained regarding the types and quantities of waste produced during the demolition and construction works and the quantities sent for recycling, recovery or disposal. A framework for the management of construction waste arising from the Site will be set out in **Chapter 6: Development Programme, Demolition and Construction** of the ES.

Once operational, a quantity of domestic and commercial waste would arise from the Development. Again, the critical aspect is how this waste is managed. This will be set out in an Operational Waste Management Strategy (to be submitted as a stand-alone document to accompany the planning application). Designing the Proposed Development to optimise good waste management practices, such as facilitating segregation of waste, would minimise the effects associated with operational waste disposal. The waste management proposals of the Proposed Development will be described in **Chapter 5: The Proposed Development** of the ES.

In conclusion, it is considered that waste should be scoped out of the EIA as the likely waste effects are considered to be insignificant when considered in light of the sustainable waste management measures to be implemented.

8. Defining the Significance of Environmental Effects

For each of the environmental topic areas assessed within the EIA, an assessment will be made in relation to the relative significance of the environmental effects identified. These will be carried out with reference to definitive standards and legislation, where available. Where it is not possible to quantify effects, qualitative assessments will be carried out, based on available knowledge and professional judgement.

The significance of predicted effects will be determined with reference to assessment criteria for each environmental topic considered. These criteria apply a common EIA approach of classifying effects according to whether they are substantial, moderate or minor effects as well as adverse, negligible or beneficial.

Specific criteria for each issue will be developed, giving due regard to the following:

- Extent and magnitude of the effect;
- Duration of the effect (short, medium or long term);
- Permanence of the effect (temporary or permanent);
- Nature of the effect (direct or indirect, reversible or irreversible);
- Whether the effect occurs in isolation, is cumulative or interactive;
- Performance against environmental quality standards or other relevant pollution control thresholds;
- Sensitivity of the receptor; and
- Compatibility with environmental policies.

For issues where definitive quality standards do not exist, significance will be based on the:

- Local, district, regional or national scale of value of the resource and/or receptor affected;
- Number of receptors affected;
- Sensitivity of those receptors; and
- Duration of the effect.

In order to provide a consistent approach in reporting the outcomes of the various studies undertaken as part of the EIA, the following terminology will be used throughout the ES to describe the likely significance (or otherwise) of identified effects:

- **Negligible:** No significant effect to an environmental resource or receptor;
- **Beneficial:** Advantageous or positive effect to an environmental resource or receptor; and
- **Adverse:** Detrimental or negative effect to an environmental resource or receptor.

Whilst there is no recognised definition of what constitutes a 'significant' effect, it is good practice to identify the degree of significance or importance. It is therefore proposed that, where adverse or beneficial effects have been identified, they will be addressed as being of either:

Minor significance (either beneficial or adverse):	Slight, very short or highly localised effect;
---	--

Moderate significance (either beneficial or adverse):	Limited effect (by extent, duration or magnitude) which may be considered significant; and
--	--

Substantial significance
(either beneficial or adverse):

Considerable effect (by extent, duration or magnitude) of more than local significance or in breach of recognised acceptability, legislation, policy or standards.

9. Proposed Structure of the Environmental Statement

The ES will comprise the following:

- Volume 1: Main Text;
- Volume 2: Figures;
- Volume 3: Appendices; and
- Non-Technical Summary.

Each of these are described in further detail below.

9.1 Environmental Statement Volume 1: Main Text

This will contain the findings of the EIA. Table 2 provides an outline structure of the ES

Table 3: Proposed Structure of the ES

ES Chapter	Lead Author
1. Introduction	Waterman IE
2. EIA Methodology	Waterman IE
3. Existing Land Uses and Activities	Waterman IE
4. Alternatives and Design Evolution	Waterman IE with input from the design team
5. The Proposed Development	Waterman IE with input from the design team
6. Development Programme, Demolition and Construction	Waterman IE with input from the design team
7. Socio-Economics	Hatch Regeneris
8. Townscape and Visual Impact	Waterman IE
9. Historic Environment	Waterman IE
10. Air Quality	Waterman IE
11. Noise and Vibration	Waterman IE
12. Ground Conditions and Contamination	Waterman IE
13. Wind Microclimate	RWDI
14. Daylight, Sunlight, Overshadowing and Solar Glare	GIA
15. Cumulative Effects	Waterman IE with input from all technical authors

9.2 Environmental Statement Volume 2: Figures

Figures accompanying all the chapters of ES Volume 1 will be presented in a separate volume for ease of reference.

9.3 Environmental Statement Volume 4: Appendices

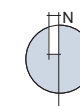
This will provide detailed supporting data, information and the full text of all relevant technical assessments undertaken as part of the EIA.

9.4 Non-Technical Summary

This will provide an accurate and balanced account of the key information in the EIA in non-technical language. The Non-Technical Summary (NTS) will be produced as a stand-alone document in a format suitable for public dissemination.

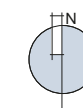
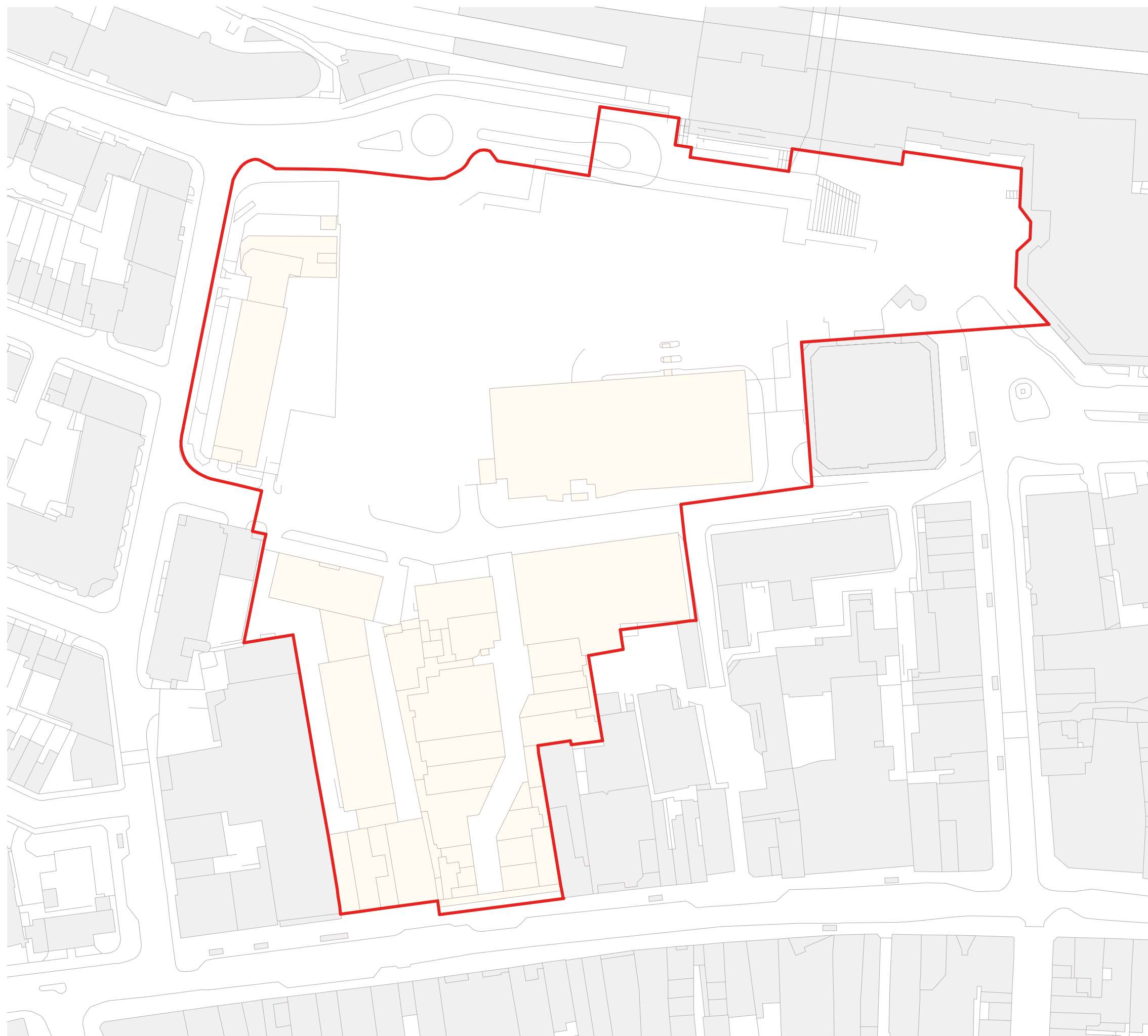
FIGURES

- Site Location Plan (Fig. 1)
- Existing Site Layout Plan (Fig. 2)
- TVIA Viewpoint Locations assessed in the 2015 ES (Fig. 3)
- Noise Monitoring Locations (Fig. 4)
- Cumulative and Future Baseline Schemes to be considered in the EIA (Fig. 5)

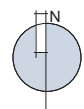
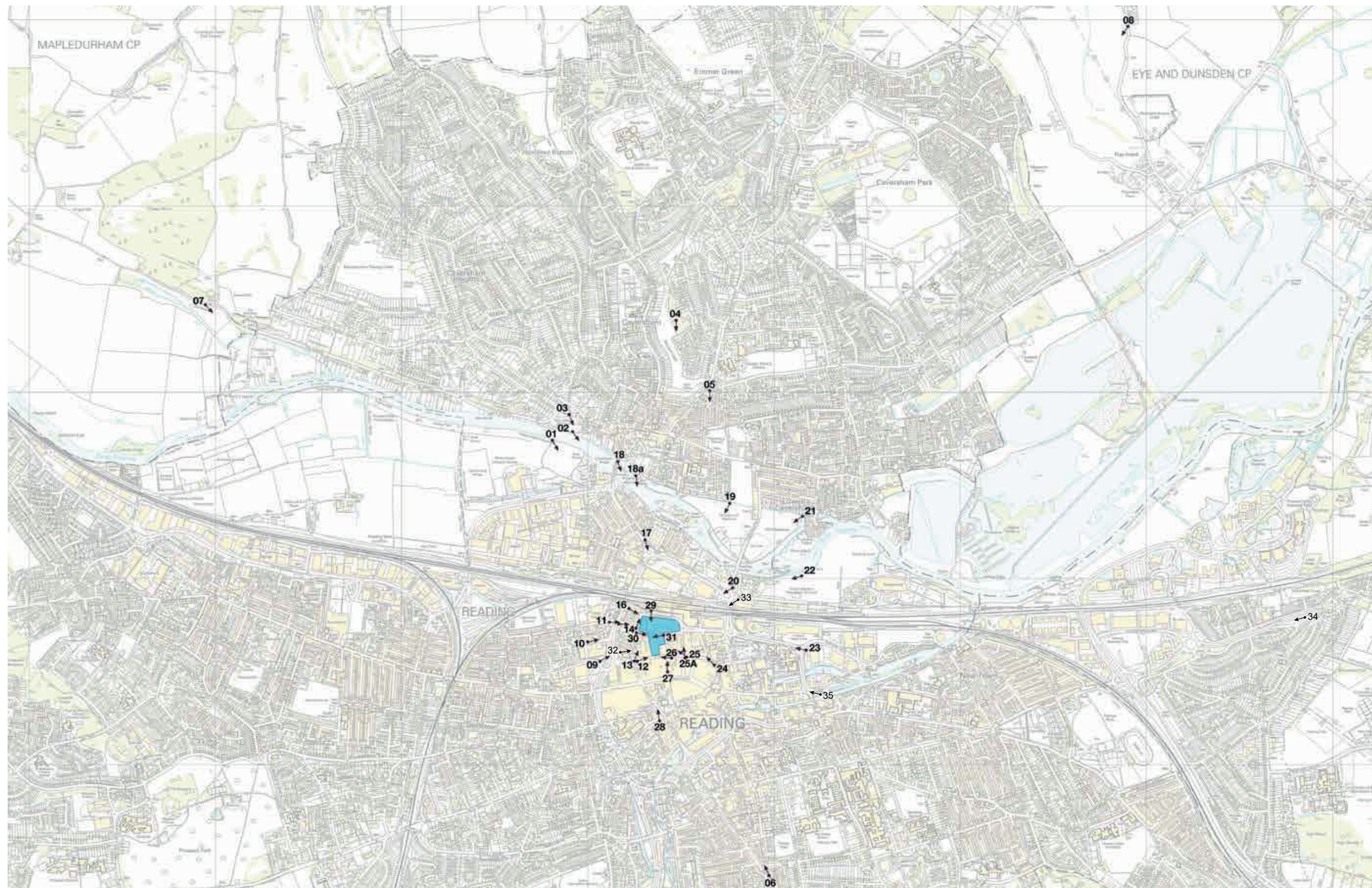


Project Details	WIE14788-100: Station Hill, Reading
Figure Title	Figure 1: Scheme Location
Figure Ref	WIE14788-100_GR_SR_1A
Date	2019
File Location	\\s-incs\wie\projects\wie14788\100\graphics\sr\issued figures

 Approximate Site Boundary



Project Details	WIE14788-100: Station Hill, Reading
Figure Title	Figure 2: Existing Site Layout and EIA Boundary Plan
Figure Ref	WIE14788-100_GR_SR_2B
Date	2019
File Location	\\s-incs\wie\projects\wie14788\100\graphics\sr\issued figures



Site Location

Project Details

WIE14788-100: Station Hill, Reading

Figure Title

Figure 3: TVIA Viewpoint Locations assessed in the 2015 ES

Figure Ref

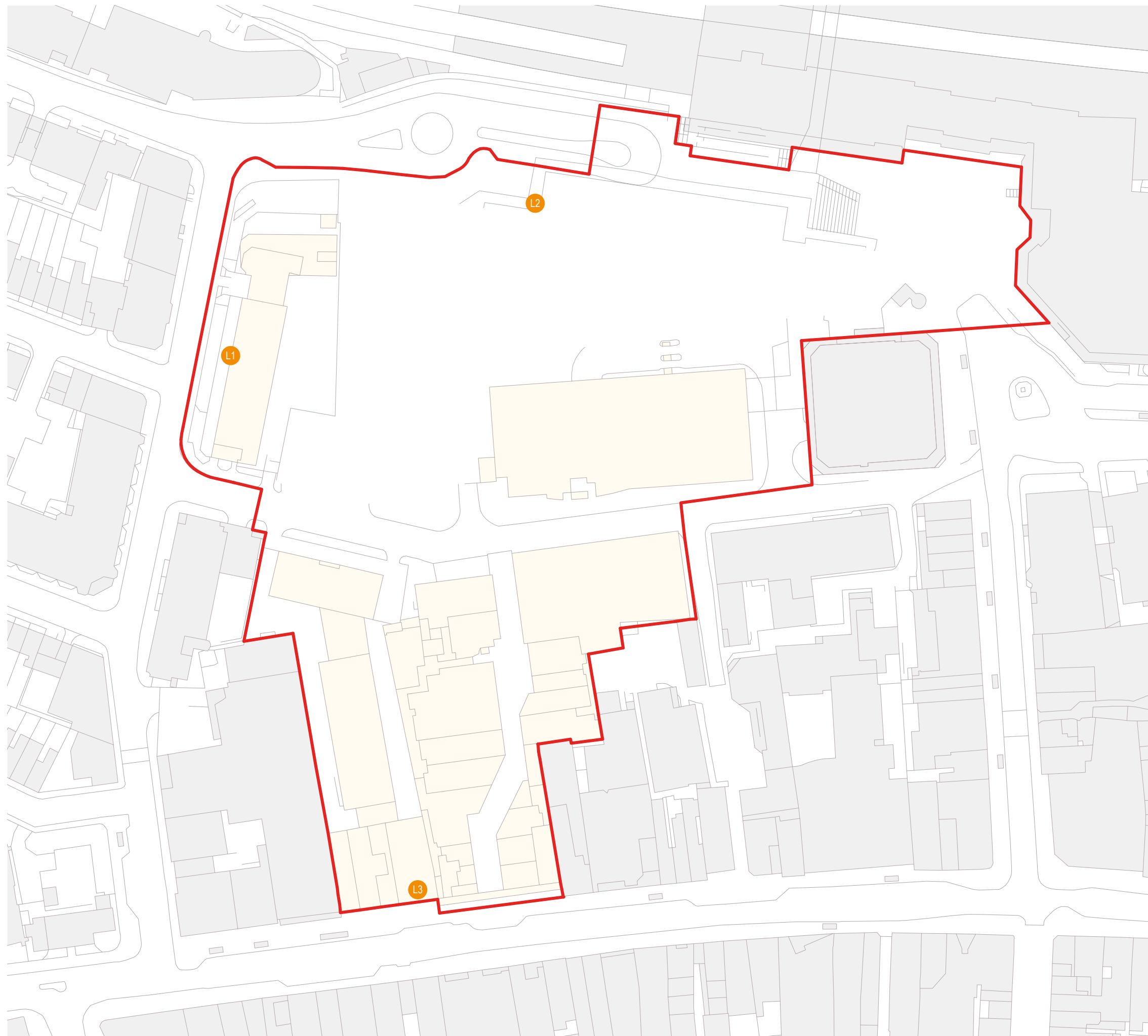
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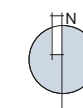
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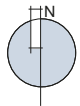
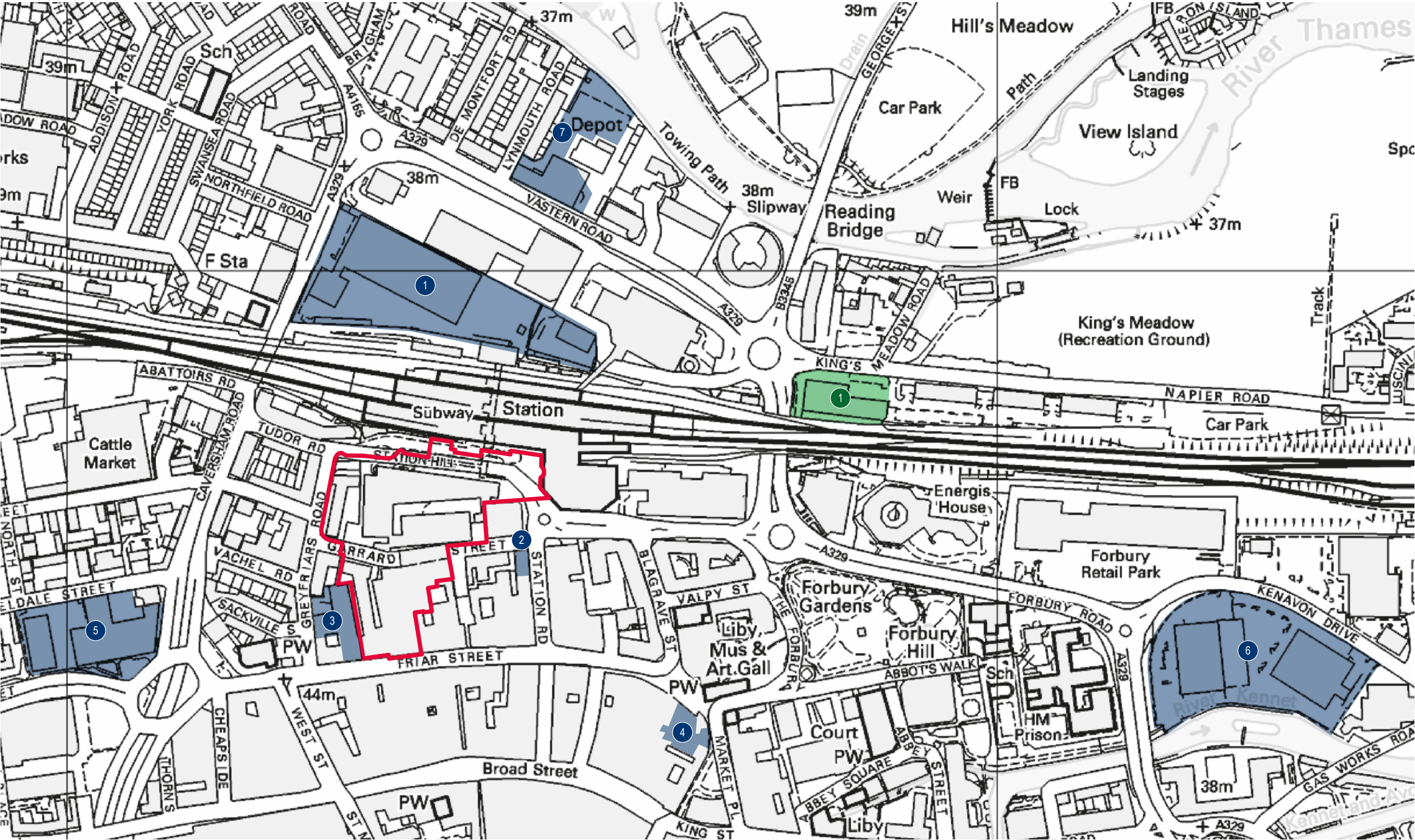
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- Approximate Site Boundary
- Unattended Position



Project Details	WIE14788-100: Station Hill, Reading
Figure Title	Figure 4: Noise Monitoring Locations
Figure Ref	WIE14788-100_GR_SR_4C
Date	2019
File Location	\\s-incs\wie\projects\wie14788\100\graphics\sr\issued figures



Approximate Site Boundary

Cumulative Schemes



Former Sorting Office Caversham Road / Vastern Road



29 -35 Station Road



52 - 55 Friar Street



Bristol and West Arcade



Land Between Wendale Street and Chatham Street



Kenavon Drive



Former Scottish & Southern Electricity Site

Future Baseline Schemes



Former Coopers BMW Site

Project Details

WIE14788-100: Station Hill, Reading

Figure Title

Figure 5: Cumulative and Future Baseline Schemes to be considered in the EIA

Figure Ref

WIE14788-100_GR_SR_5C

Date

2019

File Location

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APPENDICES

Appendix A Review of Viewpoint Locations

A total of 32 viewpoints (VPs) were assessed as part of the 2015 ES and Reading Borough Council identified a further three viewpoints that may require assessment (referenced 33, 34 and 35 on Figure 3) in their Scoping Opinion in relation to the Section 73 Applications for Plots E and F (Scoping Opinion reference 181820 SCO). These VPs have been reviewed in the light of the Proposed Development to identify if there is potential to rationalise the VPs whilst ensuring that the assessment includes consideration of potentially sensitive viewpoint locations. The review is presented in Table A1 below. Figure 3 shows the location of all 35 VPs.

Table A1: Review of 2015 ES Viewpoint Locations

VP	Location	x/✓	Comment / Justification
1	Thames Promenade opposite canoe club	x	VP3 is considered to be representative of this location.
2	Caversham Court Gardens	x	VP3 is considered to be representative of this location.
3	St Peter's Churchyard	✓	Representative of distant views from north west.
4	Balmore Walk	✓	Representative of distant views from the north.
5	Junction of Prospect Street and Peppard Road	✓	Representative of distant views from the north.
6	Junction of Mount Pleasant and Southampton Street	✓	Representative of distant views from the south.
7	The Warren footpath at Chazey Wood	x	Proposed Development not visible from this location.
8	Dunsden Way, south of Dunsden Green	✓	Representative of distant views from the far north east.
9	Chatham Street	✓	Representative of local views from a busy road junction to the west of the Site.
10	Weldale Street	✓	Representative of local views from the west of the Site.
11	Great Knollys Street	x	VP15 is considered to be representative of this location.
12	Junction of Friar Street and Greyfriars Road looking along Friar Street	✓	Local view of the South Site.
13	Junction of Friar Street and Greyfriars Road looking along Greyfriars Road	✓	View towards the northern area of the Site close to Greyfriars Church.
14	Junction of Vachel Road and Greyfriars Road	x	VP30 is considered to be representative of this location.
15	Stanshawe Street	✓	Local view from the west of the Site.
16	Tudor Road	✓	Local view from the north of the Site.
17	Caversham Road	✓	Local view from the north of the Site.
18	Caversham Bridge	✓	View from north of the Site.

VP	Location	x/✓	Comment / Justification
18a	War memorial, Christchurch Meadows	x	VP18 is considered to be representative of this location.
19	Christchurch Meadows	✓	Clear wide view of the site from the north
20	Reading Bridge near Vastern Road	✓	Local view from north east.
21	Hills Meadow	x	VP19 is considered to be representative of this location.
22	Kings Meadow	✓	View of the Site from the east.
23	Forbury Road near Reading Prison	✓	View of the Site from the east.
24	St Laurence's Church	✓	Local view towards the Site from St Laurence's Church
25	Station Road, looking west	✓	Close view of the Site from the south east.
25a	Station Road, looking north	x	VP25 is considered to be representative of this location.
26	Friar Street looking west	✓	Close view of the South Site.
27	Union Street	x	The Site is predominantly obscured by built form. Local views from the south are considered to be covered by VPs 12, 25 and 26
28	Junction of Castle Street and St Mary's Butts	✓	View of site from St. Mary's Butts/Castle Street Conservation Area.
29	Station Hill, looking south	✓	Close view from the north of the Site.
30	Looking east from the junction of Greyfriars Road and Garrard Street	✓	Close view from west of the Site.
31	Looking west along Garrard Street	✓	Close view from east of the Site.
32	Friar Street Western End	x	VPs 9, 12 and 13 are considered to be representative of this location.
33	Kings Meadow Road towards Junction with Vastern Road	✓	Local view from north east on route of the proposed East Reading Mass Rapid Transport Plan.
34	Top of Shepherds Hill near to the junction with Pitts Lane	✓	Distant view from the east.
35	Kings Road Bridge over River Kennet	✓	View from the south east with new built form (Kings Point)



Appendix B

Update Preliminary Ecology Appraisal



Station Hill, Reading

Preliminary Ecological Appraisal

August 2018

Waterman Infrastructure & Environment Limited

Merchants House, Wapping Road, Bristol, BS1 4RW
www.watermangroup.com

Client Name: SH Reading Master LLP
Document Reference: WIE14788-100-R-1-2-1-PEA
Project Number: WIE14788-100

Quality Assurance – Approval Status

This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS OHSAS 18001:2007)

Issue	Date	Prepared by	Checked by	Approved by
DRAFT	August 2018	Hayley Hockridge Principal Ecologist	Lee Mantle Associate Director	Ben Steele Regional Director
				
SECOND	August 2018	Hayley Hockridge Principal Ecologist	Lee Mantle Associate Director	Ben Steele Regional Director
				

Comments

Disclaimer

This report has been prepared by Waterman Infrastructure & Environment Limited, with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporation of our General Terms and Condition of Business and taking account of the resources devoted to us by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at its own risk.

Contents

1. Introduction	1
2. Methodology	4
3. Results	9
4. Assessment.....	19
5. Ecological Constraints and Opportunities	21
6. Conclusions	25

Figures

Figure 1: 'Extended' Phase 1 Habitat Survey Plan (ref. WIE14788-100_GR_PEA_1A)

Tables

Table 1: Previous Ecological Assessments.....	2
Table 2: Geographical Scale of Important Ecological Feature Categories	4
Table 3: Legally Protected Species	5
Table 4: Bat Roost Potential Ratings.....	6
Table 5: Summary of Black Redstart Survey Parameters.....	7
Table 6: Summary of desk study records of designated sites within 1km of the Site	9
Table 7: Summary of desk study records of flora and fauna within 1km of the Site	10
Table 8: Results of the Preliminary Roost Inspections.....	13
Table 9: Potential Important Ecological Features Anticipated to be Affected by the Development	19
Table 10: Ecological Features Scoped out of the Assessment	19
Table 11: Summary of Additional Ecological Assessments	25

Appendices

- A. Summary of Outline Planning Conditions
- B. Planning Policy and Summarised Flora and Fauna Legislation
- C. Photographs

1. Introduction

- 1.1. Waterman Infrastructure & Environment Ltd (Waterman) was commissioned by SH Reading Master LLP (hereafter referred to as the 'Client') to undertake a Preliminary Ecological Appraisal (PEA) of an area of land known as Station Hill 3 (SH3), which encompasses Plots A - G, located in Reading City Centre (hereafter referred to as the 'Site').
- 1.2. The Site is approximately 2.53 hectares (ha) area and located at Ordnance Survey Grid Reference SU 71351 73699. The Site currently comprises buildings, hard standing, ephemeral / short perennial, ornamental planting, scattered trees and walls/fences (**Figure 1**).
- 1.3. The Site is bound by roads/built development on all sides, notably Station Hill to the north, Thames Tower, Garrard Street and Merchants Place to the east, Friar Street to the south and Greyfriars Road and built retail/office/residential development (Sainsburys, Central Studios and Greyfriars House) to the west.

Site History and Development Proposals

- 1.4. An outline planning application for the redevelopment of the Site was submitted by Sackville Developments Reading Ltd (SDRL) in March 2013 (Planning Reference: 130436). The development, known as SH3, includes the demolition of all existing buildings and structures on-Site, excluding the existing multi-storey NCP car park, and replacement with four new commercial buildings (referred to as Building Plots A - D) and two new primarily residential buildings (referred to as building plots E and F). The existing NCP car park would be reconfigured and refurbished. The planning application was granted in January 2015 and is hereafter referred to as the consented scheme.
- 1.5. At the same time, an application was submitted for a temporary flexible event space on 0.35 ha of land within the north of the Site (Planning Application Reference: 130440/FUL). The temporary flexible event space was proposed to operate as an interim condition in the north-eastern part of the Site following demolition of the former Station Hill Retail Arcade (including 26 to 58 Station Hill). The temporary flexible events space was granted permission in January 2014.
- 1.6. Subsequent to submission of the application for SH3, SDRL acquired an area of land adjacent to the SH3 Site, known as the Telecom House site. An application to extend and amend Plot E of the Consented Scheme to incorporate the Telecom House site was submitted in August 2015 (Planning Reference: 151426 and 151427).
- 1.7. Amendments to the 2015 Outline Planning Application were made in December 2015. A reserved matters application was also submitted for Plot B in 2015 and granted approval in August 2016 (Planning Reference: 151543).
- 1.8. Since receiving planning consent, the buildings located within the curtilage of Plots B, C and D have been demolished and the temporary events space has been constructed in the location of Plot C.
- 1.9. With regards to the approved outline planning consents (Planning References 130436 for Plots A-D, F and G; and 151426 and 151427 for Plot E) several ecological planning conditions were attached which are summarised in **Appendix A**. Where relevant, these have been referred in this report.

- 1.10. It is now proposed to submit a prior notification of demolition of Telecom House and Friars Walk Shopping Centre (hereafter referred to as the 'Development') which occupy the areas of Blocks E and F in the SH3 Development. The report also provides information to support future planning applications and / or prior notification of demolition for buildings to the north of Garrard Street including Xfinity House, the NCP Car Park, the Temporary Events Space and the area of land occupied by Blocks B and D of the SH3 Development.'
- 1.11. Previous ecological assessments were undertaken at the Site and wider area between 2005 and 2015 to support the previous planning applications detailed above, as summarised in **Table 1** below. Where relevant, these assessments have been referred to in this PEA.

Table 1: Previous Ecological Assessments

Survey	Date(s)	Area	Description
'Extended' Phase 1 Habitat Survey and Bat Roost Potential Survey	26 May 2005	SH1 site (area to the north of Garrard Street only)	Walkover survey to classify and map all habitats on the Site in accordance with standard Phase 1 habitat survey methodology. In addition, trees and structures were examined to determine if they had the potential to provide bat roosting sites. These were classified on a scale of negligible, low, medium or high potential.
Black Redstart Survey	Visit 1: 26 May 2005 Visit 2: 1 June 2005 Visit 3: 8 June 2005 Visit 4: 15 June 2005 Visit 5: 22 June 2005	SH1 site and the immediate surrounding area (including the Site)	Surveys to detect the presence or absence of black redstarts together with any observations to indicate breeding (e.g. singing males, nesting behaviour or the presence of juveniles).
Updated 'Extended' Phase 1 Habitat Survey and Bat Roost Potential Survey	20 April 2009	SH2 site (area of the Site excluding Telecom House but for a different scheme)	Walkover as described above.
Updated 'Extended' Phase 1 Habitat and Bat Roost Potential Survey	12 August 2011	SH3 site	Walkover as described above.
Updated black redstart Survey	Visit 1: 21 May 2012 Visit 2: 28 May 2012 Visit 3: 14 June 2012 Visit 4: 25 June 2012 Visit 5: 12 July 2012	SH3 site and immediate surrounding area	Survey as described above
Updated 'Extended' Phase 1 Habitat and Bat Roost Potential Survey	13 June 2014	Telecom House site + SH3 site	Walkover as described above.

Survey	Date(s)	Area	Description
Updated black redstart Survey	Visit 1: 10 June 2014 Visit 2: 24 June 2014	SH3 site + Telecom House site	Reduced Surveys to update the presence or absence of black redstarts together with any observations to indicate breeding (e.g. singing males, nesting behaviour or the presence of juveniles).
Bird Survey followed by Inspection of Western Tower	Visit 1: 7 March 2014	Western Tower (Plot B)	Bird survey at dawn followed by a building inspection prior to the erection of specific netting to deter peregrine falcons nesting on the tower prior to demolition works.
Updated Black Redstart Survey	Visit 1: 6 March 2015 Visit 2: 14 May 2015	SH3 site + Telecom House site	Reduced Surveys to update the presence or absence of black redstarts together with any observations to indicate breeding (e.g. singing males, nesting behaviour or the presence of juveniles).

Purpose of this PEA

- 1.12. The PEA has been undertaken in support of a prior notification of demolition for the Site.
- 1.13. As detailed within industry guidance^{1,2}, a PEA should be used to identify any ecological constraints and opportunities at a proposed development site. This PEA will detail the requirement for further ecological surveys to determine if any Important Ecological Features (IEFs) are present within the identified Zone of Influence (Zol). For this Development, the PEA will be used to detail the required ecological mitigation measures to ensure legal compliance.
- 1.14. The PEA will also be used to inform the emerging scheme design process for future planning applications and at this stage will make recommendations for future ecological compensation and enhancement measures.
- 1.15. In summary the purpose of this report is to:
 - Update the ecological baseline data for the Site to support the current prior notification of demolition;
 - Identify the current potential for IEF's to be present within the identified Zone of Influence (Zol) and any resulting constraints or significant ecological effects to the Development;
 - Detail the required ecological mitigation measures to ensure legal compliance (**Appendix B**); and
 - Inform the emerging scheme design process for future planning applications and make initial recommendations for ecological compensation and enhancement measures to ensure compliance with planning policy (**Appendix B**).

¹ CIEEM (2017). *Guidelines for Ecological Report Writing*. Technical Guidance Series.

² CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal*. Technical Guidance Series.

2. Methodology

Scope of the Assessment

- 2.1. This section summarises the methodologies used for undertaking the PEA based on current guidelines^{3,4,5}. This PEA included an ecological data search, 'Extended' Phase 1 Habitat Survey, preliminary roost assessments for bats (external only), black redstart survey and a common invasive plant species survey.
- 2.2. The ZoI is the area(s) over which ecological features maybe impacted by the biophysical changes caused by the proposed Development. Based on the scale and nature of the Development, it has been assessed that the ZoI arising from these works is unlikely to be greater than 1km from the centre of the Site. Therefore, this distance has been used to collect the ecological data search information. The 'Extended' Phase 1 Habitat survey area comprised primarily the Site. However, adjacent land was viewed where possible from the Site. As referenced in industry guidance, IEF's that are anticipated to be affected by the Development have been identified and subject to assessment. In this report, designated sites, habitats and species that fall into the categories in **Table 2** and **Table 3** have been identified as being ecologically important and/or legally protected/controlled and form the scope of data gathering during the data search and Site surveys.

Table 2: Geographical Scale of Important Ecological Feature Categories

Geographical Level of Importance	Category
International	Statutory designated sites: Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites (including candidate SACs and proposed SACs, SPAs and Ramsar sites)
National	Statutory designated sites: Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR) ⁶ ; Ancient Woodland; Habitats and species of principal importance for the conservation of biodiversity as listed on Schedule 41 of the NERC Act, 2006, including ecologically important hedgerows under the Hedgerow Regulations; and Red List and rare species (using IUNC criteria ⁷) and Birds of Conservation Concern (Red List ⁸)
County	Local Nature Reserves (LNR) Non-statutory designated wildlife sites: known as Local Wildlife Sites (LWS) in Reading; and Local Biodiversity Action Plan habitats and species.

³ Chartered Institute of Ecology and Environmental Management (2017). *Guidelines for Ecological Report Writing*. Technical Guidance Series.

⁴ Chartered Institute of Ecology and Environmental Management (2017). *Guidelines for Preliminary Ecological Appraisal*. Technical Guidance Series.

⁵ BSI (2013) BS 42020:2013. *Biodiversity - Code of Practice for Planning and Development*.

⁶ DCLG (2018). *National Planning Policy Framework*, paragraph 174.

⁷ <http://www.iucnredlist.org/technical-documents/categories-and-criteria>

⁸ https://www.rspb.org.uk/birds-and-wildlife/bird-and-wildlife-guides/bird-guide/status_explained.aspx

Table 3: Legally Protected Species

Legislation (Summarised in Appendix A)
Species included on Schedules II and IV of The Conservation of Habitat and Species Regulations 2017; Species included on Schedules 1, 5 and 8 of the Wildlife and Countryside Act 1981 (as amended), excluding species that are only protected in relation to their sale (Section 9[5] and 13[2]); and Badgers, which are protected under the Protection of Badgers Act 1992.

Ecological Data Search

- 2.3. The aim of the ecological data search is to collate existing ecological records for the Site and adjacent areas. Obtaining existing records is an important part of the evaluation process, as it provides additional information that may not be apparent during a site survey.
- 2.4. An ecological data search was undertaken in August 2018, during which all records of protected species, and/or other notable fauna and flora within 1km of the Site were requested from Thames Valley Environmental Records Centre (TVERC)⁹.
- 2.5. Records of important statutory and non-statutory sites designated for their nature conservation value within 1km of the Site were also requested from TVERC and searched for on the Multi-Agency Geographic Information for the Countryside (MAGIC)¹⁰.
- 2.6. Sites with statutory, national or international designations could typically include Local Nature Reserves (LNR), Ancient Woodland, notified or candidate Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA) or Ramsar sites.
- 2.7. In addition, Habitats of Principal Importance (HoPI) and Species of Principal Importance (SoPI) listed under Section 41 (S41) of the NERC Act¹¹, as well as Species Action Plans (SAPs) and Habitat Action Plans (HAPs) identified by the Reading Biodiversity Action Plan, were consulted to assign an ecological context to the Site.

'Extended' Phase 1 Habitat Survey

- 2.8. An 'Extended' Phase 1 Habitat Survey of the Site was undertaken on 25th July 2018 using the Joint Nature Conservancy Council (JNCC)¹² standard 'Phase 1' survey technique. The Phase 1 Habitat Survey methodology was 'Extended' by undertaking an assessment of the Site to support protected and notable faunal species. All habitat types within the Site were mapped (**Figure 1**) with target notes where appropriate. The survey of the Site was conducted under conditions deemed appropriate for survey (being dry).
- 2.9. Where access allowed, adjacent habitats were also considered to assess the Site within the wider landscape, and to provide information with which to assess possible impacts of the proposed Development.

⁹ Thames Valley Environmental Records Centre (August 2018). *Biodiversity Report* Ref: TVERC/18/259.

¹⁰ Magic.defra.gov.uk. (2014). *Magic*. [online] Available at: <http://magic.defra.gov.uk/> [Accessed February 2018].

¹¹ ODPM (2006) 'Natural Environment and Rural Communities Act'

¹² JNCC. (2010). *Handbook for Phase 1 Habitat Survey*. Nature Conservancy Council.

- 2.10. A detailed floral species list was collated for the Site during the 'Extended' Phase 1 Habitat Survey. As such, the species list detailed within the results section of this report can be used to inform any future BREEAM reports (specific assessment guidelines dependant).

Preliminary Bat Roost Inspections

- 2.11. As part of the preliminary roost inspection an external building inspection for roosting bats was undertaken in combination with the 'Extended' Phase 1 Habitat Survey. The survey was led by an experienced ecologist who holds a Natural England Class 2 Licence for all bat species and counties of England. The survey was based on current best practice guidelines¹³.
- 2.12. An assessment of the buildings and trees on Site and adjacent was made in terms of their suitability to support roosting bats. The survey consisted of a visual inspection of the exterior of the buildings and trees for evidence of bat use (e.g. droppings, scratch marks, staining and sightings). A number of factors were considered, including internal conditions, presence of features suitable for use by roosting bats, proximity to foraging habitats or cover and potential for disturbance. Notes were made relating to relevant characteristics of features providing potential access points and roosting opportunities for bats. Following the preliminary roost inspections, the buildings and trees were scored as per the criteria set out in **Table 4**, based on adapted current best practice guidelines, to determine its potential to support roosting bats.

Table 4: Bat Roost Potential Ratings

Assigned Bat Roosting Potential	Description
Known or confirmed roost	Evidence of roosting bats within the building or tree.
High	A building or tree with one or more Potential Roost Features (PRFs) 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.
Moderate	A building or tree with one or more PRFs 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).
Low	A building with one or more PRFs that could be used by individual bats opportunistically. However, these PRFs do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
	A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.
Negligible	Building or tree with negligible features likely to be used by roosting bats.

Invasive Plant Species Assessment

- 2.13. The list of invasive plant species included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) is extensive and these plants are found in a range of different habitats, including aquatic habitats. The 'Extended' Phase 1 Habitat Survey checked for the presence of common invasive species including; Japanese knotweed *Fallopia japonica*, giant knotweed *Fallopia*

¹³ Collins. J, (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. Third Edition, Bat Conservation Trust.

sachalinensis, hybrid knotweed *Fallopia baldschuanica*, giant hogweed *Heracleum mantegazzianum* and Himalayan balsam *Impatiens glandulifera*.

Black Redstart Survey

- 2.14. A single visit to check the Site for breeding black redstart *Phoenicurus ochruros* was undertaken by Bill Haines (experienced ornithologist) on 23rd July 2018. The methodology broadly followed those given in Gilbert *et al*, (1998)¹⁴ and the Black Redstart Action Plan Working Group for London (BRAPWGL)¹⁵ whereby the Site and immediately adjacent areas were walked starting before dawn and birds were looked and listened for at a number of points for a minimum of 3 hours. The NCP Car Park in Garrard Street was used as a suitable point to view from, as it overlooked all the roofs within the Site boundary. An internal search of the NCP Car Park for nests was also made during the survey. **Table 5** below provides a summary of the survey parameters during the black redstart survey.

Table 5: Summary of Black Redstart Survey Parameters

Date	Dawn time	Survey time start / end	Start weather conditions (°C*, BF** & Oktas***)	Finish weather conditions
23.07.18	05:38	04:58-07:40	20°C. BF2, cloud cover 0/8 Oktas, good visibility, dry.	25°C. BF1, cloud cover 0/8 Oktas, excellent visibility, dry.

*Degrees Celsius

**Beaufort Scale (0-12)

***Cloud cover scale (0-8)

IEF Assessment

- 2.15. Data gathered as part of this PEA has been used to identify potential IEFs (i.e. designated sites, habitats and species as listed in **Tables 2** and **3**) that are anticipated to be affected by the Development within the Zol (up to 1km from the Site).
- 2.16. However, not all the IEFs within the Zol have the potential to be significantly affected by the Development, or the legislation pertaining to them to be contravened. Therefore, where features are unlikely to be affected by the Development, or where any effects that impact IEFs are unlikely to be significant, for the reasons¹⁶ listed below, such features have been scoped out of the assessment:
- No pathway of effect has been identified, for example the feature is sufficient distance from the Site or there is the presence of a barrier between its location and the Site¹⁷ ; or
 - The feature is of insufficient biodiversity conservation value within the Zol, due to its quality, extent or population size¹⁸.

¹⁴ Gilbert G, Gibbons DW & Evans J. Bird Monitoring Methods. A manual of techniques for key UK species. RSPB. 1998.

¹⁵ <https://www.blackredstarts.org.uk/pages/sitesurvey.html>

¹⁶ Positive or negative effects on ecological features that have the potential to influence a planning decision are considered to be significant

¹⁷ Whilst the Zol of potential effects arising from the development is up to 1km from the Site, the ecological Zol (within which the feature could be affected) for each feature may vary and for some features may be much less, e.g. great crested newts generally move up to a maximum of 500m from a breeding pond and movement can be restricted by barriers such as busy roads and fast flowing rivers

¹⁸ E.g. whilst a Priority Species such as skylark *Alauda arvensis* or house sparrow *Passer domesticus* is of National importance (**Table 3**), the impact of development on individual or a small population of such a species, which are generally commonly found, is unlikely to be assessed as significant

- 2.17. For all remaining features scoped into the assessment, the pathway of effect (e.g. habitat loss, lighting, noise etc.) and potential impact of this on the feature have been identified.

Constraints and Limitations

- 2.18. Only a single black redstart survey was carried out in 2018. This survey was undertaken late in the season (the latest that previous surveys have been carried out was 12th July in 2012 when the birds were proved breeding within the Site) and it is suspected that any birds that may have been present could have already left the area on post-breeding/natal dispersal and migration. As such, the mitigation and enhancement measures detailed in Section 5 of this report take into account the historical surveys undertaken at the Site and are based on the assumption that black redstarts are still breeding on, or within the vicinity of, the Site.
- 2.19. All other contractors, designers and the client should be aware of the following: The design recommendations within this report are assessed to be the most effective ecological solution at this stage of the project. No other pre-construction information has been provided, obtained or referred to during the preparation of this report (including, but not limited to, services information, geotechnical reports and ordnance reports). In deciding whether and how to progress with this project, it will be incumbent upon the client, designers and contractors to obtain and refer to relevant pre-construction and maintenance information, as required by the Construction (Design and Management) Regulations to ensure compliance. Waterman can assist with the development and co-ordination of this design to support effective risk management on this project upon request.

3. Results

Desk Study

Statutory Sites

- 3.1. There are no statutory designated sites within 1km of the Site.

Non-Statutory Sites

- 3.2. The Site is not located within any non-statutory designated sites. However, there are three non-statutory sites located within 1km of the boundary of the Site, as detailed in **Table 6** below.

Table 6: Summary of desk study records of designated sites within 1km of the Site

Site Name	Designation	Distance from Site Boundary (km)	Description
Kennet and Avon Canal and River Kennet	LWS	0.48km south-east	The River Kennet is one of the best national examples of a chalk river which is a UKBAP priority habitat. The Kennet and Avon canal section is fed by the river and is accordingly, calcareous in nature. This provides rich and varied riparian vegetation together with adjacent habitats.
Holy Brook (south of Berkley Avenue and Berkley Avenue to Inner Distribution Road)	LWS	0.76km south	The Holy Brook stream carries water to and from the River Kennet. It provides a green area between housing, commercial and industrial areas. A number of notable invertebrates have been recorded in Holy Brook and water vole has been recorded in the central and western sections.
Cow Lane Depot	LWS	0.65km west	This small, triangular site bounded by a railway track towards the centre of Reading comprises a mosaic of habitats including willow scrub, standing water, swamp and ruderal grassland. Cow Lane Depot provides an important wildlife corridor in an urban landscape.

Ancient Woodland

- 3.3. There is no Ancient Woodland on or within 1km of the boundary of the Site.

Protected, BAP and Other Notable Species

- 3.4. Records of legally protected or otherwise notable species of flora and fauna within 1km of the Site were provided by TVERC. A summary of the most significant results of relevance to the Site are provided in **Table 7** below. Full results can be obtained from the data providers but cannot be presented in this report as a result of copyright. It should be noted that the distances provided in **Table 7** below are taken from the central grid reference of the Site and therefore are approximate.

- 3.5. Only records where the most recent record has been recorded within the last c.30years have been included in **Table 7**.

Table 7: Summary of desk study records of flora and fauna within 1km of the Site

Species	Category of Importance	Number of Records	Date Range of Records	Distance of closest record from the centre of the Site (km)
Bats				
Common pipistrelle <i>Pipistrellus pipistrellus</i>	Hab Regs, WCA, RBAP	10	2009 - 2015	0.34km south-east
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	Hab Regs, WCA, S41, RBAP	7	2010 - 2015	0.36km south-east
Pipistrelle sp <i>Pipistrellus sp</i>	Hab Regs, WCA, RBAP	20	1993-2015	0.41km south-east
Daubenton's bat <i>Myotis daubentonii</i>	Hab Regs, WCA, RBAP	25	1991-2008	0.72km north-east
Noctule <i>Nyctalus noctula</i>	Hab Regs, WCA, RBAP	3	1999-2015	0.36km south-west
Unidentified bat <i>Chiroptera sp</i>	Hab Regs, WCA, RBAP	3	1991 - 2015	0.36km south-west
Birds				
Dunnock <i>Prunella modularis</i>	S41	1	2015	0.86km north-east
Black-headed gull <i>Chroicocephalus ridibundus</i>		1	2015	0.86km north-east
Swift <i>Apus apus</i>		91	1994 -	0.3km east
Peregrine falcon <i>Falco peregrinus</i>	A1, WCA	2	2012	On Site (one pair on the former Western Tower)
House martin <i>Delichon urbicum</i>		1	1991	0.9km south
Grey wagtail <i>Motacilla cinerea</i>		1	2015	0.86km north-east
Black redstart <i>Phoenicurus ochruros</i>	WCA, Red, RBAP	5	2005 - 2012	On Site (nest on the former Western Tower)
Starling <i>Sturnus vulgaris</i>	S41, Red	3	2004 - 2015	0.28km east

Species	Category of Importance	Number of Records	Date Range of Records	Distance of closest record from the centre of the Site (km)
Song thrush <i>Turdus philomelos</i>	S41, Red	8	1999 - 2000	0.45km north-east

Hab Regs - Conservation of Species and Habitats Regulations 2017

WCA - The Wildlife and Countryside Act 1981 (as amended)

A1 – Annex 1 of the Birds Directive

S41 – Species of Principal Importance under The Natural Environment and Rural Communities Act 2006

Red – Red list criteria (Bird of Conservation Concern)

RBAP – Reading Biodiversity Action Plan

‘Extended’ Phase 1 Habitat Survey

Habitats

3.6. The following habitat types, described in more detail below, were identified on Site during the ‘Extended’ Phase 1 Habitat Survey:

- Buildings;
- Ephemeral/short perennial vegetation;
- Hardstanding;
- Ornamental planting and scattered trees;
- Walls/fences.

3.7. The habitat descriptions given below should be read in conjunction with **Figure 1** and the photographs (Plates) presented in **Appendix C**.

Buildings

3.8. Numerous buildings are present on Site. These comprise offices, a multi-storey car park, retail space, leisure space and sub-stations. Further details of each building are provided in **Table 8**.

Ephemeral/Short Perennial Vegetation

3.9. There are some small patches of sporadic ephemeral / short perennial vegetation in the north-west of the Site. This area of the Site has been subject to disturbance as a result of the demolition of the Western Tower and former bus station / Mecca Bingo hall in 2015. The ephemeral / short perennial vegetation has colonised the edges of this area where the ground appears less disturbed. Ephemeral / short perennial vegetation is also present on the roof of Telecom House (B4). Species recorded in this habitat comprise smooth sow-thistle *Sonchus oleraceus*, fescue sp. *Festuca* sp., spear thistle *Cirsium vulgare*, rosebay willowherb *Chamaenerion angustifolium*, ragwort *Senecio jacobaea*, butterfly bush *Buddleja davidii* and Canadian fleabane *Conyza canadensis*.

Hardstanding

- 3.10. Hardstanding is present in the temporary events space (**Plate 1**) located along the southern side of Station Hill and within the storage compound area (**Plate 2**) where Western Tower was demolished. There are also some crushed aggregate stockpiles in this location. Roads and pavements are also present within the Site.

Ornamental Planting and Scattered Trees

- 3.11. Five ornamental planting beds (**Plate 3**) are present along the western and north-western Site boundaries adjacent to Xafinity House (B1). These beds contain a variety of cultivated and introduced shrub species including Oregon grape *Mahonia aquifolium*, butterfly bush, barberry *Berberis sp*, cultivated holly *Ilex sp*, ivy *Hedera helix*, Leyland cypress *Cupressus × leylandii* and semi-mature silver birch trees *Betula pendula*.
- 3.12. A raised linear ornamental planting bed is present along the southern side of the temporary events space (**Plate 4**). It is understood that this was implemented in 2016, following the demolition of Western Tower and the former bus station/Mecca Bingo hall. Species recorded include ivy, pendulum sedge *Carex pendula*, fern *Polypodium vulgare*, spurge *Euphorbia 'Wulfenii'* together with young silver birch and field maple *Acer campestre* trees.
- 3.13. Three temporary ornamental flower beds are also located along the northern Site boundary and these contain New Zealand flax *Phormium sp*.
- 3.14. Two semi-mature river birch *Betula nigra* trees are present in tree pits at the southern Site boundary along Friar Street.

Walls / Fences

- 3.15. Hoarding fencing and a brick wall are present at various locations across the Site, defining boundaries for different uses.

Notable Adjacent Habitats

- 3.16. Building B7 is connected to B3 at its northern side. B7 has been assessed as having low potential to support roosting bats, further details are provided in **Table 8**. All other adjacent habitats are considered to be of limited ecological value given the presence of roads and buildings.

Protected, BAP and other Notable Fauna and Flora

- 3.17. As a result of the previous ecological surveys undertaken and a review of the ecological desk study, an assessment is made below on the potential of the Site to support:
- Bats;
 - Birds;
 - Flora; and
 - Invasive Plant Species.
- 3.18. The fauna descriptions provided below should be read in conjunction with **Figure 1** and the photographs (Plates) presented in **Appendix C**.

Bats

- 3.19. The data search returned records of four bat species (as well as unidentified pipistrelle species) within 1km of the Site. The closest record was of a common pipistrelle bat recorded approximately 340m away in 2009.
- 3.20. None of the previous ecological assessments listed in **Table 1** assessed the Site as having potential value to support roosting, commuting or foraging bats.
- 3.21. The current preliminary roost inspection assessed all buildings and trees on Site and adjacent for their potential to support roosting bats. This inspection identified two buildings (B3 and B7) as having **low** potential to support roosting bats, further details are provided in **Table 8** below. All other buildings and trees have been assessed as having **negligible** potential to support roosting bats.
- 3.22. The Site supports limited vegetated habitats and it is in a densely urbanised area, with associated levels of disturbance and lighting. As such it is assessed that the Site lacks suitable foraging and commuting resources for bats.

Table 8: Results of the Preliminary Roost Inspections

Potential Roosting Features	Building Photographs	Bat Roost Rating
<u>Xafinity House (B1)</u> A six/four-storey 'L-shaped' red-brick structure with ground floor parking. This building is currently occupied by a variety of commercial office uses and is a well-maintained building. No PRFs observed.		Negligible
<u>NCP Car Park (B2)</u> An eight-storey rectangular concrete structure. It provides 950 public parking spaces over 16 floors of split-level car parking space. Security lighting is present on the exterior of the building at level 3. No PRFs observed.		Negligible

Potential Roosting Features	Building Photographs	Bat Roost Rating
<u>Friars Walk Shopping Centre (B3)</u> Friars Walk Shopping Centre is a 1970s five-storey construction. One retail unit is present on the ground floor fronting Friar Street and the remainder of the building is used as a temporary leisure space i.e 'zombie experience'. The NCP Car Park extends over Garrard Street and occupies the roof level of the north-eastern portion of the shopping centre. At the north-eastern corner of B3 a section of brick wall has been removed and this has resulted in the exposure of a cavity wall measuring approximately 10cm wide by 5m high. This feature could provide a potential entry point for bats into the cavity wall (TN1, Plate 5).		Low
<u>Telecom House (B4)</u> Telecom House is a largely vacant 1960s/1970s building with retail uses at ground floor level fronting onto Friar Street and five levels of office uses above. The section of the building fronting Friar Street comprises six storeys and has a flat roof. The remainder of the building which extends north to Garrard Street comprises four storeys and has a flat roof with external roof plant units present. No PRFs observed.		Negligible
<u>Biscuit Tin Café (B5)</u> A café constructed from metal crates. No PRFs were recorded.		Negligible

Potential Roosting Features	Building Photographs	Bat Roost Rating
<u>Sub-stations (B6)</u> Two metal sub-stations recently constructed. No PRFs recorded.		Negligible
<u>(B6)</u> A two-storey brick building with a tiled pitched roof. Two brick chimney stacks protrude from the western roof pitch and wooden cladding is present on the eastern façade. The building is currently occupied by three retail units. This building is connected to B3 at its northern side. PRFs recorded include slipped/raised roof tiles.		Low

Birds

Black Redstarts

- 3.23. The data search returned five black redstart records within 1km of the Site. The closest and most recent records being from the former Western Tower in 2012.
- 3.24. As detailed in **Table 1**, previous black redstart surveys have been undertaken at the Site and wider area. A summary of the results of these surveys are provided below.
- 3.25. The 2005 black redstart survey revealed a pair of black redstarts together with dependent young on the roof of a building adjacent to the east of the Site. The roof being utilised by the species comprises a small informal 'living' roof consisting of a flat, gravel covered substrate colonised with ephemeral plant species. Updated desk-studies undertaken in 2009 and 2011 provided further records for black redstarts in the immediate vicinity of the Site from 2009, 2010 and 2011 (specifically Friar Street, Garrard Street and Merchants Place), with breeding records held for 2009 and 2010.
- 3.26. The 2012 black redstart survey revealed that the Site was found to contain a pair of black redstarts which attempted to breed twice, both times in the NCP Car Park on Garrard Street. Two nests were found; the first is thought to have been partially successful, as chicks were heard calling from it. On inspection under licence on 29th June 2012, the nest was found to contain three cold eggs, but any surviving chicks would have left the nest by then. The second nest contained four well grown feathered young at the time of the survey visit on 12th July 2012.

- 3.27. The 2014 black redstart survey revealed that the Site still provides nesting habitat for black redstarts owing to the presence of buildings. During the first of the two survey visits, two singing males were recorded, the first singing from the buildings to the south of Garrard Street and the second on buildings outside the Site to the south east of Friar Street. The male observed on Site was seen to use a number of song-perches around and just outside the Site. A female black redstart was also seen briefly on Telecom House. The second survey visit recorded a male black redstart that was seen and heard singing briefly from two song-perches to the south of Garrard Street. The other singing male located outside the Site during the first survey was not located and no females were observed. No direct evidence of nesting or breeding black redstarts was recorded during the two surveys.
- 3.28. The 2015 black redstart surveys revealed that the Site still provides nesting habitat for black redstarts owing to the presence of buildings. Although no direct evidence of nesting or breeding black redstarts were identified during the survey, a singing male was recorded on the NCP carpark.
- 3.29. In 2018, no black redstarts were heard or seen on Site or within the adjacent areas. The ephemeral / short perennial vegetation present in the north-west of the Site and on the roof of B4, although limited, could provide foraging opportunities for black redstarts.

Peregrines

- 3.30. The data search returned two peregrine falcon records within 1km of the Site. The closest and most recent records being from the former Western Tower in 2012.
- 3.31. A single male peregrine falcon was recorded on and around the Site on two occasions in 2005 (1st June and 8th June). This individual was observed to be wearing jesses and is therefore considered to be an escaped falconer's bird. As an escaped bird, it does not have the same conservation status as a wild-bred peregrine.
- 3.32. In 2012, a pair of peregrines was seen on the Western Tower on Site on several occasions during the black redstart survey visits. A search was made for a nesting scrape on the Western Tower on 29th June 2012. However, no sign of any breeding activity was found. It is therefore considered to be a perch site only.
- 3.33. A pair of peregrines was again recorded to be using the Western Tower in 2014. They were using it as a lookout and for loafing and feeding. No evidence of nesting was found during any bird surveys in 2014. In 2014, following a bird survey building inspection at the Western Tower on Site, netting was erected to deter peregrine falcons nesting on the tower prior to demolition works.
- 3.34. In 2015 a single peregrine falcon was observed flying over the Site but did not land on any buildings within the Site boundary. It is considered that the netting erected in 2014 was successful in deterring peregrine falcons from using the Western Tower for perching and so the Site was deemed suitable for foraging peregrines only.
- 3.35. The Western Tower was demolished in 2015. None of the other buildings on Site are considered to have potential to support peregrine falcon owing to their much lower heights. As such, no specific survey for peregrine falcon was undertaken in 2018.

Other Bird Species

- 3.36. The data search returned records of seven other bird species (which are known to utilise urban environments) within 1km of the Site. The closest record was of a starling recorded approximately 280m away in 2008.
- 3.37. The following bird species were recorded during the previous Site walkovers and black redstart surveys detailed in **Table 1**, both on and adjacent to the Site:
- Blackbird *Turdus merula* in 2005 and 2012;
 - Starling *Sturnus vulgaris* in 2005, 2012 and 2014;
 - Magpie *Pica pica* in 2014;
 - Jackdaw *Corvus monedula* in 2014;
 - Red kite *Milvus milvus* in 2014;
 - Wren *Troglodytes aedon* in 2014;
 - Wood pigeon *Columba palumbus* in 2005 and 2014;
 - Feral pigeon *Columba livia* in 2005, 2009, 2011, 2012, 2014 and 2015;
 - Swift *Apus apus* in 2005 and 2014;
 - Sparrowhawk *Accipiter nisus* in 2009 and 2014;
 - Carrion crow *Corvus corone* in 2009;
 - Robin *Erithacus rubecula* in 2012 and 2014;
 - Pied wagtail *Motacilla alba* in 2012 and 2014;
 - Grey wagtail *Motacilla cinerea* in 2012 and 2014;
 - Blue tit *Cyanistes caeruleus* in 2012 and 2014;
 - House sparrow *Passer domesticus* in 2012 and 2014;
 - Black-headed gull *Chroicocephalus ridibundus* in 2014;
 - Herring gull *Larus argentatus* in 2012 and 2014;
 - Peregrine falcon *Falco peregrinus* in 2005, 2012, 2014 and 2015; and
 - Dunnock *Prunella modularis* in 2014.
- 3.38. In 2018, the following bird species were recorded on Site or in the immediate adjacent area:
- Black-headed gull;
 - Herring gull;
 - Lesser black-backed gull *Larus fuscus*;
 - Feral pigeon;
 - Common swift *Apus apus*;
 - Pied wagtail;
 - Dunnock;
 - Robin;

- Starling;
- Carrion crow;
- Western jackdaw; and
- European goldfinch *Carduelis carduelis*.

- 3.39. Of the above recorded in 2018, a dunnoek was holding territory (singing) in the northwest corner of the Site and feral pigeon were seen to be nesting within the Site, both in the NCP Car Park and on the buildings to the south of Garrard Street. There was a small group of European goldfinch (containing juveniles) in the newly developed area of Station Hill and pied wagtails appear to be roosting (and probably breeding) within the adjacent railway station complex with at least one pair commuting between the Site and the station. Herring gull, western jackdaw and carrion crow were all seen perched within the Site but not showing any indication of having bred on the Site. All other species listed above were seen either overflying the Site or outside the Site.
- 3.40. Two species (herring gull and starling), which are on the red list of birds of conservation concern and are listed as SoPI were recorded in 2018. They are not thought to have bred on-Site, and given these species are still common and widespread in the region, the Site is not considered to be of particular importance to them.
- 3.41. Four species; lesser black-backed gull, common swift, black-headed gull and dunnoek (SoPI) were recorded in 2018. None of these species are thought to have bred on Site, although as detailed above dunnoek was holding territory.
- 3.42. All other species recorded in 2018 are not of special conservation concern.

Flora

- 3.43. No notable or protected flora or fauna species were recorded on Site.

Invasive Plant Species

- 3.44. No commonly known invasive plant species listed on Schedule 9 of the WCA were recorded at the Site during the 'Extended' Phase 1 Habitat Survey.

Other Protected and Notable Faunal and Flora Species

- 3.45. No evidence of any other protected and notable species faunal species was recorded on Site at the time of survey and overall, given the type and extent of habitats present, it is considered unlikely that any such species would be present on Site.

4. Assessment

- 4.1. The potential IEFs that are anticipated to be affected by the Development (based on the results of the PEA and the Development plans received to date) are listed in **Table 9** below. This table details the rationale for the inclusion of each potential IEF and also details the potential effect pathways and any requirement for further ecological assessments.

Table 9: Potential Important Ecological Features Anticipated to be Affected by the Development

Potential Important Ecological Feature	Category of Importance	Rationale	Potential Effect Pathway	Requirement for Further Ecological Assessment
Black Redstart	WCA, Red RBAP	Historical use (breeding and holding territory) of the Site. Potential breeding habitats still exist on Site.	Disturbance and injury and killing of the species. Destruction and damage to active nests.	Pre-demolition survey if works are undertaken during the breeding season (March – August inclusive). Further details provided in Section 5.
Roosting bats	Hab Regs, WCA, S41, RBAP	B3 and B7 are assessed to have low potential to support roosting bats.	Destruction / disturbance of bat roosts. Killing or injury of bats present in the roosts during building demolition.	Yes - Further assessment in the form of evening emergence / re-entry surveys.

- 4.2. All other ecological features identified through the PEA have been scoped out of further assessment because the population or area likely to be affected by the Development is of insufficient size or diversity to be of ecological value, no potential effect pathway between the Development and these features has been identified; and/or contravention of the legislation relating to the feature is unlikely to occur. The rationale for scoping out features is provided in **Table 10** below.

Table 10: Ecological Features Scoped out of the Assessment

Ecological Feature	Rational
Designated Sites	No pathway of direct or indirect effect given distance from Site. No significant effects anticipated from the Development.
On Site and adjacent habitats (all)	Habitat types are both nationally and locally common. No significant effects anticipated from the Development.
Roosting bats	Buildings B1, B2, B4, B5, B6 and all trees on Site have been assessed as having negligible potential to support roosting bats and therefore no significant effects are anticipated from the Development.
Foraging & commuting bats	The Site itself is considered to provide very limited opportunities for foraging and commuting bats. No significant effects anticipated from the Development.

Ecological Feature	Rational
Peregrine Falcon	None of the buildings on Site are considered suitable to support peregrine falcon. No significant effects anticipated from the Development.
Other Bird Species	Based on survey results usage of the Site is likely to be limited to small numbers (except feral pigeon) of urban bird species only. No significant effects anticipated from the Development.

5. Ecological Constraints and Opportunities

- 5.1. The PEA has identified two potential IEFs, namely roosting bats and black redstarts, which have the potential to be affected by the Development and result in significant ecological effects. The requirement for further ecological assessments to fully define the presence of roosting bats has been highlighted within **Table 9** and a detailed scope is provided below.
- 5.2. To minimise or avoid any significant ecological effects of the Development ecological mitigation have been provided in this section for the potential IEFs and other ecological features. Further details in relation to bats has been provided in a separate bat report.
- 5.3. To inform the future scheme design process for future planning applications recommendations for future ecological compensation and enhancement measures have also been provide in this section. These measures will need to be finalised upon scheme fix and based upon the results of the additional bat assessments.

Designated Sites

- 5.4. Three LWSs lie within 1km of the Site as detailed in **Table 6**. The built development and roads separate the Site from these LWSs. The proposed Development is unlikely to impact upon these LWSs due to the nature of the existing and proposed end use and that the proposals comprise redevelopment of an existing developed site. In addition, public access is encouraged to LWSs and the redevelopment of the Site is unlikely to increase the public use of this area significantly. As such, it is considered that the proposed Development would not have any adverse ecological impact on any LWSs and are therefore are not assessed to be an IEF. However, as a matter of best practice and in accordance with Outline Planning Condition 35, it is recommended that an Environmental Management Plan (EMP) (see below for further details) be implemented during the demolition and construction phase of the Development.

Habitats

- 5.5. No habitats present within the Site are assessed to be IEFs. Nevertheless, mitigation in the form of appropriate protection measures would be set out within the EMP during the construction phase of the Development in accordance with Outline Planning Condition 35. Measures to be included within the EMP should comprise:
 - In line with local planning policy CS38, those trees which will be retained within the Development should be protected in accordance with local planning policy SG18, the existing retained trees should be protected during the construction phase of the Development in accordance with BS 5837:2012 - "*Trees in relation to design, demolition and construction – Recommendations*"¹⁹;
 - The use of British Standards Best Practice Guidelines to reduce disturbance resulting from noise, surface run-off and vibration during construction works;
 - Careful siting and appropriate bunding of storage facilities for fuel and hazardous materials;
 - Delivery of oils and fuels to be supervised at all times;
 - Dust build up and mud deposits should be avoided and stockpiled material to be covered or stored within a contained area to enable run-off to be treated; and
 - Use of trip trays when filling smaller containers from tanks or drums to avoid spillage entering the ground or drainage systems.

¹⁹ BSI (2012): *BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations*.

- 5.6. In line with local planning policy CS36 and Outline Planning Condition 22, it is recommended that the future scheme designs provide the following ecological enhancement measures. The following measures should be considered:
- It is recommended that trees on Site are retained where possible, and placed under a suitable management regime, as part of any future Development proposals;
 - The use of native species or species of benefit to wildlife within any proposed landscape scheme to provide foraging opportunities for birds, bats, invertebrates and other fauna is recommended to enhance the Site for wildlife;
 - The provision of a variety of habitats to provide floristic diversity e.g lawns, hedgerows, shrub planting and herbaceous planting;
 - Additional habitat could be created above ground level utilising roof top space to provide suitable foraging opportunities for local fauna such as bats, bird and invertebrates. Brown roofs should be provided with a gravel substrate and allowed to self-seed with ruderal/ephemeral species. Green roofs could also be provided by creating grassland on roofs by sowing sedum and hardy plant species in shallow low-nutrient soils. Such habitats would provide a food source for invertebrates on which birds and bats may feed. They are also ideal for incorporating bat/bird boxes; and
 - Artificial habitats for bats and birds (see fauna section below) to enhance the Site for these species group.

Protected and Notable Fauna

Bats

- 5.7. Buildings B3 and B7 have been assessed as having **low** potential to support roosting bats. It is understood that B3 will be demolished as part of the Development (specifically Plot F) and B7, which adjoins B3, could also be disturbed as a result of the proposed demolition works. In line with best practice guidelines, it is recommended these buildings are subject to a single evening emergence or pre-dawn re-entry survey to determine the presence / likely absence of roosting bats. Evening emergence / pre-dawn re-entry surveys should be undertaken during the optimal time for this type of survey (May – August). If bats are found roosting within any of these buildings, survey effort would need to be increased to gain an understanding of the bat roost present, and to provide enough information for a NE European Protected Species (EPS) Development Licence application. Please note that a NE licence application takes at least 30 working days to process and must be supported by bat survey information within 18-24 months of age. If roosting bats are discovered, appropriate mitigation and enhancement measures would need to be provided within the Development.
- 5.8. The results of the recommended bat surveys are provided in a separate bat survey report for Plot F.
- 5.9. All other buildings and trees on Site have been identified as having negligible potential to support roosting bats. As such, no further assessment of these buildings and trees is required.
- 5.10. In line with Outline Planning Condition 30, if a significant period of time elapses (normally considered by most local planning authorities as being over 2 years) between this report being produced and the proposed Development works being undertaken, the buildings and trees may deteriorate in

condition and should be subject to an update survey to determine if their potential to support roosting bats has changed.

- 5.11. In line with local planning policy CS36, it is recommended that the future scheme designs provide bat boxes to enhance opportunities on Site for roosting bats. The bat boxes should be erected at least 4m above ground level facing south, south-east or south-west. The exact details of the enhancement measures would be finalised upon completion of the recommended bat surveys.
- 5.12. The use of native plant species as recommended above, would provide additional foraging and commuting habitat for bats at the Site.
- 5.13. In addition, a wildlife sensitive lighting strategy should look to be adopted across the Site to prevent any unnecessary spill on future roosting habitats (e.g. bat boxes) and commuting/foraging habitats.

Birds

Black Redstarts

- 5.14. Although no black redstarts were observed on Site in 2018, given the previous survey and desk study results, it is considered likely that black redstarts could still breed on or immediately adjacent to the Site.
- 5.15. In line with Outline Planning Condition 31 and to ensure legal compliance for the Development, demolition and Site clearance works should be undertaken outside the main breeding bird season where practicable (mid-September to mid-February inclusive). If these works cannot be restricted to this period, a pre-demolition/clearance check should be undertaken by a suitably qualified ecologist to ensure that nesting black redstarts are not adversely affected. If nesting black redstarts are recorded during the pre-demolition/clearance check, an appropriate method statement would be agreed in consultation with RBC. This would include measures to prevent the disturbance to breeding black redstarts, including cessation of demolition, site clearance or construction works in areas close to breeding sites until the birds have completed breeding, and monitoring the species during the active construction period.
- 5.16. In line with Outline Planning Condition 22, it is recommended that the future scheme designs provide artificial nesting opportunities (e.g. Schwegler 2HW Nest Box) for black redstarts. It is recommended that the nest boxes are erected at least 4m above ground level on buildings facing a north-east or east direction. The nest box should be located away from areas of disturbance and ideally close to potential foraging resources (e.g. brown roofs).
- 5.17. As discussed in the habitats section above, the provision of brown roofs within the Development would provide foraging habitats for black redstarts.

Peregrine Falcon

- 5.18. Given the demolition of Western Tower, there are no current opportunities on Site for peregrine falcon and as such, no specific mitigation measures for this species are required as part of the Development.
- 5.19. In line with Outline Planning Condition 22, it is recommended that artificial nesting opportunities for peregrine falcons should be provided within the Development on buildings of suitable height, taking

the former Western Tower as a benchmark at c.15 storeys. It is recommended that open fronted peregrine falcon nest boxes filled with suitable substrate for egg-laying are erected at a high elevation on the edge of the roof tops of new buildings. The nest box should be located away from areas of disturbance and have a clear flight path. Alternatively, a specially designed high elevation ledge or recess could be included within the design of proposed new buildings to provide a safe perching or nesting platform. Any artificial nest site should be sited facing north-east or east to prevent possible overheating of the eggs and newly hatched young²⁰.

Other Bird Species

- 5.20. As detailed above for black redstart, demolition and Site clearance works should be undertaken outside the main breeding bird season where practicable (mid-September to mid-February inclusive) in line with Outline Planning Condition 31 (note: feral pigeon recommendation below) and to ensure legal compliance for the Development.
- 5.21. Given the presence of nesting feral pigeons within buildings on Site it is recommended that a staged approach to legally remove the pigeons is carried out prior to demolition. The breeding season for most common bird species is documented to be between March to August inclusive, however feral pigeons are known to breed all year round and receive legal protection (**Appendix B**) when at an active nest site. As such it is recommended that a contractor is appointed to develop a strategy to clear the Site of feral pigeons that could include the use anti-nesting devices, to discourage birds from nesting on the buildings. Once nests are no longer active the contractor may wish to install netting to prevent birds from returning. These are critical to prevent any delays to the proposed demolition commencement date on Site.
- 5.22. In line with Outline Planning Condition 22, it is recommended that the future scheme designs provide artificial nesting opportunities for swifts (e.g lbstock eco-habitat for swifts). It is recommended that the nest boxes are erected at a high elevation on buildings facing a north direction. The nest bricks should be incorporated into a wall (cladding) with clear adjacent airspace for the swifts to fly into.
- 5.23. The use of native plant species as recommended above, would provide additional foraging and nesting habitat for birds at the Site.

²⁰ Ratcliffe, D A (1995) *The Peregrine Falcon*. Second Edition. T and A D Poyser, London.

6. Conclusions

- 6.1. As a result of the PEA, ecological features within the ZOI including designated Sites, habitats, foraging and commuting bats, peregrine falcon and other bird species have been scoped out of the assessment due to insufficient biodiversity conservation value or a lack of an identified pathway for potential effects to occur. However, roosting bats and black redstarts are potential IEFs within the ZOI which are anticipated to be affected by the Development.
- 6.2. It is determined that further ecological assessments as detailed in **Table 11** below would be required to inform the Development's emerging scheme design.

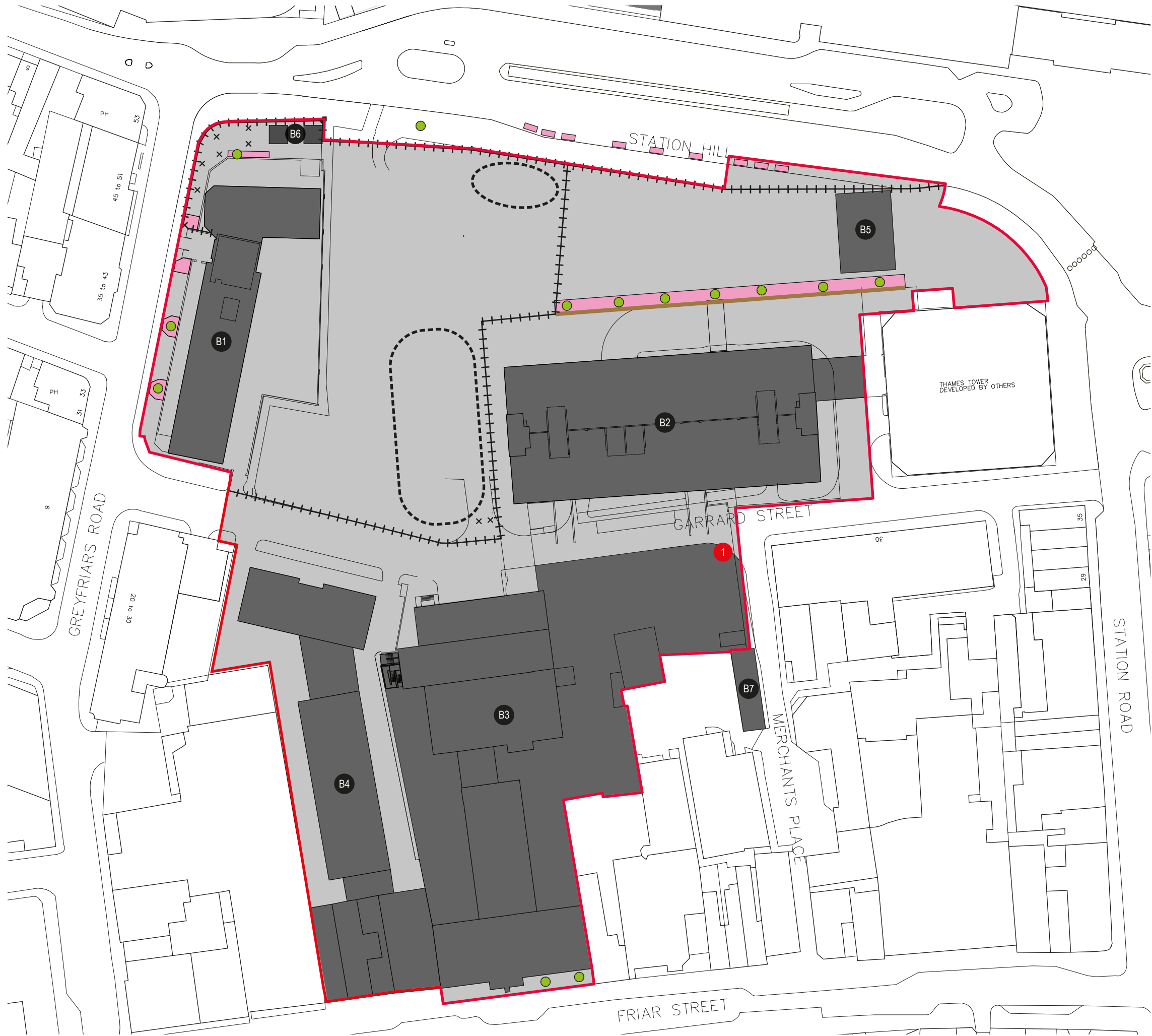
Table 11: Summary of Additional Ecological Assessments

Species	Survey	Timing
Roosting bats	A single evening emergence or pre-dawn re-entry survey at B3 and B7.	May to August

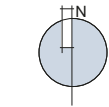
- 6.3. Recommendations have been made within this report to ensure legal compliance and ensure good practice measures are adopted during the Development works. Furthermore, recommendations for ecological compensation and enhancement have been provided to inform the future scheme design process for future planning applications.
- 6.4. It should be noted that this PEA is relevant to the legislation detailed in Section 2 and **Appendix B** at the time of writing. If there are any changes to legislation prior to the Development being completed, the advice within this PEA may require amending / updating in line with any legislative updates.
- 6.5. If there is a significant period of time (most LPAs consider this period to be to 24 months) between this PEA and the Development commencing, the ecological value of the Site may change and the Site should therefore be subject to an update survey.

Figures

Figure 1: 'Extended' Phase 1 Habitat Survey Plan (ref. WIE14788-100_GR_PEA_1A)



- Site Boundary
- Buildings
- Hardstanding
- Tree
- Ornamental Planting
- Ephemeral / Short Perennial
- Wall
- Aggregate Stockpiles
- Fence
- Target Note



Project Details	WIE14788-100: Station Hill, Reading
Figure Title	Figure 1: 'Extended' Phase 1 Habitat Survey Plan
Figure Ref	WIE14788-100_GR_PEA_1A
Date	August 2018
File Location	\\s-incs\wiel\projects\wie14788\100\graphics\peal\issued figures



APPENDICES

A. Summary of Outline Planning Conditions

Planning Condition	Relevant to which Phase / Plot	Comments
Condition 22: <i>"In respect of each Plot, each application for the approval of Reserved Matters shall be accompanied by details of habitat mitigation works for that Plot (if and to the extent relevant to the subject matter of the Reserved Matters application). This shall include a report detailing the following habitat mitigation works which shall be submitted to and approved in writing by the Local Planning Authority:</i> <i>A. Locations and specification for bird nesting habitats for Black Redstarts, Swifts and Peregrine Falcons</i> <i>B. Specifications for green roofs and brown roofs (to be a minimum area of 25% of each Plot's roof area in the development), including their method of construction and landscaping on-going management for five years; and</i> <i>C. Details of the ground level planting scheme (demonstrating how it has been designed to maximise its benefit to wildlife within the context of the scheme).</i> <i>These approved habitat mitigation works shall be in place prior to completion of the relevant building/Plot and retained thereafter.</i> <i>Reason: to ensure that a habitat which would be designed specifically for these birds is created/re-provided for within the development, in the interests of biodiversity."</i>	All	Condition 22 was discharged for Plot B on 17.10.16 (ref. 151545); and Condition 22 is duplicated on the Plot E / Telecom House consent (151426) and is yet to be discharged.
Condition 30: <i>"In the event that demolition of a relevant Plot has not commenced by 1 June 2015, no development/demolition shall commence until an updated bat survey has been undertaken (by an appropriately qualified ecologist, that is a member of CIEEM or an equivalent institution with experience of undertaking bat surveys,) and the results submitted to and approved in writing by the Local Planning Authority. Furthermore, should bats or evidence of bats be found, no development shall commence until any relevant licence(s) have been obtained from the Statutory Nature Conservation Organisation (currently Natural England) and a copy is submitted to the Local Planning Authority. Should bats or evidence of bats be found and the applicant considers that a licence for development works affecting bat is not required, the applicant must submit a report to the Local Planning Authority detailing the reasons for this assessment and this report is to be approved in writing before development shall commence.</i> <i>Reason: to ensure that bats, a material consideration, are not adversely affected by the development."</i>	All	N/A
Condition 31: <i>"No demolition or site clearance within a plot shall take place within the bird nesting season (mid-February to mid-September inclusive). If clearance within a Plot during the bird-breeding season cannot reasonably be avoided, a suitably qualified ecologist will resurvey the areas within and adjacent to the Plot immediately prior to clearance within</i>	All	Condition 31 is duplicated on the Plot E / Telecom House consent (151426) and

Planning Condition	Relevant to which Phase / Plot	Comments
<i>the Plot and advise whether nesting birds are present. If active nests are recorded, no works that could disturb the nest shall proceed until all young have fledged the nest and if a nest of a Peregrine Falcon, Swift or Black Redstart is found on a Plot, all works of demolition within a Plot or site clearance within a Pot which could disturb the nest must cease until a method statement for undertaking the works on the Plot has been agreed with the Local Planning Authority. The works shall only be undertaken in accordance with the approved method statement, save to the extent that the Local Planning Authority approves any variation.</i> <i>Reason: to minimise the impact of the development on bird species."</i>		is yet to be discharged.
Condition 35: <i>"No development shall commence (including works of demolition) on any Plot until an Environmental Management Plan (EMP) (based on the recommendations in Chapter 6: Development Programme Demolition and Construction of the document, "Environmental Statement Volume 1", dated March 2013 by Waterman Group) for that Plot has been submitted to and approved in writing by the Local Planning Authority. The demolition and construction within the Plot shall thereafter only be undertaken in accordance with the approved EMP (which shall include noise control, hours of construction and controlling exposure to contaminated land), save to the extent that the Local Planning Authority approves any variation to the approved details.</i> <i>Reason: to ensure that the redevelopment of each Plot is undertaken in a way which minimises disturbance to residents and occupiers of other Plots within the development and surrounding existing residential and commercial land uses."</i>	All	Condition 35 was discharged 19.03.2015 (ref. 150119); and Condition 35 is duplicated on the Plot E / Telecom House consent (151426) and is yet to be discharged.

B. Planning Policy and Summarised Flora and Fauna Legislation

National Planning Policy

National Planning Policy Framework, 2018

- B1. The National Planning Policy Framework²¹ (NPPF) was published in July 2018. Section 15 (outlined below) of the NPPF, 'Conserving and Enhancing the Natural Environment', replaces Section 11 of the previous NPPF 2012 revision²². However, Government Circular 06/2005²³ - Biodiversity and Geological Conservation: Statutory Obligations and Their Impact within the Planning System, remains valid and is referenced within the NPPF.
- B2. The NPPF encourages the planning system to contribute to and enhance the natural and local environment. This should be achieved by:
- *"Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
 - *recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
 - *maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*
 - *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*
 - *preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*
 - *Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate".*
- B3. The NPPF also stipulates that Local Planning Authorities (LPAs), when determining planning applications, 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;*

²¹ Ministry of Housing, Communities and Local Government. (2018). *National Planning Policy Framework*.

²² Department of Communities and Local Government. (2012). *National Planning Policy Framework*.

²³ Department of Communities and Local Government. (2005). *Circular 06/05: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*.

- *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 reasons and a suitable compensation strategy exists; and*
- *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.”*

National Planning Practice Guidance, 2016

- B4. The Government's National Planning Practice Guidance²⁴ (NPPG) is intended to provide guidance to local planning authorities and developers on the implementation of the planning policies set out within the NPPF. The guidance of most relevance to ecology and biodiversity is the Natural Environment Chapter, which explains key issues in implementing policy to protect biodiversity, including local requirements.

Local Planning Policy

Reading Borough Local Development Framework: Core Strategy

- B5. The Core Strategy²⁵ was adopted (with alterations) by Reading Borough Council on 27th January 2015. The Core Strategy is the main document in the Council's Local Development Framework (LDF). It sets out how planning and development will achieve the Reading 2020 Vision for the town. It provides a framework for how Reading can grow in a sustainable way in the future. The following policies are of relevance to the Site:
- Policy CS36 'Biodiversity and Geology' states:
 - “a) Development should retain, protect and incorporate features of biodiversity or geological interest (including protected species and their habitats) found within the application site into their schemes. On sites with recognised biodiversity or geological value, development will not be permitted where there would be a direct or indirect adverse impact on the site, unless it can be clearly demonstrated that: -*
 - i. The need for development clearly outweighs the need to protect the value of the site; and*
 - ii. Appropriate compensation, impact minimisation, mitigation and compensation are provided.*
 - b) Local Nature Reserves and Wildlife Heritage Sites will be safeguarded and where possible, enhanced. Permission will not be granted for any development that would adversely affect a designated nature reserve or Wildlife Heritage Site.*
 - c) Any development that would sever or threaten the integrity of an established wildlife link, as indicated on an adopted proposals map, will not be permitted. Where applicable, developments should be designed to protect, consolidate, extend and enhance the network of wildlife links and corridors in and adjoining the Borough, working with neighbouring authorities where appropriate.”*
 - Policy CS38 'Trees, Hedges and Woodlands' states:

²⁴ Department for Communities and Local Government. (2016). *National Planning Practice Guidance*. DCLG, London.

²⁵ Reading Borough Council (January 2015). *Reading Borough Local Development Framework: Core Strategy*.

“Individual trees, groups of trees, hedges and woodlands will be protected from damage or removal, and the Borough’s vegetation cover will be extended.”

Reading Borough Local Development Framework, Sites and Detailed Policies Document, Adopted 2012 (Updated 2015)

- B6. Policy DM3 of the Sites and Detailed Policies Document²⁶ relates to infrastructure Planning. The policy states that in determining planning applications the highest priority will be given to *“open space, green infrastructure and other measures to improve or enhance biodiversity”*.
- B7. Policy DM18 encourages tree planting within application sites or off-site where appropriate.

Reading Borough Local Development Framework, Reading Central Area Action Plan, 2009

- B8. The Reading Central Area Action Plan (RCAAP) adopted in 2009²⁷, stresses that the design and construction of new developments in the centre of Reading should be sustainable in nature. The Plan draws attention to the use of green and brown roofs which *“may enhance the biodiversity value of developments in the centre. Brown roofs in particular are of benefit to species such as black redstarts, one of the priority species in the [Reading] Biodiversity Action Plan, which have been sighted in the central area”*.

Station Hill South Planning and Urban Design Brief, 2007

- B9. The Station Hill Planning and Urban Design Brief²⁸ acknowledges that the ecology of the area is mainly limited to black redstarts, which are known to nest in the area. Design principle 8 states:
- *“Developments should demonstrate positive yield in terms of environmental and ecological benefits...”*;
 - *“Development should meet the requirements of the local Biodiversity Action Plan (BAP)”*; and
 - *“Building tall buildings can also yield potential ecological and environmental benefits by integrating vertical landscaping, roof gardens or vegetation within the architecture. Further consideration will be expected as part of any application for taller buildings.”*

Reading Borough Council: Tree Strategy for Reading

- B10. The Tree Strategy for Reading²⁹ sets out a shared vision and strategy for trees in Reading. It considers various issues and options in relation to trees and sets out a strategic approach towards future management. The following objectives are of relevance to this report:

- B11. Objective 5: Enhancing biodiversity states:

“The Council will seek to ensure that the management of its tree stock and woodlands is enhanced by:

- *Protecting trees and woodlands, particularly ancient or veteran trees and important woodlands;*
- *Writing and implementing woodland management plans;*
- *Conserving, enhancing and extending existing green corridors and creating new ones to enhance the borough’s green infrastructure;*

²⁶ Reading Borough Council (2012). *Reading Borough Local Development Framework, Sites and Detailed Policies Document, Adopted 2012*

²⁷ Reading Borough Council (2009). *Reading Borough Local Development Framework: Reading Central Area Action Plan To 2026*.

²⁸ Reading Borough Council (2007). *Station Hill South Planning and Urban Design Brief*.

²⁹ Reading Borough Council (June 2010). *Tree Strategy for Reading*.

- Ensuring that native and wildlife friendly species of trees are used in new planting schemes in most cases; and
- Retaining standing and fallen dead wood habitat for biodiversity where health and safety and amenity considerations allow.”

B12. Objective 6: The role of new developments states:

“New development will be expected to make a positive and sustainable contribution supporting the objectives of this strategy in enhancing Reading’s urban environment. Such planting should be used to enhance streets and other public realm as part of planning permissions for all relevant new developments, particularly in higher density urban developments.”

Reading Local Plan 2018

B13. Reading Borough Council are currently producing a new Local Plan³⁰, which once adopted will replace the existing development plans detailed above. The new Local Plan was submitted to the Secretary of State for examination on Thursday 29th March 2018. The following policies relate to the Site and/or biodiversity and nature conservation:

- EN12: Biodiversity and The Green Network; and
- CR11: Station / River Major Opportunity Area
 - CR11a: Friar Street & Station Road;
 - CR11b: Greyfriars Road Corner;
 - CR11c: Station Hill & Friars Walk.

Biodiversity Action Plans

UK Post-2010 Biodiversity Framework

B14. The Environment Departments of all four governments in the UK work together through the Four Countries Biodiversity Group. Together they have agreed, and Ministers have signed, a framework of priorities for UK-level work for the Convention on Biological Diversity. Published on 17 July 2012, the 'UK Post-2010 Biodiversity Framework'³¹ covers the period from 2011 to 2020. This now supersedes the UK Biodiversity Action Plan (UK BAP)³². However, many of the tools developed under UK BAP remain of use, for example, background information about the lists of priority habitats and species. The lists of priority species and habitats agreed under UK BAP still form the basis of much biodiversity work in the countries.

B15. Although the UK Post-2010 Biodiversity Framework does not confer any statutory legal protection, in practice many of the species listed already receive statutory legal protection under UK and / or European legislation. In addition, the majority of Priority national (English) BAP habitats and species are now those listed as Habitats of Principal Importance (HoPI) and Species of Principal Importance (SoPI) in England listed under Section 41 (S41) of the NERC Act 2006. For the purpose of this report, habitats and species listed under S41 of the NERC Act are referred to as having superseded the UK BAP. All public bodies have a legal obligation or 'biodiversity duty' under Section 40 of the NERC Act 2006 to conserve biodiversity by having particular regard to those species and habitats listed under S41.

³⁰ Reading Borough Council (2018) *Submission Draft: Reading Borough Local Plan*.

³¹ JNCC and DEFRA (on behalf of the Four Countries' Biodiversity Group). (2012). *UK Post-2010 Biodiversity Framework*.

³² HMSO. (1994) *Biodiversity The UK Action Plan*.

Appendices

Station Hill, Reading

WIE14788-100

WIE14788-100-R-1-2-1-PEA

B16. Based on the results of the PEA no HoPIs are considered present on or adjacent to the Site. However, the following SoPIs listed under S41 are considered to be of potential value on and/or immediately adjacent to the Site:

- Soprano pipistrelle *Pipistrellus pygmaeus*;
- Noctule *Nyctalus noctule*;
- Starling *Sturnus vulgaris*;
- Herring gull *Larus argentatus*; and
- Dunnock *Prunella modularis*.

Berkshire Biodiversity Strategy

B17. The Berkshire Biodiversity Strategy³³ presents a statement of the current state of nature in Berkshire and a strategy for protecting and enhancing the natural environment.

Local Biodiversity Action Plan

B18. At a local level, the Site is covered by The Reading Biodiversity Action Plan (RBAP)³⁴. The RBAP sets out a methodology to protect, conserve and enhance Reading's diversity of wildlife. Based on the results of the PEA, the following Habitat Action Plans (HAPs) and Species Action Plans (SAPs) listed on the RBAP are considered to be of potential value on and/or immediately adjacent to the Site:

- Urban I (Manmade site and structures);
- Black redstart *Phoenicurus ochrurus*; and
- Bats.

Guidance

Biodiversity 2020: A strategy for England's wildlife and ecosystem services

B19. In October 2010, over 190 countries signed an historic global agreement in Nagoya, Japan to take urgent and effective action to halt the alarming global declines in biodiversity. This agreement recognised just how important it is to look after the natural world. It established a new global vision for biodiversity, including a set of strategic goals and targets to drive action. England's response to this agreement was the publication of '*Biodiversity 2020: A strategy for England's wildlife and ecosystem services*'³⁵. The mission for this strategy is:

"to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people."

BS 42020: 2013 Biodiversity: Code of Practice for Planning and Development

B20. The UK commitment to halt overall loss of biodiversity by 2020 in line with the European Biodiversity Strategy and UN Aichi targets³⁶, is passed down to local authorities to implement, mainly through

³³ Berkshire Local Nature Partnership (2014) *The Natural Environment in Berkshire: Biodiversity Strategy 2014-2020*.

³⁴ The Reading Biodiversity Action Plan. http://www.reading.gov.uk/media/5972/Reading-Biodiversity-Action-Plan/pdf/Reading_BAP_February_062.pdf Access in July 2018.

³⁵ Defra. (2011) *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*.

³⁶ <https://www.cbd.int/sp/targets/>

planning policy. To assist organizations affected by these commitments, BSI has published BS 42020 which offers a coherent methodology for biodiversity management.

- B21. This British Standard sets out to assist those concerned with ecological issues as they arise through the planning process in matters relating to permitted development and activities involved in the management of land outside the scope of land use planning, which could have site-specific ecological implications.
- B22. The standard has been produced with input from a number of organisations including the Chartered Institute of Ecology and Environmental Management (CIEEM) and the Association of Local Government Ecologists (ALGE) and provides:
- Guidance on how to produce clear and concise ecological information to accompany planning applications;
 - recommendations on professional ethics, conduct, competence and judgement to give confidence that proposals for biodiversity conservation, and consequent decisions/actions taken, are sound and appropriate; and
 - direction on effective decision-making in biodiversity management a framework to demonstrate how biodiversity has been managed during the development process to minimize impact.

Legislation

- B23. Specific habitats and species receive legal protection in England under various pieces of legislation, including:
- The Conservation of Habitats and Species Regulations 2017³⁷;
 - The Wildlife and Countryside Act 1981 (as amended)³⁸;
 - The Countryside and Rights of Way (CROW) Act 2000³⁹; and
 - The Natural Environment and Rural Communities Act 2006⁴⁰.
- B24. Further details of legislation in respect of legally protected and notable flora and fauna of relevance to the Site are provided below;

Bats

- B25. In summary, in England all UK bat species are protected by the Conservation of Habitats and Species Regulations 2017 and by the WCA 1981 (as amended). Taken together it is an offence to deliberately, intentionally or recklessly:
- Kill, injure or capture a bat;
 - Disturb bats in such a way as to be likely significant to affect:
 - (i) the ability of any significant group of bats to survive, breed, or rear / nurture their young; or
 - (ii) the local distribution of that species;
 - Damage or destroy any breeding or resting place used by bats; or
 - Obstruct access to any place used by bats for shelter or protection and disturbing bats while occupying such as place.

³⁷ HMSO (2010) The Conservation of Habitats and Species Regulations 2017.

³⁸ HMSO (1981) 'Wildlife and Countryside Act 1981 (as amended)'

³⁹ HMSO (2000) 'The Countryside and Rights of Way (CROW) Act'

⁴⁰ ODPM (2006) 'Natural Environment and Rural Communities Act (2006)'

Birds

B26. All breeding birds are protected under current UK legislation through the Wildlife and Countryside Act 1981 (as amended). Part 1 of the Wildlife and Countryside Act 1981, entitled 'Protection of Wild Birds, their Nests and Eggs', confirms the following:

B27. Subject to the provisions of this Part, if any person intentionally:

- kills, injures or takes any wild bird;
- takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
- takes or destroys an egg of any wild bird, he shall be guilty of an offence.

B28. Black redstarts are afforded National protection under Schedule 1 of the WCA 1981 (as amended). It is an offence to intentionally take, injure or kill a black redstart or to take damage or destroy its nest, eggs or young. It is also an offence to intentionally or recklessly disturb the birds close to their nest during the breeding season.

C. Photographs



Plate 1 – Temporary events space along the southern side of Station Hill comprising hardstanding, ornamental planting, scattered trees, The Biscuit Tin Café (B5) and a pop-up event venue.



Plate 2 – Compound area located between Garrard Street and Station Hill with crushed aggregate stockpiles where Western Tower was previously demolished.



Plate 3 – Ornamental planting along the western Site boundary adjacent to Xafinity House (B1)

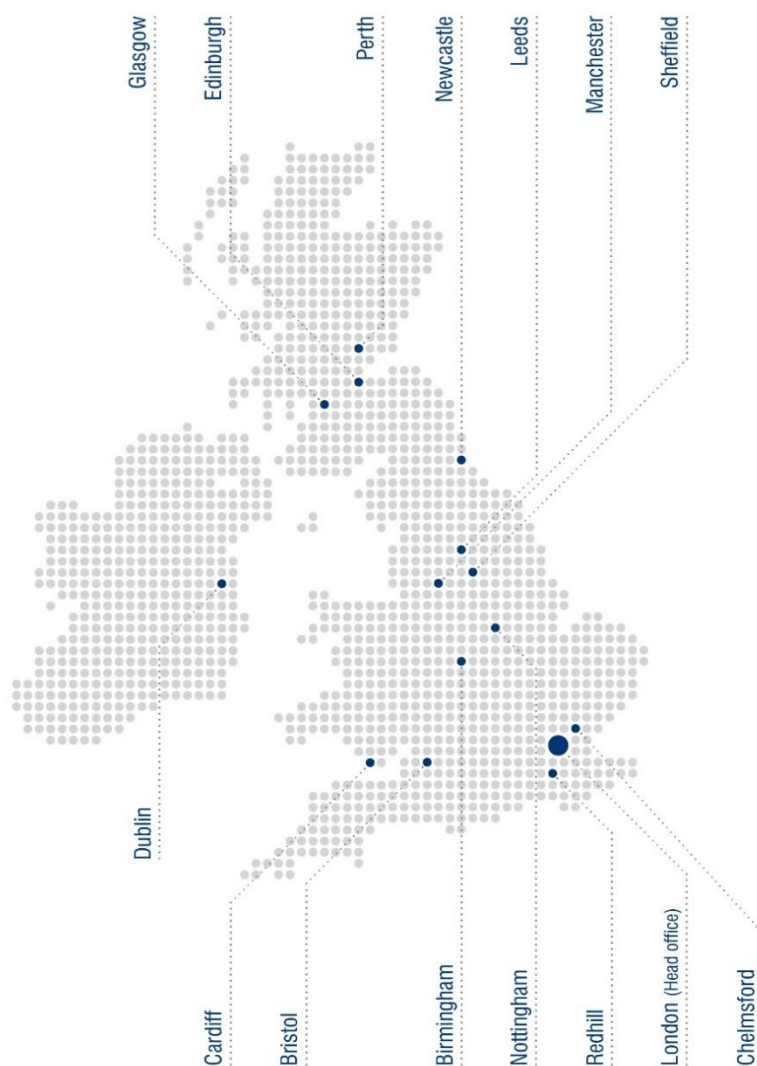


Plate 4 - Linear raised ornamental planting bed located along the southern extent of the temporary events space.



Plate 5 - At the north-eastern corner of B3 a section of brick wall has been removed and this has resulted in the exposure of a cavity wall measuring approximately 10cm wide by 5m high (located denoted by red arrow above). This feature could provide a potential entry point for bats to roost in the cavity wall **(TN1)**.

UK and Ireland Office Locations





Appendix C

Bat Survey, 2018



Station Hill, Reading

Bat Survey Report

September 2018

Waterman Infrastructure & Environment Limited

Merchants House, Wapping Road, Bristol, BS1 4RW.

www.watermangroup.com

Client Name: SH Reading Master LLP
Document Reference: WIE14788-100-R-2-2-1-BAT
Project Number: WIE14788-100

Quality Assurance – Approval Status

This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS OHSAS 18001:2007)

Issue	Date	Prepared by	Checked by	Approved by
Draft	August 2018	Hayley Hockridge Principal Ecologist 	Lee Mantle Associate Director 	Ben Steele Regional Director 
Final	September 2018	Hayley Hockridge Principal Ecologist 	Ben Steele Regional Director 	Ben Steele Regional Director 

Comments

Disclaimer

This report has been prepared by Waterman Infrastructure & Environment Limited, with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporation of our General Terms and Condition of Business and taking account of the resources devoted to us by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at its own risk.

Contents

1. Introduction	1
2. Relevant Legislation and Planning Policy	2
3. Methodology	7
4. Results	8
5. Conclusions and Recommendations	9

Tables

Table 1: Summary of Evening Emergence Bat Survey	7
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Figures

Figure 1: 'Extended' Phase 1 Habitat Survey Plan (WIE14788-100_GR_PEA_1A)	10
Figure 2: Bat Surveyor Locations (WIE14788-100_GR_EC_1A)	10

1. Introduction

- 1.1. Waterman Infrastructure & Environment Ltd (Waterman IE) was commissioned by SH Reading Master LLP (hereafter referred to as the 'Applicant') to carry out a bat survey at an area of land known as Station Hill, which encompasses Plots A - G, located in Reading Town Centre (hereafter referred to as the 'Site'). The bat survey however was specific to a building within Plot F (B3) and a building (B7) adjacent to the south of this plot.

The Site

- 1.2. The Site is approximately 2.53 hectares (ha) in area and is centred on Ordnance Survey Grid Reference SU 71351 73699.
- 1.3. The recent Preliminary Ecological Appraisal (PEA) (report ref: WIE14788-100-R-1-2-1-PEA) identified the following habitats on Site: buildings (B1 – B6), hardstanding, ephemeral / short perennial, ornamental planting, scattered trees and walls/fences (**Figure 1**).
- 1.4. The Site is bound by roads/built development on all sides, notably Station Hill to the north, Thames Tower and Merchants Place to the east, Friar Street to the south and Greyfriars Road and built retail/office/residential development (Sainsburys, Central Studios and Greyfriars House) to the west.

Development Proposals

- 1.5. The planning history of the Site and Development proposals are summarised in the recent PEA report, however, this report has been prepared specifically in support of a prior notification of demolition submission by the Applicant in relation to Friars Walk Shopping Centre (B3) and Telecom House (B4) (hereafter referred to as the 'Development') which occupy Plot F and Plot E of the overall Development.

Aims and Objectives of this Assessment

- 1.6. The recent PEA identified B3 and B7 as having low potential to support roosting bats. B3 will be demolished as part of the Development and therefore a further bat survey was recommended in the PEA to determine the presence / likely absence of roosting bats in this building. Although building B7 will not be demolished as part of the Development, it is considered that it could be disturbed due to the proposed demolition works at the attached B3, and therefore a further bat survey was also undertaken at this building.
- 1.7. The findings of the bat surveys are presented in this report, together with mitigation and enhancement measures where required, in line with current planning policy and legislative requirements (**Appendix A**).

2. Relevant Legislation and Planning Policy

Legislation

Bats

- 2.1. All bat species in England are protected by The Conservation of Habitats and Species Regulations 2017¹ and by the Wildlife and Countryside Act 1981 (as amended)². Taken together, it is an offence to:
- Deliberately kill, injure or capture a bat;
 - Deliberately disturb bats in such a way as to be likely to significantly affect:
 - (i) The ability of any significant group of bats to survive, breed, or rear / nurture their young; or
 - (ii) The local distribution of that species;
 - Damage or destroy any breeding or resting place used by bats; or
 - Intentionally or recklessly obstruct access to any place used by bats for shelter or protection.

National Planning Policy

National Planning Policy Framework, 2018

- 2.2. The National Planning Policy Framework³ (NPPF) was published in July 2018. Section 15 (outlined below) of the NPPF, 'Conserving and Enhancing the Natural Environment', replaces Section 11 of the previous NPPF 2012 revision⁴. However, Government Circular 06/2005⁵ - Biodiversity and Geological Conservation: Statutory Obligations and Their Impact within the Planning System, remains valid and is referenced within the NPPF.
- 2.3. The NPPF encourages the planning system to contribute to and enhance the natural and local environment. This should be achieved by:
- *"Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
 - *recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
 - *maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*
 - *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*
 - *preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental*

¹ HMSO, 2017 'The Conservation of Habitats and Species Regulations'

² HMSO, 1981 'The Wildlife and Countryside Act' (WCA) (as amended)

³ Ministry of Housing, Communities and Local Government. (2018). *National Planning Policy Framework*.

⁴ Department of Communities and Local Government. (2012). *National Planning Policy Framework*.

⁵ Department of Communities and Local Government. (2005). *Circular 06/05: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*.

conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

- *Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate”.*

2.4. The NPPF also stipulates that Local Planning Authorities (LPAs), when determining planning applications, 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 reasons and a suitable compensation strategy exists; and*
- *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.”*

National Planning Practice Guidance, 2016

2.5. The Government’s Planning Practice Guidance⁶ (PPG) is intended to provide guidance to local planning authorities and developers on the implementation of the planning policies set out within the NPPF. The guidance of most relevance to ecology and biodiversity is the Natural Environment Chapter, which explains key issues in implementing policy to protect biodiversity, including local requirements.

Local Planning Policy

Reading Borough Local Development Framework: Core Strategy

2.6. The Core Strategy⁷ was adopted (with alterations) by Reading Borough Council on 27th January 2015. The Core Strategy is the main document in the Council’s Local Development Framework (LDF). It sets out how planning and development will achieve the Reading 2020 Vision for the town. It provides a framework for how Reading can grow in a sustainable way in the future. The following policy is of relevance to the Site:

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“The Council will seek to ensure that the management of its tree stock and woodlands is enhanced by:

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- *Retaining standing and fallen dead wood habitat for biodiversity where health and safety and amenity considerations allow.”*

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“New development will be expected to make a positive and sustainable contribution supporting the objectives of this strategy in enhancing Reading’s urban environment. Such planting should be used to enhance streets and other public realm as part of planning permissions for all relevant new developments, particularly in higher density urban developments.”

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¹¹ Reading Borough Council (June 2010). *Tree Strategy for Reading*.

¹² Reading Borough Council (2018) *Submission Draft: Reading Borough Local Plan*.

Guidance

Biodiversity 2020: A strategy for England's wildlife and ecosystem services

- 2.14. In October 2010, over 190 countries signed an historic global agreement in Nagoya, Japan to take urgent and effective action to halt the alarming global declines in biodiversity. This agreement recognised just how important it is to look after the natural world. It established a new global vision for biodiversity, including a set of strategic goals and targets to drive action. England's response to this agreement was the publication of '*Biodiversity 2020: A strategy for England's wildlife and ecosystem services*'¹³. The mission for this strategy is:

"to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people."

BS 42020: 2013 Biodiversity: Code of Practice for Planning and Development

- 2.15. The UK commitment to halt overall loss of biodiversity by 2020 in line with the European Biodiversity Strategy and UN Aichi targets¹⁴, is passed down to local authorities to implement, mainly through planning policy. To assist organizations affected by these commitments, BSI has published BS 42020 which offers a coherent methodology for biodiversity management.
- 2.16. This British Standard sets out to assist those concerned with ecological issues as they arise through the planning process in matters relating to permitted development and activities involved in the management of land outside the scope of land use planning, which could have site-specific ecological implications.
- 2.17. The standard has been produced with input from a number of organisations including the Chartered Institute of Ecology and Environmental Management (CIEEM) and the Association of Local Government Ecologists (ALGE) and provides:
- Guidance on how to produce clear and concise ecological information to accompany planning applications;
 - recommendations on professional ethics, conduct, competence and judgement to give confidence that proposals for biodiversity conservation, and consequent decisions/actions taken, are sound and appropriate; and
 - direction on effective decision-making in biodiversity management a framework to demonstrate how biodiversity has been managed during the development process to minimize impact.

¹³ Defra. (2011) *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*.

¹⁴ <https://www.cbd.int/sp/targets/>

3. Methodology

- 3.1. To confirm the presence or absence of roosting bats within B3 and B7, an evening emergence bat survey was undertaken based on current best practice guidelines¹⁵.
- 3.2. Three bat surveyors were used during the surveys to ensure all of the potential bat access features were covered. The surveys were led by an ecologist who holds a Natural England Class 2 Bat Survey Licence for all counties and species in England. The positions of the surveyors during the evening emergence survey are presented on **Figure 2**.
- 3.3. The surveys were undertaken using Batlogger M bat detectors. This survey equipment is considered suitable for detecting all resident species of UK bats.
- 3.4. The surveys were undertaken in appropriate weather conditions and within the recognised bat active season (May to August) for these types of surveys. **Table 1** below provides a summary of the bat surveys undertaken.

Table 1: Summary of Evening Emergence Bat Survey

Date	Dusk Time	Time start / end (GMT+1)	Start Weather conditions	Temp at start	Temp at end
08.05.18	20:40	20:25-22:12	BF2*, cloud cover 6/8 Oktas**	22°C	18°C

*Beaufort Scale (0-12)

**Oktas cloud cover scale (0-8)

- 3.5. Recorded bat calls were later analysed using appropriate sound analysis reference publications where appropriate using BatSound 4.1.2b.
- 3.6. Any bats observed were recorded. Information, where relevant, included:
 - Time;
 - Emergence or re-entry points;
 - Direction of flight;
 - Use of landscape;
 - Flight characteristics;
 - Size;
 - Height; and
 - Behaviour.

¹⁵ Collins. J (2016) *Bat Survey for Professional Ecologists: Good Practice Guidelines*. 3rd Edition.

4. Results

- 4.1. No bats were observed emerging or entering building B3 or B7 during the evening emergence survey. Common pipistrelle *Pipistrellus pipistrellus* passes were recorded between 20:54 and 22:12 by the bat surveyors and further details are provided below:
- Surveyor 1 recorded four common pipistrelle passes at 21:02, 21:24, 21:56 and 22:12, however these bats were not seen;
 - Surveyor 2 recorded twenty-one common pipistrelle passes at 20:54, 20:57, 21:00, 21:01, 21:02, 21:04, 21:08, 21:20, 21:21, 21:22, 21:35, 21:43, 21:44, 21:45, 21:46, 21:47, 21:54, 22:00, 22:02, 22:07 and 22:09. The bats recorded at 20:54, 20:57, 21:00, 21:01, 21:02 and 21:08 were observed passing west to east and east to west over B7. All other bat recordings were heard but not seen; and
 - Surveyor 3 recorded twenty-six common pipistrelle passes at 20:54, 20:55, 20:58, 21:01, 21:02, 21:05, 21:08, 21:10, 21:19, 21:20, 21:21, 21:22, 21:23, 21:24, 21:25, 21:35, 21:43, 21:44, 21:45, 21:46, 21:47, 21:56, 21:58, 22:01, 22:02 and 22:07. Activity recorded was similar to Surveyor 2, with the exception that foraging activity was recorded at 21:01, 21:19, 21:47 and 22:02 to the west of B7.
- 4.2. Based on the bat surveyor observations it is considered that a small number of common pipistrelle bats (1-23 individuals) were recorded at the Site. Common pipistrelle is considered to be the most common and widespread bat species in England (population over 100,000)¹⁶. The average roost emergence time for common pipistrelle is 24.8 minutes after sunset¹⁷. Given that the first bat was recorded fourteen minutes after to sunset, it is considered likely that this bat is roosting near the Site.
- 4.3. Given that no bats were recorded emerging or entering B3 or B7, it is considered unlikely that B3 or B7 would support roosting bats and therefore these buildings are currently of **negligible** value to roosting bats.

¹⁶ Wray, S., Wells, D., Long, E., Mitchell-Jones, T. (2010): 'Valuing Bats in Ecological Impact Assessment', IEEM In-Practice

¹⁷ Andrews Ecology (2017) A review of empirical data in respect of emergence and return times reported for the UK's 17 native bat species.

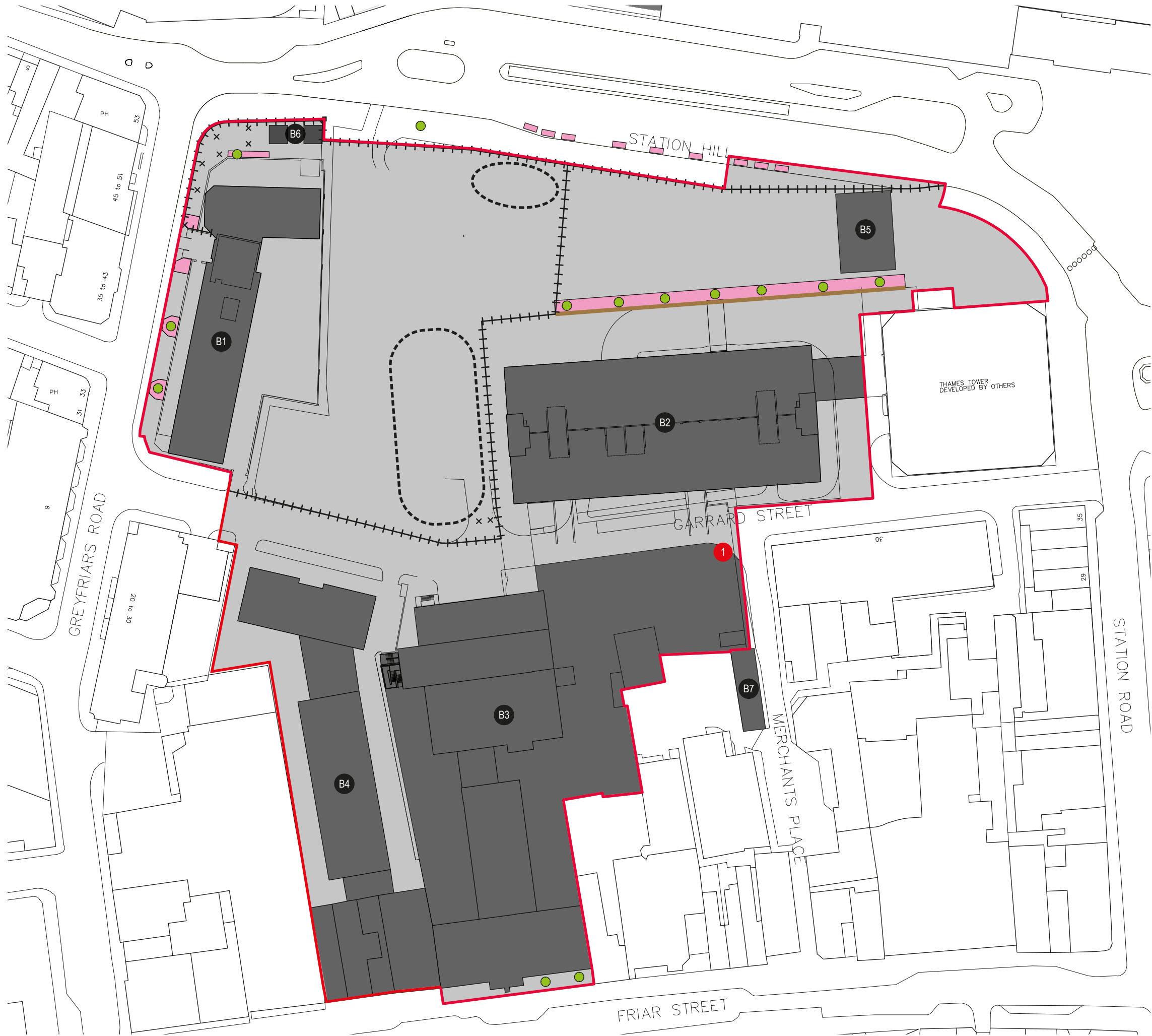
5. Conclusions and Recommendations

- 5.1. No evidence of roosting bats was recorded during the surveys of building B3 or B7. It is therefore assessed that the proposed demolition of B3 as part of the Development would not have any impacts on roosting bats either at B3 or the adjacent B7.
- 5.2. All other built structures and trees on Site have been identified as having **negligible** potential to support roosting bats. As such, no further assessment of these buildings/trees is required prior to any demolition works as part of the Development.
- 5.3. In line with Outline Planning Condition 30, if a significant period of time elapses (normally considered by most local planning authorities as being over 2 years) between this report being produced and the proposed Development works being undertaken, the buildings may deteriorate in condition and should be subject to an update survey to determine if their potential to support roosting bats has changed.
- 5.4. In line with local planning policy CS36, it is recommended that the future development provides bat boxes to enhance opportunities on Site for roosting bats. The bat boxes should be erected at least 4m above ground level facing south, south-east or south-west, be positioned in proximity to vegetated habitats and not lit by artificial lighting. The exact details of the bat box locations and models will be finalised by an ecologist in liaison with the architect / project team during the detailed design of the future development. The use of native plant species within the future development's landscape design would provide additional foraging and commuting habitat for bats at the Site.

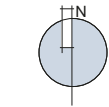
FIGURES

Figure 1: 'Extended' Phase 1 Habitat Survey Plan (WIE14788-100_GR_PEA_1A)

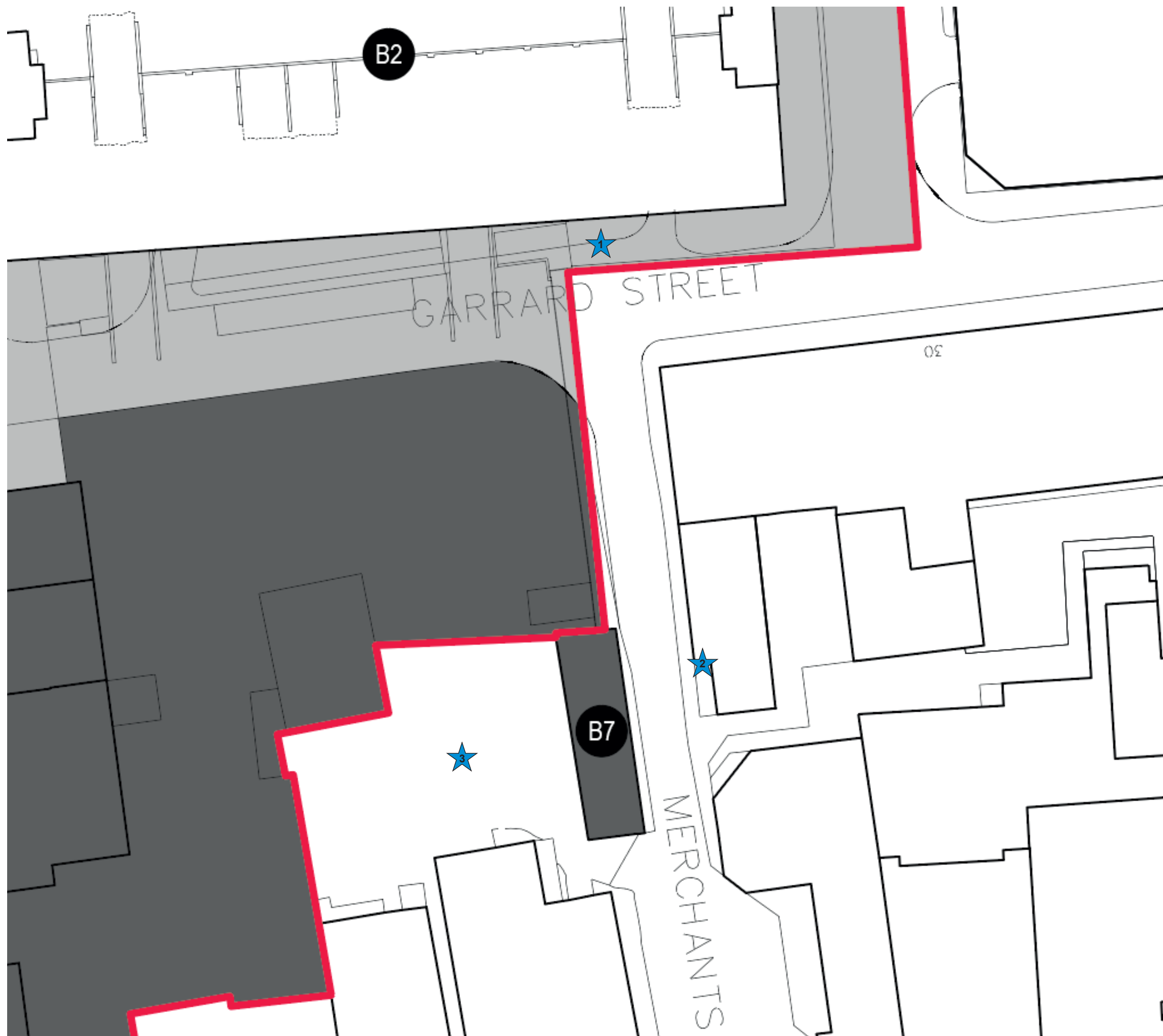
Figure 2: Bat Surveyor Locations (WIE14788-100_GR_EC_1A)



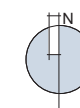
- Site Boundary
- Buildings
- Hardstanding
- Tree
- Ornamental Planting
- Ephemeral / Short Perennial
- Wall
- Aggregate Stockpiles
- Fence
- Target Note



Project Details	WIE14788-100: Station Hill, Reading
Figure Title	Figure 1: 'Extended' Phase 1 Habitat Survey Plan
Figure Ref	WIE14788-100_GR_PEA_1A
Date	August 2018
File Location	\\s-incs\wie\projects\wie14788\100\graphics\peal\issued figures

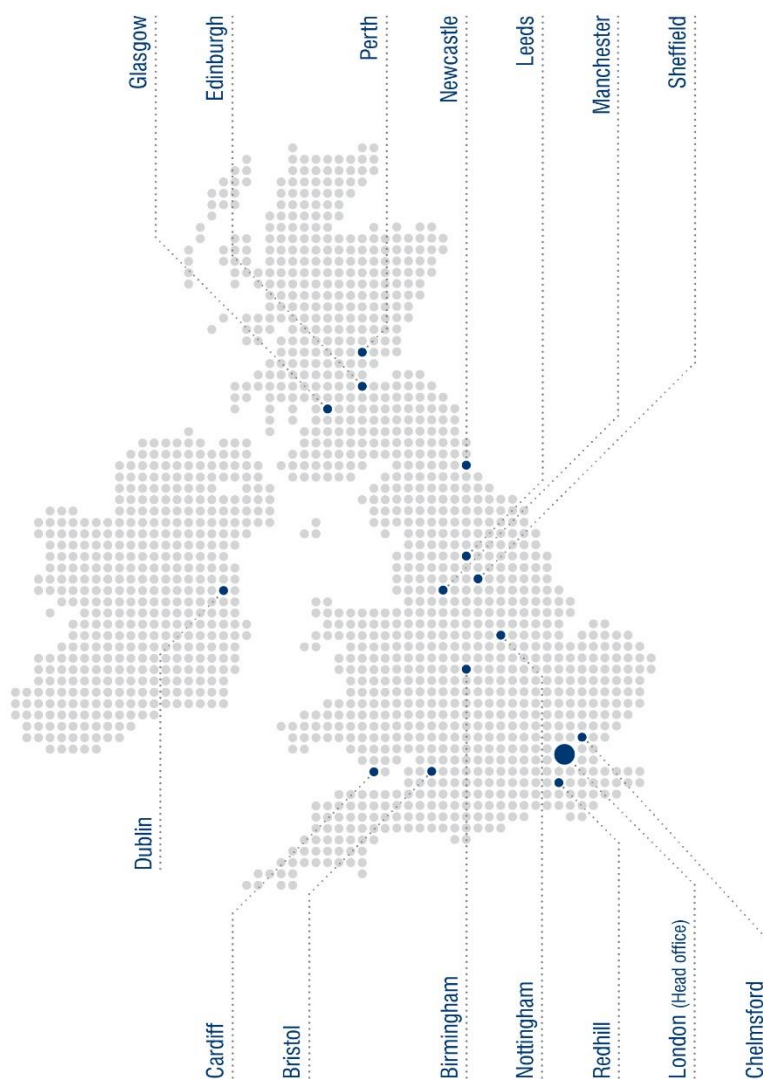


-  Site Boundary
-  Buildings
-  Hardstanding
-  Bat Surveyor Locations



Project Details	WIE14788-100: Station Hill, Reading
Figure Title	Figure 2: Bat Surveyor Locations
Figure Ref	WIE14788-100_GR_EC_1A
Date	August 2018
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UK and Ireland Office Locations



UK and Ireland Office Locations

