

# 12 Junction of Friar Street and Greyfriars Road



### Proposed

Only Plot E (red) of the Proposed Development will be visible in this view. Plot E will be lower at its southerly end, on Friar Street, and will (at maximum parameters) appear to be of a similar height to the new building on the left of the frame and the Novotel at the east end of the street. At maximum parameters, a sliver of its northerly element, stepping up to Garrard Street, will also be visible on the skyline. At minimum parameters, only the southerly element will be visible and it will be of a similar height to that of the existing buildings on Site. The southern elevation will have a slightly staggered footprint, maintaining the street line to the west and east and creating a balanced entrance to the new Friar's Walk on the immediate east side of Plot E. The entrance to the new route northwards will set Plot E slightly away from the lower listed building to its east side (39 Friar Street). Above street level, Plot E will be visibly predominantly residential in nature and characterised by an appropriate materials palette. It will be a new high quality building which will add positively to the varied street frontage and will mark the entrance to the new pedestrian route north through the Site and the new public spaces and activity located there.

Significance of Impact: **minor to moderate, beneficial**

### Amended Maximum Parameters

The southern elevation of Plot E (red) will now be straight, allowing a broader pavement at the entrance to the new Friar's Walk. The west half of the elevation will be lowered, providing a more articulated roofline; the taller part marking the entrance to Friar's Walk leading to the heart of the Proposed Development. The setback top has been altered, it will now not be visible from this position, reducing the impact of the building at street level. Although the amendments to Plot E would cause a noticeable change to the articulation of the plot in this view, the impact of the Proposed Development would remain minor to moderate, beneficial as described above.

Significance of Impact: **minor to moderate, beneficial**

Proposed view



View Location



Camera Location





Amended Maximun Parameters

# 25 Station Road, looking west



Proposed view



View Location



Camera Location

## Proposed

Plot E (red) of the Proposed Development will be visible on the left side of this view on Friar Street. The southern frontage on Friar Street will appear in line with the small brick listed building (39 Friar Street) on the east side of the entrance to the new Friar’s Walk. At the minimum parameters, Plot E (red) will rise little above the existing building’s height and will be little noticed, if at all, seen obliquely within this varied street frontage. At the maximum parameters, it will contribute more variation and depth to the existing roofline without dominating the skyline and will act as a local landmark for the new pedestrian route north off Friar Street. To the right, above the roofline on Station Road, the top of Plot C (blue) will landmark the new Station Square and regenerated area just south of the Station, and will assist in forming a separate upper layer of built form in view, joining the top of the redeveloped Thames Tower (brown) and helping to separate the Novotel from the predominantly brick frontage at street level. At the minimum parameters, the top of Plot C (blue) is unlikely to be noticed.

Significance of Impact: **minor, beneficial**

## Amended Maximum Parameters

The southern elevation of Plot E (red) will now be straight, allowing a broader pavement at the entrance to the new Friar’s Walk. The elevation will be step down at the western end, providing a more articulated roofline; the taller part marking the entrance to Friar’s Walk leading to the heart of the Proposed Development. The setback top has been altered so it will now not be visible from this position and will reducing the impact of the building from the street. Although the amendments to Plot E would cause a noticeable change to the articulation of the plot in this view, the impact of the Proposed Development would remain minor, beneficial as described above.

Significance of Impact: **minor, beneficial**



Amended Maximun Parameters

# 26 Friar Street looking west



### Proposed

Only Plot E (red) of the Proposed Development will be visible in this view. The southern frontage on Friar Street will be set in line with the listed building to its east, with the entrance to the new Friar’s Walk in between. At the minimum parameters, Plot E (red) will rise to a similar height as its closest neighbours. At the maximum parameters, it will appear taller than the buildings further west and will provide a local marker for the entrance to the new Friar’s Walk. Its stepped roofline will rise up and away from the street front, indicating the new route and newly regenerated Site beyond. It will be a new high quality building which will add positively to the varied street frontage and will mark the entrance to the new pedestrian route northwards through the Site and the new public spaces and activity located there.

Significance of Impact: **minor to moderate, beneficial**

### Amended Maximum Parameters

The southern elevation of Plot E (red) will now be straight and set slightly back from the building line of the listed building to its east. This will allow a broader pavement at the entrance to the new Friar’s Walk. The west half of the elevation will be lowered, providing a more articulated roofline; the taller part marking the entrance to Friar’s Walk leading to the heart of the Proposed Development. The setback top has been altered; it will now not be visible from this position, reducing the impact of the building at street level. Although the amendments to Plot E would cause a noticeable change to the articulation of the plot in this view, the impact of the Proposed Development would remain minor to moderate, beneficial as described above.

Significance of Impact: **minor to moderate, beneficial**

Proposed view



View Location



Camera Location



Amended Maximun Parameters

# 28 Junction of Castle Street and St Mary’s Butts



## Proposed

From this south-westerly point, and at maximum parameters, the tops of almost all the Plots of the Proposed Development would be visible. The west tip of the tallest Plot C (blue) would be visible at both minimum and maximum parameters and would provide a new marker for the refurbished Station and new Station Square. It would appear directly adjacent to the Tower of the Grade I listed St Mary’s Church, but would in no way dominate its setting, and its calm and light architectural expression would ensure that it appeared as a recessive feature on the skyline, in the mid-distance. The other Plots would step down from the greater height of C (blue) to the south and west. Together, the new buildings will have a dense and richly layered cluster form on the skyline, marking the regeneration of the Station and surrounding area. In summer, much of Plot C (blue) would be concealed by the trees in the graveyard of St Mary’s Church and at minimum parameters, the lower Plots would not be visible and the taller – B (yellow) and C (blue) – would be little noticed in the distance.

Significance of Impact: **minor to moderate, beneficial**

## Amended Maximum Parameters

The changes to the setback top of Plot E (red) will be seen from this position, the building would step the overall massing of the building will be reduced. The amendments to Plot E would cause only a slight change to the view and the impact of the Proposed Development would remain minor to moderate, beneficial as described above.

Significance of Impact: **minor to moderate, beneficial**

Proposed view



View Location



Camera Location



Amended Maximun Parameters

30

Looking east from the junction of Greyfriars Road and Garrard Street



Proposed view



View Location



Camera Location

Proposed

Plots A (green) and D (pink) of the consented SH3 Scheme will provide a new continuous and legible frontage to Garrard Street on the left, and the northern elevations of Plots E (red) and F (orange) will follow the route of the road on the right. The maximum and minimum proposed heights for Plot E (red) will relate to those of the adjacent Plot F (orange), stepping down from the consented taller plots to the south. The existing jumbled, backlands character of Garrard Street will be transformed by the consented plots of the SH3 Scheme and Plot E (red), and well-defined routes between the plots will improve the permeability of the wider area.

Significance of Impact: **major, beneficial**

Amended Maximum Parameters

No change, although there will be a reduction in height of the north-west corner of Plot E (red), the building would still rise out of the frame; the impact of the Proposed Development would remain major, beneficial as described above.

Significance of Impact: **major, beneficial**





Amended Maximun Parameters



03

# ADDITIONAL VIEW

Table of View

| View | Location                  | Page | Style | Ref    | OS-E       | OS-N      | Height (AOD) | Heading | Lens | Field of View | Film    | Date       | Time  |
|------|---------------------------|------|-------|--------|------------|-----------|--------------|---------|------|---------------|---------|------------|-------|
| 32   | Friar Street, western end | 28   | AVR-1 | D12296 | 470810.257 | 174747.32 | 37.33        | 150.95  | 35mm | 54°           | Digital | 02/06/2015 | 20:11 |

# 32

Friar Street,  
western end



View Location



Camera Location



Existing view



Proposed view

### Existing

This view is taken from the western end of Friar Street at the island in the centre of the pedestrian crossing. Behind the viewing position is a busy roundabout on the A329 dual carriageway. The view looks east along Friar Street, which is one of the principal retail streets in central Reading. Development along this street is mixed, on the south side (to the right) are varied in scale, age and quality and those on the north side are more recent post-war blocks; at the far end the bulky stepped curtain walling of the Novotel hotel is visible. In the foreground to the left, and the principal building in the frame, is Greyfriars Church which is Grade I listed. The Franciscan-style Church was completed in the 14th century and restored in the mid-19th century. The mature trees in the Church grounds screen the clear reading of the Church's silhouette even from this close position. The significance of the Church lies in its age and it being the most complete surviving example of Franciscan architecture in England. The modern setting of the Church, dominated by the road infrastructure to the north and west and post-war commercial and office buildings to the north-east, contributes little to its significance.

### Proposed (with Amended Plot E)

From this south westerly position, if built out to the maximum parameters, the tops of Plot A (green), B (yellow), D (pink), and C (blue) will appear as a tight group, their different heights and massing adding depth to the skyline form and rising towards Plot C (blue) to mark the northeast end of the Site marking the Station. Plot E (red) will be visible in the vista along Friar Street and will be similar in height to its neighbours and the Novotel at the east end of the street. The north-east corner of the plot, on Garrard Street, will be visible in front of Plot D. The cluster of commercial buildings, Plots A-D, to the left of the Church, will share a calm and light architectural expression

whilst their different heights and mass will read as separate, stepped forms. The buildings will be set some distance beyond Greyfriars Church and will be read as a distinctly modern backdrop to the listed building. The proposed buildings at their maximum parameters will appear lower than the belfry turret and west end gable; the Church will remain the primary building in the frame and the picturesque roofline of the Church would remain clearly legible against open sky.

Significance of Impact: **major, beneficial**

### Cumulative

Plot B (Reserved Matters Application) (black) will appear to have the same massing as Plot B in the SH3 Scheme and will appear between and to the left of Plots A (green) and D (pink), maintaining the compact, rounded profile of the new group of buildings.

Significance of Cumulative Impact: **major, beneficial**







04

CONCLUSIONS

- 4.1 As the remodelled views assessed in section 2 demonstrate, the minor parameter changes proposed to the Plot E result in a slight visual change to the local views (Views 9, 10 and 28) and a more noticeable change in close views (Views 12, 25 and 26). There would be no visible change to View 30. While it is judged that the revised massing would result in a slight change in impact, in these views the proposed changes to the maximum parameters of Plot E would not materially alter the composition of the submitted proposed views. They would not therefore alter the assessment of significance of impacts in isolation or cumulatively. There would be no impact on any of the remaining views assessed in the TCVIA (July 2015). As a result there would also be no changes in the impacts on townscape character or the settings of built heritage assets reported in the July 2015 TCVIA.
- 4.2 The additional viewing position (View 32), included in section 3, demonstrates that while the impact on this view of Greyfriars Church would be major, it would not be harmful to its significance.



# Appendix:

## CITYSCAPE VERIFIED VIEWS METHODOLOGY

|     |                                   |    |     |                           |    |
|-----|-----------------------------------|----|-----|---------------------------|----|
| 0.0 | INTRODUCTION .....                | 34 | 4.0 | MODEL POSITIONING .....   | 40 |
| 0.1 | Methodology overview              |    | 4.1 | Height and position check |    |
| 0.2 | View selection                    |    |     |                           |    |
| 1.0 | PHOTOGRAPHY .....                 | 34 | 5.0 | CAMERA MATCHING .....     | 42 |
| 1.1 | Digital photography               |    | 5.1 | Cityscape's Database      |    |
| 1.2 | Lenses                            |    | 5.2 | Creation of Scheme Model  |    |
| 1.3 | Digital camera                    |    | 5.3 | Camera Matching Process   |    |
| 1.4 | Position, time and date recording |    | 5.4 | Wireline Image            |    |
| 2.0 | DIGITAL IMAGE CORRECTION .....    | 36 | 6.0 | POST PRODUCTION .....     | 44 |
| 2.1 | Raw file conversion               |    | 7.1 | Post production           |    |
| 2.2 | Digital image correction          |    |     |                           |    |
| 3.0 | GPS SURVEY .....                  | 38 |     |                           |    |
| 3.1 | Survey                            |    |     |                           |    |

# 0.0 INTRODUCTION

## 0.1 Methodology overview

The methodology applied by Cityscape Digital Limited to produce the verified images or views contained in this document is described below. In the drafting of this methodology and the production and presentation of the images, guidance has been taken from the London View Management Framework SPG March 2012. The disciplines employed are of the highest possible levels of accuracy and photo-realism which are achievable with today's standards of architectural photography and computer-generated models.

## 0.2 View selection

The viewpoints have been selected through a process of consultation with relevant statutory consultees and having regard to relevant planning policy and guidance.

# 1.0 PHOTOGRAPHY

## 1.1 Digital photography

With the latest advances in Digital Photography it is now possible to match the quality of plate photography. Due to the added benefits of time saving and flexibility Cityscape now employ full time in-house digital photographers.

## 1.2 Lenses

For local views a wide angle lens of 24mm or 35mm was used in order to capture as much of the proposal and its surroundings as possible. Intermediate distance views were photographed with a standard 35mm to 70mm.

As a guide, the following combinations were used:

| Distance to subject | View and 5D  | Canon Digital SLR, 1DS Mark III and 5D |
|---------------------|--------------|----------------------------------------|
| 0 – 800 metres      | Local        | 24mm to 50mm 'L' series                |
| 800 to 5000 metres  | Intermediate | 24mm to 70mm 'L' series zoom           |

Examples of these views are shown in Figures 4 and 5.

## 1.3 Digital camera

Cityscape used a Canon 1DS (shown in figure 1), Canon Digital SLR, Canon 1DSMK3 or 5D (all full frame digital SLRs) high resolution digital camera for the digital photography. Also used were Canon's 'L' series professional tilt and shift lenses which produce high quality images that are suitable for the camera-matching process without the need for processing and scanning.

## 1.4 Position, time and date recording

The photographer was provided with (i) an Ordnance Survey map indicating the position of each viewpoint from which the required photographs were to be taken, and (ii) a digital photograph taken by Cityscape of the desired view. For each shot the camera was positioned at a height of 1.60/1.65 metres (depending on whether image is SPG or RPG3A view) above the ground level which closely approximates the human eye altitude. A point vertically beneath the centre of the lens was marked on the ground as a survey reference point and two digital reference photographs were taken of (i) the camera/tripod location and (ii) the survey reference point (as shown in Figures 2 and 3). The date and time of the photograph were recorded by the camera.

1





2



3

4



5



1 Canon 1DS Digital Camera

2 Camera Location

3 Survey reference point

4 Local view

5 Intermediate view

## 2.0 DIGITAL IMAGE CORRECTION

2.1 Raw file conversion  
Canon cameras produce a raw file format, which is then processed digitally for both high detail and colour accuracy. The final image is outputted as a tiff<sup>1</sup> file.

2.2 Digital image correction  
The digital images were then loaded into Cityscape's computers running Adobe Photoshop<sup>®2</sup> software to prepare the digital image for the next stage of camera matching (see section 5). The image is also 'bank'<sup>3</sup> corrected which means ensuring that the horizon in each digital image is precisely horizontal.

In spite of the selection of the most advanced photographic equipment, lenses are circular which results in a degree of distortion on the perimeter of images. The outer edges of an image are therefore not taken into consideration; this eliminates the risk of inaccuracy. Figure 17 in section 5 illustrates the 'safe' or non-distortive area of an image which is marked by the red circle.

The adjusted or corrected digital image, known as the 'background plate', is then saved to the Cityscape computer system ready for the camera matching process (see section 5). In preparation for the survey (see section 4) Cityscape marks up each background plate selecting a number of points in the view, such as corners of buildings, for survey (see Figures 6 and 7)

<sup>1</sup> TIFF is the name given to a specific format of image file stored digitally on a computer.

<sup>2</sup> Adobe Photoshop<sup>®</sup> is the industry standard image editing software.

<sup>3</sup> By aligning the vanishing points.

6





6 Background plate highlighting critical survey points in purple and secondary survey strings in red

7 Area of interest to be surveyed as shown in Figure 7

## 3.0 GPS SURVEY

### 3.1 Survey

Marshall Survey Associates Ltd. (MSA) were contracted to undertake the survey of (i) each viewpoint as marked on the ground beneath the camera at the time the photograph was taken (and recorded by way of digital photograph (see section 1 above)) and (ii) all the required points on the relevant buildings (as marked on the background plate).

The survey was co-ordinated onto the Ordnance Survey National Grid (OSGB36) by using Global Positioning System (GPS) equipment (see, for example, Figure 9) and processing software. The Ordnance Survey National Grid (OSGB36) was chosen as it is the most widely used and because it also allows the captured data to be incorporated into other available digital products (such as Ordnance Survey maps). The height datum used was Ordnance Survey Newlyn Datum and was also derived using the GPS.

MSA uses a baseline consisting of two semi-permanent GPS base stations (see Figure 8). These stations are located approximately 5730 metres apart and positioned so as to optimise the results for the area of operation (see location map, Figure 13). The base stations are tied into the National GPS Network and are constantly receiving and storing data which allows their position to be monitored and evaluated over long periods of operation. By using the same base stations throughout the survey MSA ensure the consistency of the results obtained.

Using the Real Time Kinematic method a real time correction is supplied by each base station to the rover (shown in Figure 10) (over the GSM<sup>4</sup> network) physically undertaking the field survey. This enables the rover to determine the co-ordinates of its location instantaneously (i.e. in ‘real time’). The rover receives a ‘corrected’ fix (co-ordinates) from each base station. If the two independent fixes are each within a certain preset tolerance, the rover then averages the two fixes received. The viewpoints are, with a few exceptions, surveyed using this technique. This method of GPS survey (Real Time Kinematic) produces results to an accuracy in plan and height of between 15mm – 50mm as outlined in the “*Guidelines for the use of GPS in Land Surveying*” produced by the Royal Institute of Chartered Surveyors.

The particular points on each building as marked up on the background plate are surveyed using conventional survey techniques utilising an electronic theodolite and reflectorless laser technology (shown in Figures 11 and 12). There are two methods used to fix the building details, namely polar observations<sup>5</sup> and intersection observations<sup>6</sup>. The position of the theodolite is fixed by the rover as described above. In certain circumstances, a viewpoint may need to be surveyed using conventional survey techniques as opposed to Real Time Kinematic, if, for example, the viewpoint is in a position where GPS information cannot be received.

<sup>4</sup> GSM network: the mobile phone network.

<sup>5</sup> Polar observation is the measurement of a distance and direction to a point from a known baseline in order to obtain co-ordinates for the point. The baseline is a line between two known stations.

<sup>6</sup> Intersection observation is the co-ordination of a point using directions only from two ends of a baseline.



8



9



10



11



12



13

8 Marshall Survey semi-permanent GPS base station

9 GPS System

10 Field survey being carried out using a GPS rover

11 Electronic Theodolite

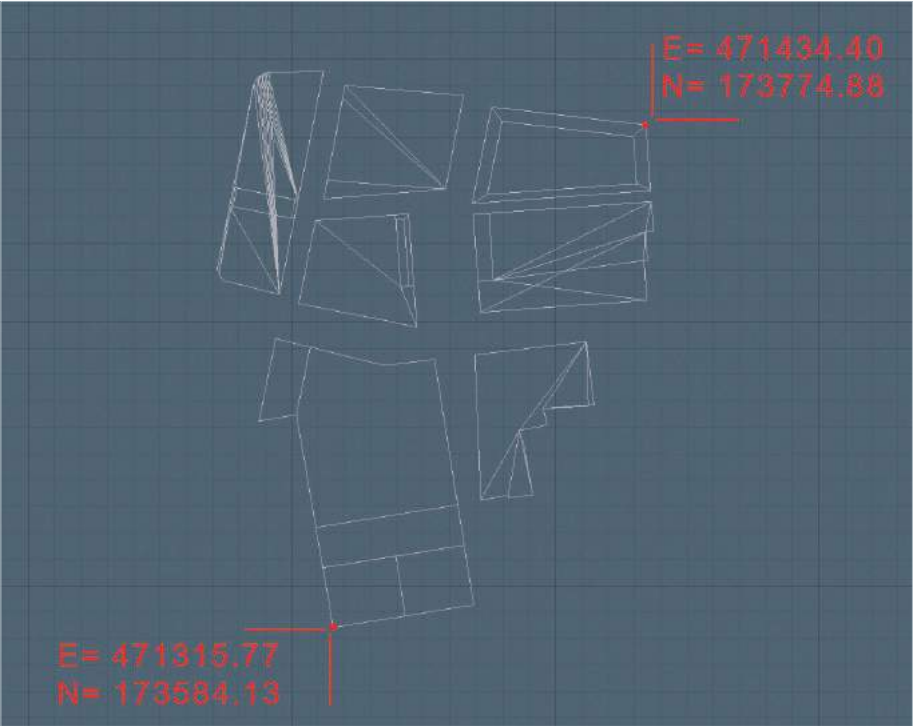
12 Field survey being carried out by St. Paul's Cathedral

13 Location of Marshall Survey's GPS base stations

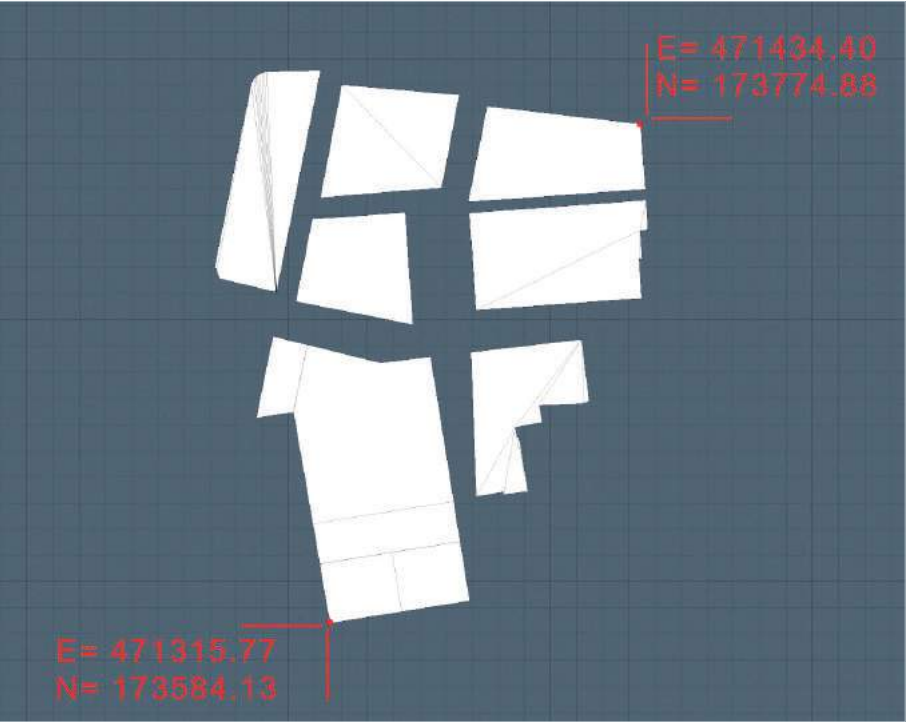
# 4.0 MODEL POSITIONING

4.1 Height and position check  
The model is positioned using a site plan provided by the architect. This is then overlaid onto OS positioned survey from ProMap. Once the building has been positioned in Lightwave confirmation of height and position is requested from the architect. Two clear reference points are agreed and used to confirm the site plan and Ordnance Survey. The height is cross checked against the architects section and given in metres Above Ordnance Survey Datum (AOD).

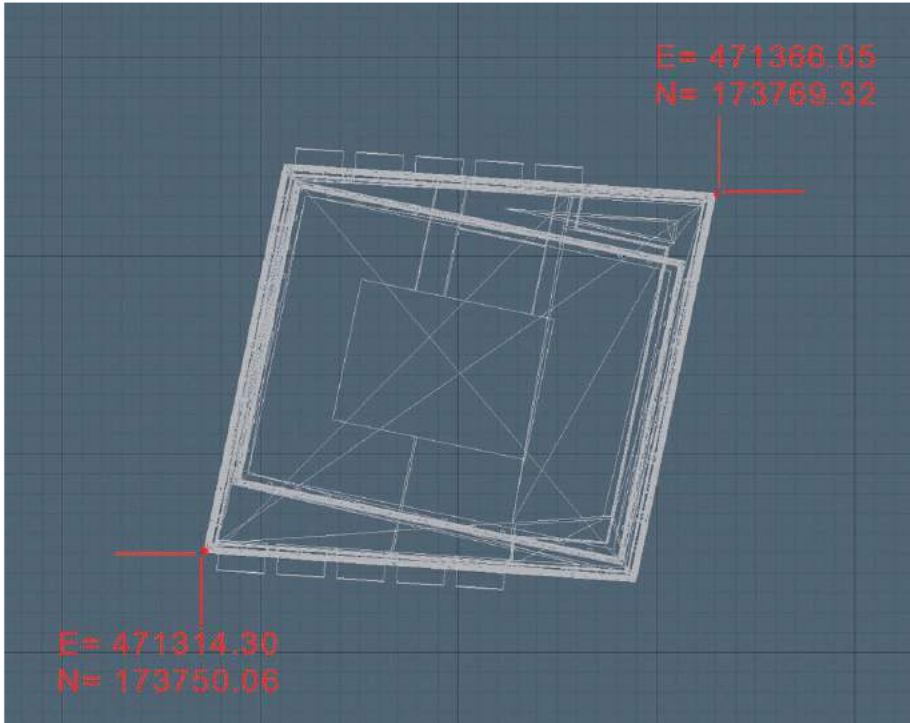
14A



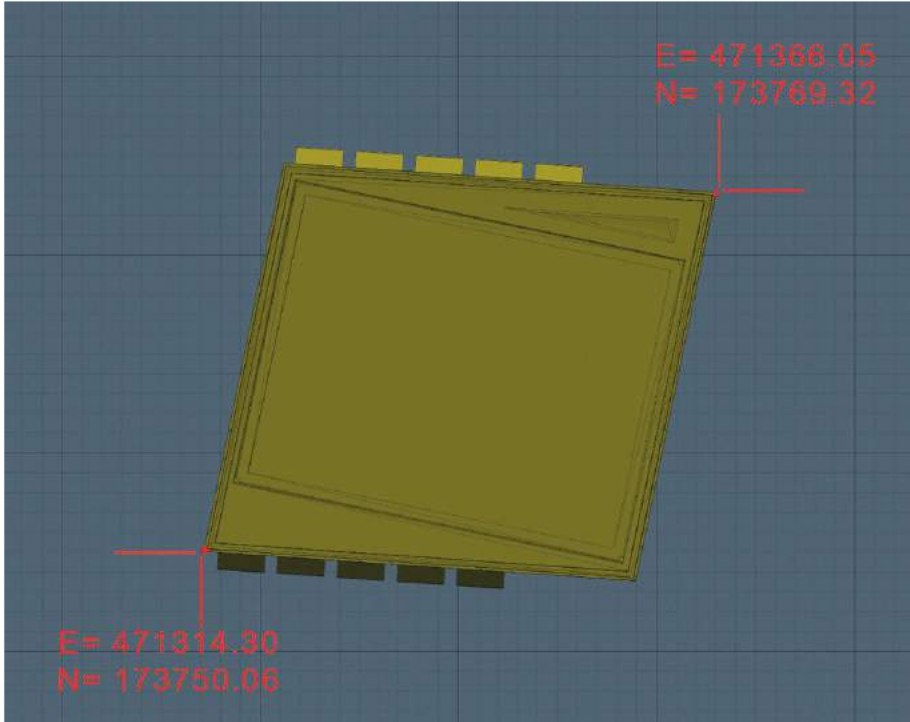
14B

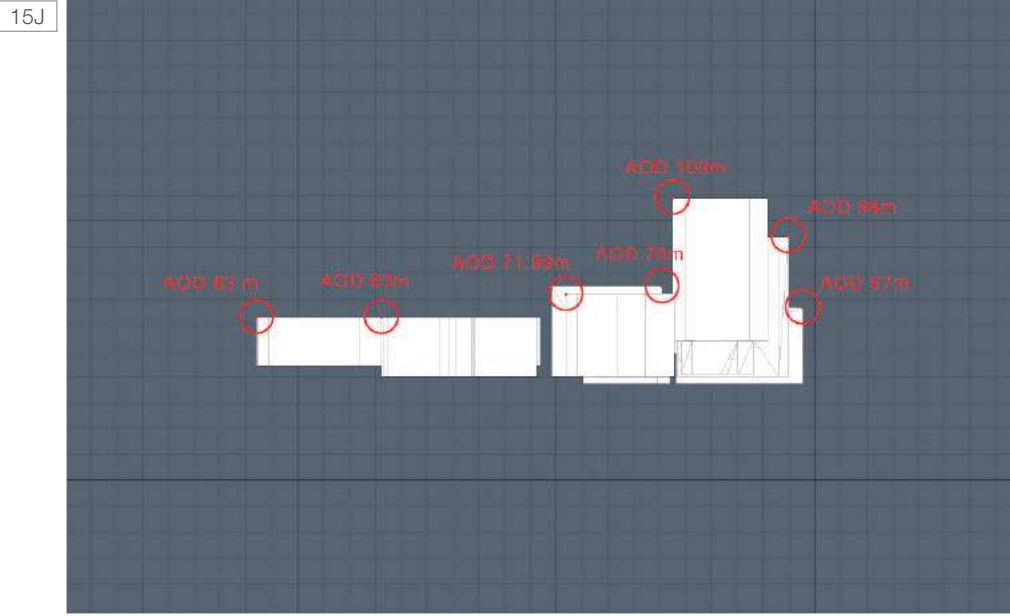
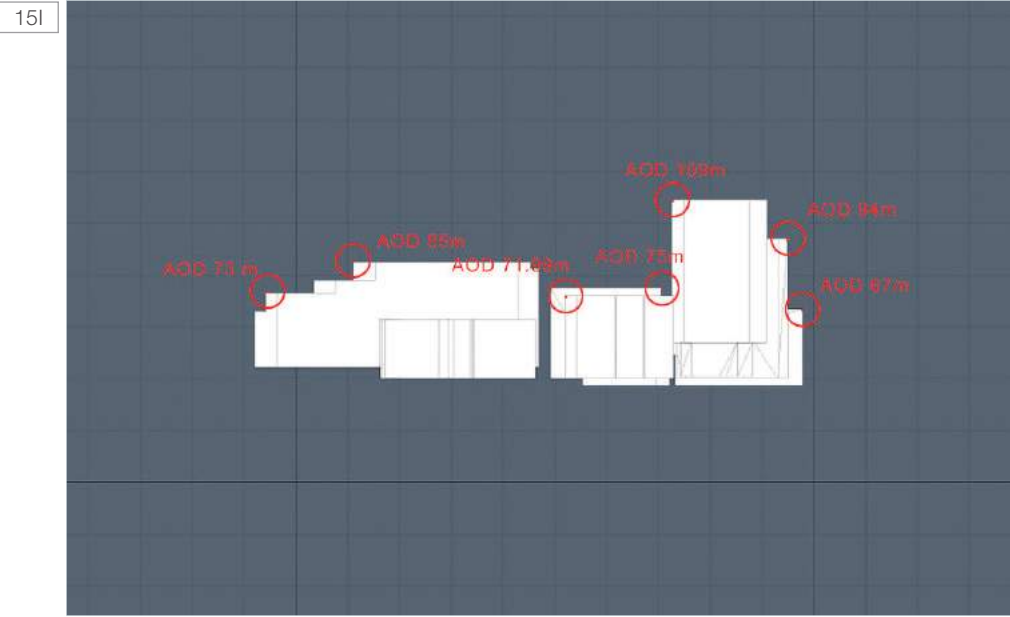


14C



14D





- 14A The architect plan
- 14B Cityscape model plan
- 14C Methodology Detail Plan Architect
- 14D Methodology Detail Plan Cityscape
- 15E Methodology Detail Elevation Architect
- 15F Methodology Detail Elevation Cityscape

- 14G Methodology Max Elevation Architect
- 15H Methodology Min Elevation Architect
- 15I Methodology Max Elevation Cityscape
- 15J Methodology Min Elevation Cityscape

# 5.0 CAMERA MATCHING

## 5.1 Cityscape's Database

Cityscape has built up a comprehensive database of survey information on buildings and locations in central London; the database contains both GPS survey information and information regarding the dimensions and elevations of buildings gathered from architects and other sources. Figure 16 shows a selection of GPS located models (yellow) within Cityscape's database which effectively represents a 3D verified computer 'model' of some prominent buildings in central London. The term '3D model' has been adopted with caution in this methodology as it is thought to be slightly misleading because not every building in central London is included in the database although the majority of those buildings which form part of the 'skyline' are included.

## 5.2 Creation of Scheme Model

The outlines of buildings are created by connecting the surveyed points or from the information obtained from architects' drawings of particular buildings. By way of example of the high level of detail and accuracy, approximately 300 points have been GPS surveyed on the dome of St. Paul's. The database 'view' (as shown in Figure 16) is 'verified' as each building is positioned using coordinates acquired from GPS surveys.

## 5.3 Camera Matching Process

In many instances, the various co-ordinates of a particular building featured in one of the background plates are already held by Cityscape as part of their database of London. In such cases the survey information of buildings and locations provided by MSA (see section 3 above) is used to cross-check and confirm the accuracy of these buildings. Where such information is not held by Cityscape, it is, where appropriate, used to add detail to Cityscape's database. The survey information provided by MSA is in all cases used in the verification process of camera matching.

A wireframe<sup>7</sup> 3D model of the proposed scheme is created by Cityscape from plans and elevations provided by the architects and from survey information of the ground levels on site and various other points on and around the site, such as the edge of adjacent roads and bollards etc. provided by MSA.

The following information is required for the camera matching process:

- Specific details of the camera and lens used to take the photograph and therefore the field of view (see section 1);
- The adjusted or corrected digital image i.e. the 'background plate' (see section 2);

- The GPS surveyed viewpoint co-ordinates (see section 3);
- The GPS surveyed co-ordinates of particular points on the buildings within the photograph (the background plate) (see section 3);
- Selected models from Cityscape's database (see section 3);
- The GPS surveyed co-ordinates of the site of the proposed scheme (see section 3);
- A 3D model of the proposed scheme (see section 4).

A background plate (the corrected digital image) is opened on computer screen (for example, Figure 17), the information listed above is then used to situate Cityscape's virtual camera such that the 3D model aligns exactly over the background plate (as shown in Figures 18 and 21) (i.e. a 'virtual viewer' within the 3D model would therefore be standing exactly on the same viewpoint from which the original photograph was taken (Figure 20). This is the camera matching process.

## 5.4 Wireline Image

Cityscape is then able to insert the wireframe 3D model of the proposed scheme into the view in the correct location and scale producing a verified wireline image of the proposal (shown in Figures 19 & 22).

The camera matching process is repeated for each view and a wireline image of the proposal from each viewpoint is then produced. The wireline image enables a quantitative analysis of the impact of the proposed scheme on views.

16



<sup>7</sup> A wireframe is a 3D model, a wireline is a single line representing the outline of the building.

16 Selected GPS located models (yellow) from Cityscape's database, situated on Cityscape's London digital terrain model

17 Background plate & selected 3D models as seen by the computer camera. Red circle highlights the safe or non-distortive area of the image

18 Background plate matched to the 3D GPS located models

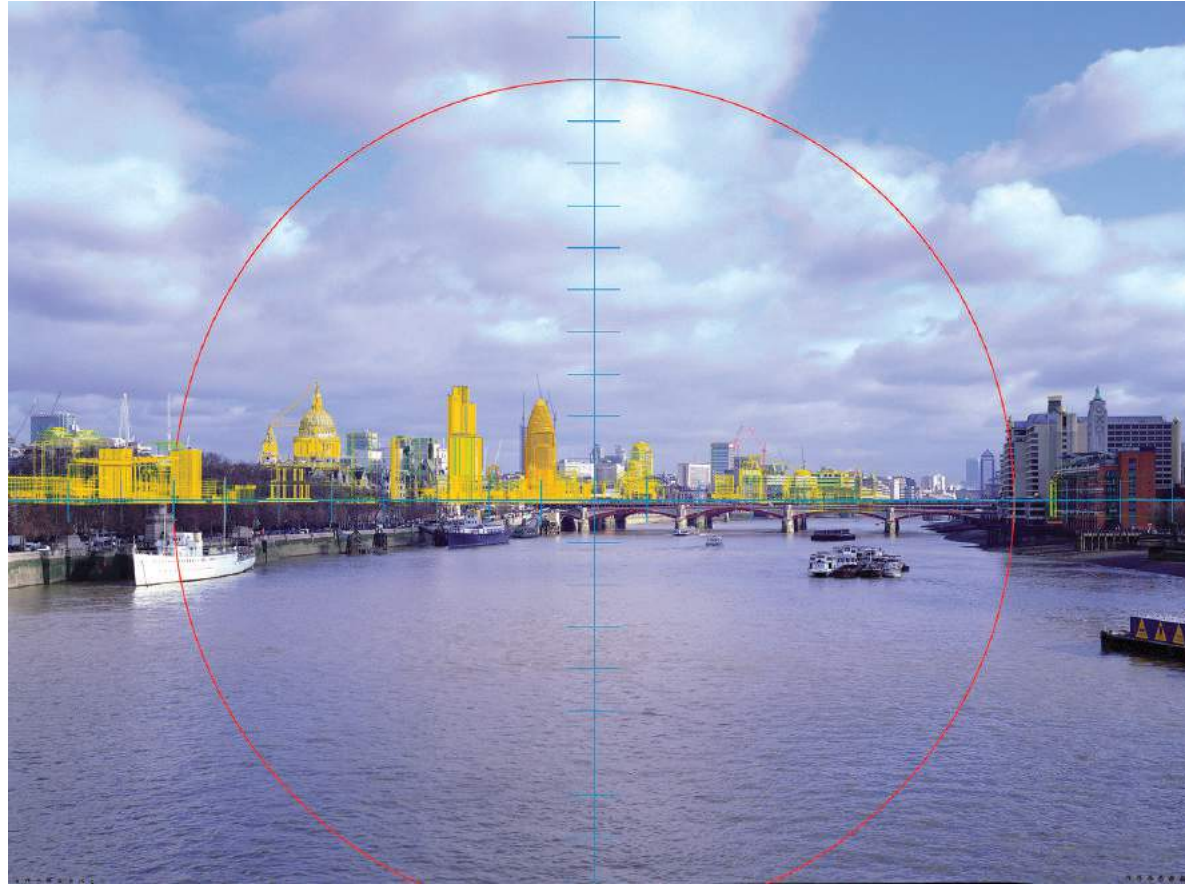
19 The camera matched background plate with an example of a proposed scheme included in red

20 Background plate: digital photograph, size and bank corrected as described in section 3

21 Camera matching: the background plate matched in the 3D GPS located models

22 The camera matched background plate with the proposed scheme included

17



20



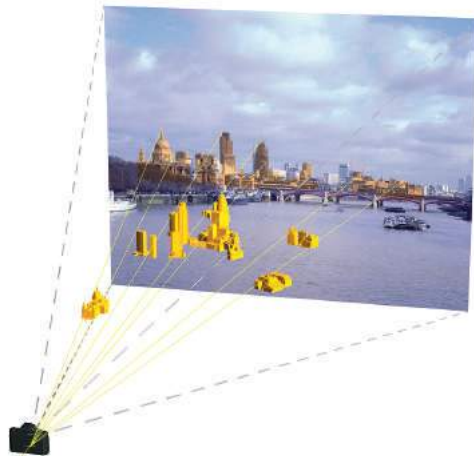
21



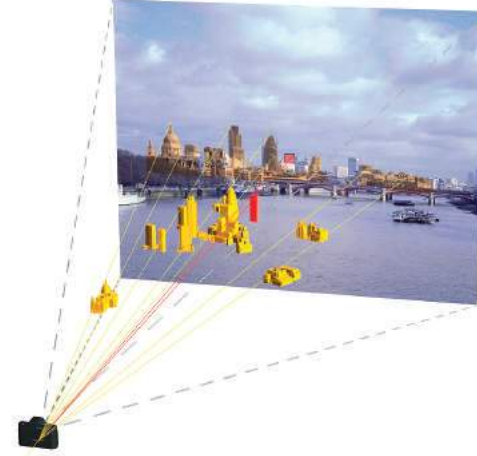
22



18



19



# 6.0 POST PRODUCTION

6.1 Post production  
Finally the rendered image of the scheme model is inserted and positioned against the camera matched background plate. Once in position the rendered images are edited using Adobe Photoshop®. Masks are created in Photoshop where the line of sight to the rendered image of the proposed scheme is interrupted by foreground buildings (as shown in Figure 29).

The result is a verified image or view of the proposed scheme (as shown in Figure 30).

28



29



30



28 Background plate

29 Process Red area highlights the Photoshop mask that hides the unseen portion of the render

30 Shows a photo-realistic verified image





## **Technical Appendix 2.1      2017 EIA Regulations Schedule 4 Requirements**

## Technical Appendix 2.1 EIA Regulations, 2017 - Schedule 4 Requirements

### Introduction

Schedule 4 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations, 2017)<sup>i</sup> sets out the information required for inclusion in Environmental Statements. The table below provides a schedule detailing the relevant requirements and where within the 2015 ES and 2019 ES Addendum these items are addressed.

Table A1: Schedule 4 Requirements

| Schedule 4 Requirement                                                                                                                                                                                                                                                                                                                                                            | Location information is addressed in the ES 2015 and ES Addendum 2019                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 (a), a description of the location of the development.                                                                                                                                                                                                                                                                                                                          | Chapter 3 (Existing Land Use) 2015 ES.<br>Chapter 3 (Existing Land Use) of the 2019 ES Addendum.                                                                                                                                                                                                                                                                                                                                                        |
| 1 (b), a description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases.                                                                                                                                                               | Chapter 5 (Description of Development) and 6 (Demolition and Construction) of the 2015 ES.<br>Chapter 5 (Description of Development) and 6 (Demolition and Construction) of the 2019 ES Addendum.                                                                                                                                                                                                                                                       |
| 1 (c), a description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used.                                                                                 | Chapter 5 (Description of Development) and Chapter 12 (Ground Conditions), and Chapter 14 (Ecology) of the 2015 ES.<br>Chapter 4 (Alternatives) and Chapter 5 (Description of Development) of the 2019 ES Addendum.                                                                                                                                                                                                                                     |
| 1 (d), an estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste) produced during the construction and operation phases.                                                                                                                  | Chapter 6 (Demolition and Construction), Chapter 10 (Air Quality), Chapter 11 (Noise and Vibration), Chapter 12 (Ground Conditions) and Chapter 13 (Surface Water Drainage and Flood Risk) of the 2015 ES.<br>Chapter 6 (Demolition and Construction), and Technical Appendix 2.3 (Scoping) of the 2019 ES Addendum.                                                                                                                                    |
| 2. A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.             | Chapter 4 (Alternatives and Design Evolution) of the 2015 ES.<br>Chapter 4 (Alternatives and Design Evolution) of the 2019 ES Addendum.                                                                                                                                                                                                                                                                                                                 |
| 3. A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge. | Chapter 3 (Existing Land Use), Chapter 4 (Alternatives), Chapters 7 to 16 and Volume 2 Townscape and Visual Impact Assessment of the 2015 ES.<br>Chapter 3 (Existing Land Use), Chapter 4 (Alternatives), Chapter 7 (Socio Economics and Health), Chapter 13 (Surface Water Drainage and Flood Risk), Chapter 15 (Wind), Chapter 16 (Daylight, Sunlight and Overshadowing) and Volume 2 Townscape and Visual Impact Assessment of the 2019 ES Addendum. |
| 4. A description of the factors specified in regulation 4(2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion,                                                                                                               | Chapters 7 to 16 and Volume 2 (Townscape, Conservation and Visual Assessment) of the 2015 ES.<br>Chapter 7 (Socio Economics and Health), Chapter 13 (Surface Water Drainage and Flood Risk), Chapter 15                                                                                                                                                                                                                                                 |

| Schedule 4 Requirement                                                                                                                                                                                                                                                                                                   | Location information is addressed in the ES 2015 and ES Addendum 2019                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.                                  | (Wind), Chapter 16 (Daylight, Sunlight and Overshadowing), Volume 2 Townscape and Visual Impact Assessment and Technical Appendix 2.3 (Scoping) of the 2019 ES Addendum.                                                                                                                         |
| 5. A description of the likely significant effects of the development on the environment resulting from:                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                  |
| (a) the construction and existence of the development, including, where relevant, demolition works;                                                                                                                                                                                                                      | Chapters 7 to 16 and Volume 2 (Townscape, Conservation and Visual Assessment) of the 2015 ES. Chapters 7, 13, 15 & 16 and Volume 2 (Townscape, Conservation and Visual Assessment) of the 2019 ES Addendum.                                                                                      |
| (b) the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;                                                                                                                                                      | Chapter 12 (Ground Conditions), and Chapter 14 (Ecology) of the 2015 ES.                                                                                                                                                                                                                         |
| (c) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;                                                                                                                                                                          | Chapter 10 (Air Quality), Chapter 11 (Noise and Vibration), Chapter 15 (Wind) and Chapter 16 (Daylight, Sunlight and Overshadowing) of the 2015 ES.<br>Chapter 15 (Wind) and Chapter 16 (Daylight, Sunlight and Overshadowing) of the 2019 ES Addendum.                                          |
| (d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);                                                                                                                                                                                                         | Chapter 7 (Socio Economics), Chapter 8 (Archaeology) and Volume 2 (Townscape, Conservation and Visual Assessment) of the 2015 ES. Chapter 7 (Socio Economics and Health), Volume 2 (Townscape, Conservation and Visual Assessment) and Technical Appendix 2.3 (Scoping) of the 2019 ES Addendum. |
| (e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;                                                                      | Chapter 17 (Cumulative Effects) of the 2015 ES. Chapter 17 (Cumulative Effects) of the 2019 ES Addendum.                                                                                                                                                                                         |
| (f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;                                                                                                                                                      | Chapter 13 (Surface Water Drainage and Flood Risk) of the 2015 ES.<br>Chapter 4 (Alternatives) and Chapter 13 (Surface Water Drainage and Flood Risk) of the 2019 ES Addendum.                                                                                                                   |
| (g) the technologies and the substances used.                                                                                                                                                                                                                                                                            | Chapter 5 (Description of Development) of the 2015 ES Addendum.<br>Chapter 4 (Alternatives) and Chapter 5 (Description of Development) of the 2019 ES Addendum.                                                                                                                                  |
| 6. A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.         | Chapters 7 to 16 and Volume 2 (Townscape, Conservation and Visual Assessment) of the 2015 ES. Chapters 7, 13, 15 & 16 and Volume 2 (Townscape, Conservation and Visual Assessment) of the 2019 ES Addendum.                                                                                      |
| 7. A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the | Chapters 7 to 16, Volume 2 (Townscape, Conservation and Visual Assessment) and Chapter 18 (Residual Effects) of the 2015 ES                                                                                                                                                                      |

| Schedule 4 Requirement                                                                                                                                                                             | Location information is addressed in the ES 2015 and ES Addendum 2019                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.                          | Chapters 7, 13, 15 & 16 and Volume 2 (Townscape, Conservation and Visual Assessment) of the 2019 ES Addendum. |
| 8. A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters | Chapter 2 (EIA Methodology) and Technical Appendix 2.3 (Scoping) of the 2019 ES Addendum.                     |
| 9. A non-technical summary of the information provided under paragraphs 1 to 8.                                                                                                                    | Non-Technical Summary of the 2015 ES.<br>Non-Technical Summary of the 2019 ES Addendum.                       |
| 10. A reference list detailing the sources used for the descriptions and assessments included in the environmental statement.                                                                      | Included within each Chapter of the ES as appropriate.                                                        |

<sup>i</sup> Town and Country Planning. (2017) *Environmental Impact Assessment: EIA Regulations 2017*.



## **Technical Appendix 2.2    Competent Experts**

## Technical Appendix 2.2 Competent Experts

Regulation 18 of the 2017 EIA Regulations states:

*“In order to ensure the completeness and quality of the environmental statement: (a) the developer must ensure that the environmental statement is prepared by competent experts; and (b) the environmental statement must be accompanied by a statement from the developer outlining the relevant expertise or qualifications of such experts”.*

**Table 1** sets out a summary of relevant qualifications and experience for the professional team who have prepared and contributed to this ES Addendum. It should also be noted that Waterman IE is a Registered Environmental Impact Assessor Member of the Institute of Environmental Management and Assessment, providing independent recognition of the quality of Waterman’s EIA work.

Table 1: Competent Experts’ Qualifications and Experience

| Organisation or Name and Role                                                                 | Qualifications                                                                                                                                                                                                                                                                                                                                                                                                          | Relevant Experience                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waterman (EIA Co-ordinators, Townscape and Visual Impact Assessment, Flood Risk and Drainage) | Waterman is a market leader in EIA and environmental planning support, with experience across a wide range of sectors for both public and private clients. Waterman has been an IEMA EIA Quality Mark Registrant from inception in 2009, demonstrating our commitment to excellence in EIA, and ensuring consistent and audited quality                                                                                 |                                                                                                                                                                                                                                                                                                                                                                  |
| Joanna Bagley (EIA Project Director). Waterman IE                                             | BSc (Hons)<br>Practitioner Member of the Institute of Environmental Management and Assessment (PIEMA)<br>Licensed Code for Sustainable Homes / HQM Assessor                                                                                                                                                                                                                                                             | 18 years’ experience of co-ordinating Environmental Impact Assessments and preparing Environmental Statements within urban regeneration, retail, commercial, residential, industrial and waste management sectors, alongside experience in Sustainability Appraisals, Code for Sustainable Homes Assessments, Environmental Due Diligence and Contaminated Land. |
| David Unsworth (EIA Project Manager). Waterman IE                                             | MA<br>BSc (Hons)<br>Practitioner member of the Institute of Environmental Management and Assessment (IEMA).                                                                                                                                                                                                                                                                                                             | David has 9 years’ experience of coordinating EIAs for residential, commercial, renewable energy, and infrastructure projects.                                                                                                                                                                                                                                   |
| Wendy Wright (Townscape and Visual). Waterman IE                                              | BA (Hons)<br>Dip LA<br>Chartered Member of the Landscape Institute                                                                                                                                                                                                                                                                                                                                                      | Wendy has 25 years; experience as a Landscape Architect and has considerable experience in the preparation and review of Townscape and Visual Impact assessments for a range of commercial, retail and residential projects.                                                                                                                                     |
| Brendan McCarthy (Flood Risk and Drainage). Waterman IE                                       | BEng (Hons) Civil Eng                                                                                                                                                                                                                                                                                                                                                                                                   | Brendan has over 15 years’ experience working on civil engineering infrastructure schemes and a wide range of flood risk assessments, which have included hydrological and hydraulic modelling, flood resistant and resilient design, sustainable drainage systems, river restoration and due diligence.                                                         |
| GIA (Daylight Sunlight and Overshadowing)                                                     | GIA is an independent firm of chartered surveyors and technical specialists. They are the leading practice in rights of light and neighbourly matters and are pioneers in the field of designing for daylight in increasingly dense cities. For more than 20 years GIA have been building our reputation for delivering creative solutions on some of the most prestigious developments in the UK and around the world. |                                                                                                                                                                                                                                                                                                                                                                  |

| Organisation or Name and Role                                                        | Qualifications                                                                                                                                                                                                                                                                                                                                                                                                                                 | Relevant Experience                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Simone Pagani (Senior Partner)                                                       | MSc at London Metropolitan University in Architecture, Energy and Sustainability.                                                                                                                                                                                                                                                                                                                                                              | Over 3 years' UK experience in providing technical consultancy in relation to Daylight and Sunlight, Overshadowing, Solar Glare and Light Pollution                                                                                                                                                             |
| Krystle Stewart (Senior Consultant)                                                  | MBS – Masters in Building Science from Victoria University of Wellington (New Zealand)                                                                                                                                                                                                                                                                                                                                                         | Over 3 years' UK experience in providing technical consultancy in relation to Daylight and Sunlight, Overshadowing, Solar Glare and Light Pollution                                                                                                                                                             |
| RWDI (Wind)                                                                          | <p>RWDI are renowned for their expertise in engineering modelling and analysis, RWDI offers a range of services to help create buildings that are more efficient, sustainable, comfortable to inhabit and resilient to natural disasters.</p> <p>RWDI have more than four decades for experience, during this time their engineers and scientists have gained extensive hands-on experience across the spectrum of industries and sectors.</p> |                                                                                                                                                                                                                                                                                                                 |
| Daniel Hackett                                                                       | Meng (Hons.) – Aerospace Engineering (University of Southampton)                                                                                                                                                                                                                                                                                                                                                                               | Daniel Hackett is a Senior Engineer and Associate at RWDI. He has over 10 years' experience in wind microclimate consultancy, including impact assessment and mitigation design guidance for projects throughout the UK.                                                                                        |
| Hatch Regeneris (Socio Economics)                                                    | Hatch Regeneris is a leading, independent economics consultancy providing robust, high-quality social and economic research, analysis and advice.                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                 |
| Margaret Collins (Socio-economic assessment and HIA Project Director) HatchRegeneris | Economics and Economic & Social History BA                                                                                                                                                                                                                                                                                                                                                                                                     | Over 16 years' experience specialising in economic development and regeneration for both the public and private sectors. I have worked in consultancy for the last 15 years' which has included experience of preparing Environmental Impact Assessments under the Town & Country Planning Act EIA Regulations. |
| Cityscape Digital (Wireline Production)                                              | Cityscape Digital is a multi-disciplinary creative studio based in the heart of London's Shoreditch. Since 2001 they have been setting the benchmark for CGI production in the property industry.                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                 |



## **Technical Appendix 2.3    EIA Scoping Request (Including Preliminary Ecology Appraisal and Bat Survey Report)**

Direct Tel: 0161 8398392  
Direct Email: joanna.bagley@watermangroup.com  
  
Our Ref: WIE14788-101-181018-EIA Scoping Request  
Your Ref:  
  
Date: 18 October 2018

Mr Steven Vigar  
Planning and Building Control  
Reading Borough Council  
PO Box 17  
Civic Centre  
Reading  
RG1 7AE

Dear Mr Vigar

**Re: Environmental Impact Assessment Scoping Request, Station Hill, Reading**

In March 2013 an Outline Planning Application for the redevelopment of approximately 2.14 hectares (ha) of previously developed land at Station Hill (the 'Site') was submitted by Sackville Developments Reading Ltd (SDRL) (Planning Reference: 130436). The development was known as the Station Hill 3 Scheme (SH3). The Planning Application was subsequently granted planning consent in January 2015 and is hereafter referred to as the '2015 Consented Scheme'. At the same time, an application for a Temporary Flexible Event Space within the north of the Site (Planning Application Reference: 130440/FUL) was also submitted and subsequently granted consent in January 2014.

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 151426); 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 151427).

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

The red line boundary and plot layout of the 2016 Consented Scheme are shown on Figure 1 and drawing number 698\_04\_216.

**Proposed Alterations to the 2016 Consented Scheme**

Following acquisition of the Site from SDRL in 2018, SH Reading Master LLP (the Applicant) is seeking to make changes to the 2016 Consented Scheme in respect of Plots E and F to respond to a series of design alterations. This is proposed by way of applications pursuant to section 73 of the Town and Country Planning Act 1990 (hereafter referred to as "the Section 73 Applications"). At the same time, reserved matters applications will be submitted for Plots E and F.

The changes to the 2016 Consented Scheme are hereafter referred to as the 'proposed amendments' and comprise:

#### *Plot E*

- Residential use change from market housing to 'Build to Rent'. This will not change the maximum approved residential floor space area but will change the number of residential units which were assumed in the Environmental Impact Assessment from 225-285 units (281 were indicatively shown) to 350-370 units;
- A change to Parameter Plan 3 to reflect the creation of two open courtyards rather than single courtyard enclosed by a perimeter block, a change to the minimum building height and an increased deviation of the eastern elevation fronting Friars Walk; and
- Extending the lower ground floor eastward up to the application boundary of Plot F, thereby providing a more useable and efficient space for parking, servicing and back of house requirements. This will require a change to Parameter Plan 5 to clarify that car parking is at lower ground floor, extend the lower ground floor eastward to the boundary with Plot F and incorporate back of house facilities to the lower ground floor level.

There would be no change to the 2016 Consented Scheme maximum height, footprint or floorspace parameters.

#### *Plot F*

- Residential use change from market housing to 'Build to Rent'. This will not change the approved floor space areas but will change the number of residential units which were assumed in the Environmental Impact Assessment from 150-300 units to 170-190 units;
- Retention of the L-shape perimeter block but removal of the small courtyard area and pulling back the upper floor elevations to increase distance from Plot E, thereby preserving residential amenity by maximising window to window distances. This will require a change to Parameter Plan 3 to remove 'Zone for Courtyard', amend 'Minimum Building Heights' and increase Limit of Deviation on western façade facing Friars Walk; and
- A potential reduction in the area of the proposed D2 leisure space (to less than the 900sq.m GEA envisaged by the section106 legal agreement), and a potential alternative arrangement than that shown on the parameters which show it at first floor;
- A potential reduction in the minimum retail floorspace area provided within this Plot;
- Introducing some lower ground floor space beneath Plot F, meshing with the extended Plot E lower ground floor which will connect beneath Garrard Street, and removal of the zone for service access. This will require an amendment to Parameter Plan 5 to remove 'Zone for Service Access' from the eastern elevation.

There would be no change to the 2016 Consented Scheme maximum height, footprint or floorspace parameters.

#### *Other Parameters*

- No change in the maximum approved residential floor space area but an increase in the maximum overall number of residential units which were assumed in the Environmental Impact Assessment from 475 to 550;
- Provision of level access along Friars Walk rather than stepped or ramped access as previously proposed;
- An alteration in the phasing of the proposed Development with Plots E and F now forming part of Phase 1 rather than the plots to the north of Garrard Street (A, B, D and G) as previously proposed;

- A change in the year of completion as 2018 was previously assumed to be the year of completion in the 2015 ES.

### **EIA Background and Strategy**

In 2013, an Environmental Impact Assessment (EIA) was undertaken of the Station Hill 3 Scheme and an Environmental Statement (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 application to revise Plot E to incorporate the Telecom House Site (planning reference 151427). This ES was a full update of the 2013 ES and covered the entire Station Hill 3 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 Reading Borough Council (RBC) in December 2015. Together, the ES and EIA implications of design amendments letter are referred to as the '2015 ES'. The 2015 ES is the ES to which the proposed Section 73 Applications for Plots E and F should be compared.

The previous applications were assessed under the Town and Country Planning (Environmental Impact Assessment Regulations) 2011. However, in May 2017, the Town and Country Planning (Environmental Impact Assessment) Regulations, 2017 (the '2017 EIA Regulations') were brought into force. As a result, to support the intended Section 73 applications, an updated Environmental Statement will be submitted, by way of an addendum that incorporates the 2015 ES. The ES Addendum and 2015 ES will together be the "Environmental Statement" for the purposes of the Section 73 applications. The ES Addendum will include assessments where the proposed amendments to the 2016 Consented Scheme have the potential to result in a change to the significance of the effects presented in the 2015 ES.

On the basis of this strategy, the proposed scope of the EIA is set out below.

### **EIA Baseline**

The baseline conditions prevailing at the Site are different from those assessed as part of the 2015 ES given that the buildings within Plots B, C and D have been demolished and the Temporary Events Space constructed. In addition, the surrounding baseline conditions are slightly different with a number of schemes that were in an advanced stage of construction at the time of the 2015 ES, and which were therefore considered as part of a future baseline scenario, now having been completed.

Where the authors of each technical chapter of the 2015 ES consider that the proposed amendments may result in a change to the significance of the effects, it is proposed to consider the following scenarios:

- Existing baseline;
- Reserved matters details for Plots E and F with the remaining Station Hill Development (as maximum parameters) in place; and
- Reserved matters details for Plots E and F with the remaining Station Hill Development (as maximum parameters but with Plot B in accordance with the reserved matters consent for that plot) plus Cumulative Surrounds.

It is also proposed to provide a comparison between the effects of the 2016 Consented Schemes as presented in the 2015 ES and those of the 2016 Consented Scheme as amended by the Section 73 Applications. This may be a qualitative or a quantitative assessment, depending upon the technical study in question. This is to enable a comparison to be made between the effects of the 2016 Consented Scheme and those of the 2016 Consented Scheme as amended by the Section 73 Applications.

### **Proposed Scope of the EIA**

The methodology employed in the assessment of environmental effects, as described in the 2015 ES would remain the same for all technical studies forming part of the Environmental Impact Assessment. However, the 2017 EIA Regulations introduced new topics that need to be considered when scoping the EIA. These topics comprise population and human health, climate change and risk of major accidents or disasters. An assessment of whether these topics should be scoped into or out of the EIA is provided below.

In terms of sensitive receptors, a list of those receptors considered as part of the 2015 ES has been presented in Annex 1 of this letter. Please could you confirm that there are no new sensitive receptors in proximity to the Site that require consideration. Please note that beyond the immediate vicinity of the Site, a representative selection of sensitive residential receptors has been chosen, including those along the road network being assessed. Therefore, it is only proposed to update residential receptors if there were any new properties within close proximity to the Site.

The scope of the assessment required as part of the ES Addendum for each technical Chapter of the 2015 ES and the new technical topics brought about by the 2017 EIA Regulations is set out below.

#### **Socio Economics**

Due to the potential changes to minimum floorspace areas, increase in residential units proposed, and the change from market housing to Build to Rent, a review of the socio-economic assessment is considered to be required. This would assess whether the proposed amendments would alter the significance of the effects as presented in the 2015 ES. The methodology would follow that presented in the 2015 ES.

#### **Archaeology**

The 2015 ES assumed that excavation in the ground would be limited to:

- Nominal excavation (approximately 1m) and then grading of the Site to allow the construction of the service trenches and lower ground level;
- The installation of new services such as electricity, gas, drainage and water mains; and
- Establishment of foundations, such as the installation of piles, pile caps and ground beams.

There is no intention to change these assumptions as part of the proposed amendments and therefore the archaeology assessment would remain unchanged and no further assessment is considered to be necessary. As previously, archaeological evaluation would be undertaken post demolition to enable a mitigation strategy to be developed to record and / or preserve archaeological remains that may be present.

#### **Transportation**

The Transport Chapter of the 2015 ES showed that the Station Hill Scheme incorporating the Telecom House Site (the 2016 Consented Scheme) resulted in a reduction of trips compared with the 2015 Consented Scheme when considering the potential trip generation of the extant uses of Telecom House.

The net reduction in vehicle trips is shown in Table 9-12 of the Transport chapter of the 2015 ES, which concluded that the traffic modelling presented in the 2013 ES (and reproduced in the 2015 ES) demonstrated a 'worst-case' scenario.

The anticipated increase in vehicle trips generated by the increase in the maximum number of units (additional 75 units) brought about by the proposed amendments, is less than the net reduction in vehicle trips shown in the 2015 Transport ES chapter. Peter Brett Associates, the Transport Consultants for both the 2015 and 2016 Consented Schemes and authors of the 2013 and 2015 ES Chapters, therefore consider that the transport modelling presented in the 2013 ES (and reproduced in the 2015 ES) still represents a 'worst-case' scenario, with the impacts previously assessed considered to accurately represent the likely significant effect of the proposed development.

#### *Air Quality*

On the basis that the traffic flow data, used in the air quality assessment presented in the 2015 ES, represents a worst case scenario even with the proposed amendments, the findings of the air quality chapter will remain unchanged and no further assessment is considered to be required.

#### *Noise*

On the basis that the traffic flow data, used in the air quality assessment presented in the 2015 ES, represents a worst case scenario even with the proposed amendments, the findings of the noise chapter will remain unchanged and no further assessment is considered to be required.

#### *Ground Conditions and Contamination*

The proposed amendments to the 2016 Consented Scheme are not considered to alter the significance of effects on Ground Conditions and Contamination as set out in the 2015 ES. No further assessment of ground conditions and contamination is therefore considered to be required.

#### *Flood Risk and Drainage*

Due to the proposed level changes brought about by the provision of level access along Friars Walk rather than stepped or ramped access as previously proposed and extension of the lower ground floor level, a review of the Flood Risk Assessment and Drainage Strategy would be undertaken. An Addendum Flood Risk Assessment and Drainage Strategy would be prepared as necessary. This would be used to inform an assessment of whether the significance of the effects in the 2015 ES have changed as a result of the proposed amendments.

#### *Ecology*

An update PEA has been undertaken across the whole of the Station Hill Site. This did not identify any material changes in the baseline conditions since completion of the PEA to support the 2015 ES other than an increased potential for bats in Friars Walk Shopping Centre. However, subsequent bat surveys undertaken in August 2018 confirmed that bats are not roosting in the buildings and the effects on bats therefore remains negligible. The significance of ecological effects therefore remains unchanged from that set out in the 2015 ES, and no further ecological assessment is considered to be required to support the Section 73 Applications.

The update PEA and Bat Survey Report are appended to this letter in Annex 2.

#### *Wind*

The wind assessment presented within the 2015 ES was undertaken on the proposed maximum building envelope, which will not be exceeded by the proposed amendments to Plots E and F. It is, however,

recognised that a wind tunnel test is required at Reserved Matters Stage as a condition of the 2016 Consented Scheme, and this will be undertaken to ensure that the effects of the proposed amendments on wind, specifically those associated with building entrances, revised public realm and pedestrian routes, are fully assessed. On this basis it is therefore proposed to test the following scenarios in the wind tunnel:

- Existing baseline;
- Reserved matters details for Plots E and F with the remaining Station Hill Development (as maximum parameters) in place; and
- Reserved matters details for Plots E and F with the remaining Station Hill Development (as maximum parameters but with Plot B in detail in place) plus Cumulative Surrounds.

The findings of the wind tunnel test will be reported within the ES Addendum submitted in support of the Section 73 Applications.

#### *Daylight, Sunlight and Overshadowing*

The 2015 ES Chapter dealt with the following aspects:

- Daylight & Sunlight Impacts upon Neighbours;
- Daylight & Sunlight within the Proposed Development;
- Overshadowing of Neighbouring and Proposed Amenity Areas.

The above assessments were undertaken for the maximum building envelope, which will not be exceeded by the proposed amendments to Plots E and F. However, as a result of the changes in the current baseline condition and adjacent cumulative schemes, there is potential for changes to the significance of the effects and as a result, an updated assessment would be undertaken. The updated assessment would assess the following scenarios:

- Existing baseline;
- Reserved matters details for Plots E and F with the remaining Station Hill Development (as maximum parameters) in place; and
- Reserved matters details for Plots E and F with the remaining Station Hill Development (as maximum parameters but with Plot B in detail in place) plus Cumulative Surrounds.

#### *Townscape, Conservation and Visual Assessment and Visual*

The previous Townscape, Conservation and Visual assessment was undertaken on the proposed maximum building envelope, which will not be exceeded by the proposed amendments to Plots E and F. However, as a result of the amended baseline conditions and adjacent cumulative schemes, there is potential for changes to the Townscape, Conservation and Visual effects. An assessment will therefore be undertaken to determine if the proposed amendments result in a change to the significance of the effects reported in the 2015 ES. It is also proposed to update the following viewpoints from the 2015 ES to reflect the updated baseline conditions or additional cumulative scheme:

- VP 9 – Baseline photo to be updated to reflect the fact that Western Tower has been demolished. Additional cumulative schemes in the proposed view;
- VP 10 - Baseline photo to be updated to reflect the fact that Western Tower has been demolished. Additional cumulative schemes in the proposed view;
- VP 12 – Cumulative scheme (52 to 55 Friar Street) in the view;

- VP24 – Cumulative scheme (the Bristol and West Arcade) in the view;
- VP 25- Cumulative scheme (52 to 55 Friar Street and 29-35 Station Road) in the view;
- VP 26- Cumulative scheme (52 to 55 Friar Street) in the view;
- VP 30 – Baseline photo to be updated to reflect the fact that built elements on Garrard Street have now been demolished. Proposed view to be updated with revised scheme.

**Please could you confirm that you agree with the approach and the above six viewpoints to be updated.**

#### *Population and Human Health*

With regard to population and human health, a 'new' topic introduced by the 2017 EIA Regulations, it is proposed to undertake an assessment of potential effects using the NHS London Healthy Urban Development Unit (HUDU) Rapid Health Impact Assessment tool. This would be appended to the ES Addendum with any significant effects identified described in the Socio Economics Chapter. The Socio Economics Chapter will therefore be re-titled 'Socio Economics and Health'.

#### *Climate Change*

In accordance with the 2017 EIA Regulations, the potential for a development to have significant effects on climate change needs to be considered.

As part of the Flood Risk Assessment and Drainage Strategy, the effects of climate change on rainfall volumes and intensities will be considered in line with best practice.

With regard to the building structures, it is proposed to re-use existing slabs and retaining walls in the temporary construction case where possible and use cement replacements such as ground granulated blast slag (GGBS) or pulverised fuel ash (PFA). Where early concrete strength development is not required, higher cement replacements will be used. The facades of the building will also be optimised to reduce the heating and ventilation requirements.

In terms of energy consumption, a revised energy strategy has been prepared by Hoare Lea to reflect current approaches to energy provision. The amended energy strategy comprises an all-electric strategy for domestic hot water and heating. This aims to provide greater actual carbon reductions than the energy strategy previously proposed for the 2016 Consented Scheme. Such an approach will be coupled with high efficiency water storage, mechanical, heating and ventilation systems to minimise the potential effects of the 2016 Consented Scheme as amended by the Section 73 applications on climate change.

The alternative energy strategies considered will be discussed in the ES Addendum and an energy strategy detailing the energy approach and carbon reduction measures to be implemented will be submitted with the Section 73 Applications. However, a specific Climate Change Chapter is not considered to be required.

#### *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 Addendum.

### *Cumulative Effects*

Given the time that has elapsed since preparation of the 2015 ES, the list of cumulative schemes requiring consideration has been updated and would be considered in the assessments being updated as part of the ES Addendum.

A list of cumulative schemes to be assessed within the revised ES is appended to this letter in Annex 3. **Please could you confirm that there are no other cumulative schemes requiring assessment.**

In accordance with the 2017 EIA Regulations, Waterman would like to request a formal Scoping Opinion on behalf of the Applicant. This request is made under Regulation 15 of the 2017 EIA Regulations.

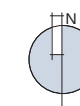
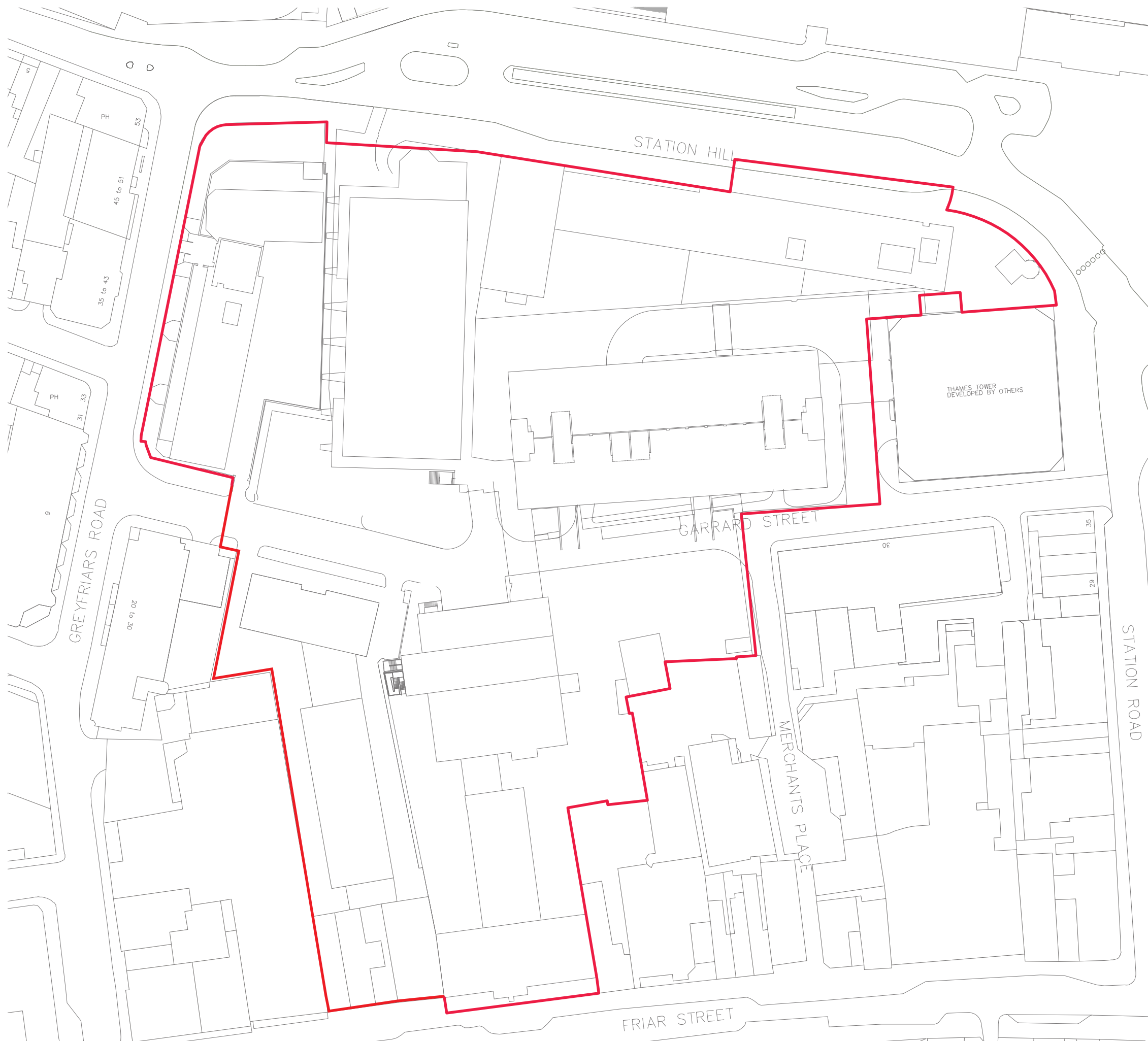
Should you require any further information to assist in forming your opinion, please do not hesitate to contact us. We look forward to receiving your opinion within five weeks of receipt of this letter, as prescribed within Section 15(4) of the 2017 EIA Regulations. If you have any queries in relation to the above, please do not hesitate to contact me.

Yours sincerely

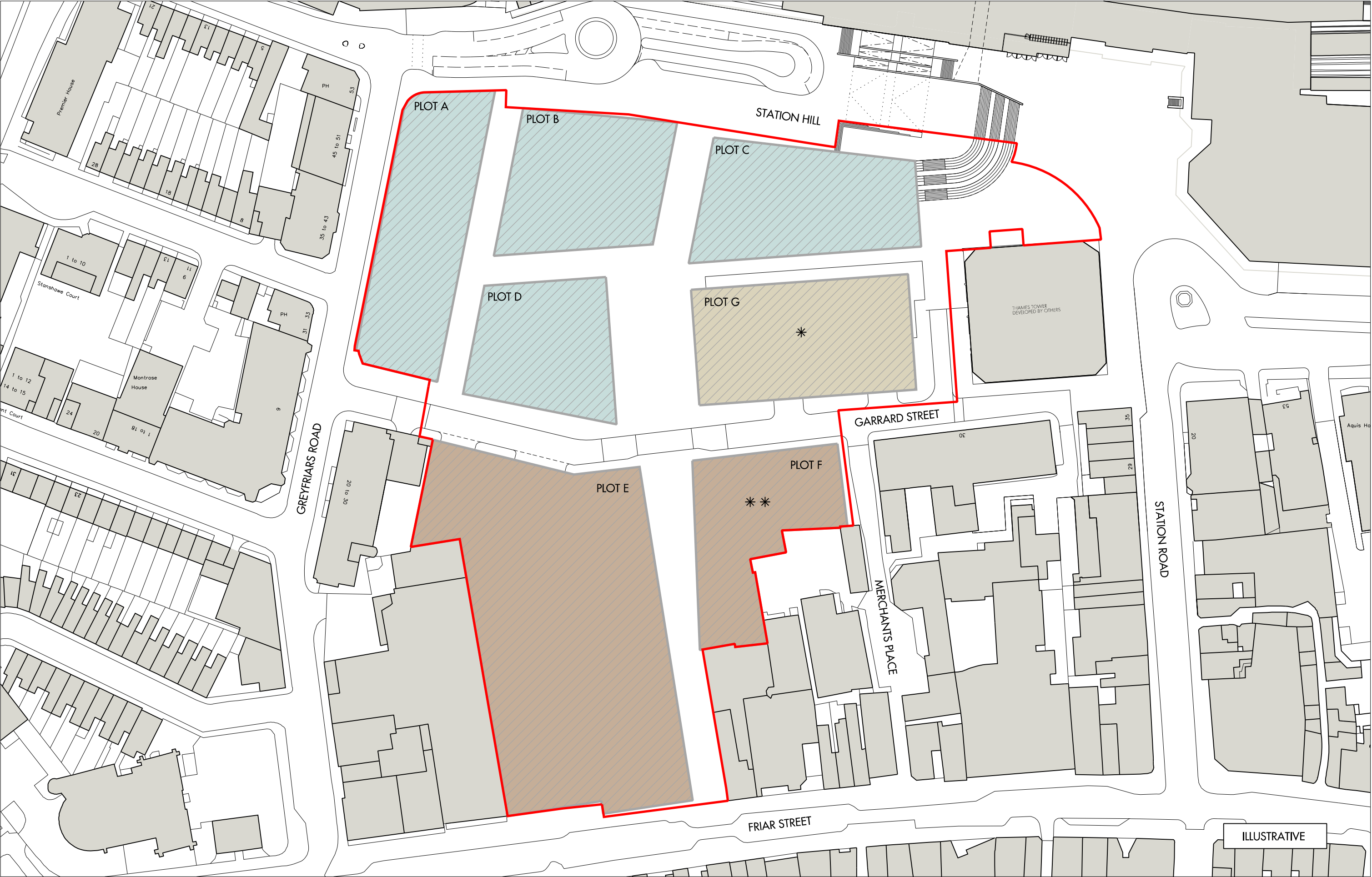
A handwritten signature in blue ink that reads 'J. Bagley'.

**Joanna Bagley**  
**Senior Associate Director**  
**For and on behalf of Waterman Infrastructure & Environment Ltd**

|      |                    |                                                      |
|------|--------------------|------------------------------------------------------|
| Enc. | Figure 1           | 2016 Consented Scheme Red Line Boundary              |
|      | Drawing 698_04_216 | 2016 Consented Scheme Plot Layout                    |
|      | Annex 1            | List of Sensitive Receptors                          |
|      | Annex 2            | Updated Preliminary Ecology Appraisal and Bat Survey |
|      | Annex 3            | List of cumulative schemes.                          |



|                 |                                                               |
|-----------------|---------------------------------------------------------------|
| Project Details | WIB12350-111: Station Hill, Reading                           |
| Figure Title    | Figure 1: Planning Application Boundary                       |
| Figure Ref      | WIB12350-111_GR_ES_1.3A                                       |
| Date            | 2015                                                          |
| File Location   | \\sncs\weed\projects\weed12350\111\graphics\es\issued figures |



| REV | DATE     | DESCRIPTION                                | CHKD |
|-----|----------|--------------------------------------------|------|
| 00  | 07.07.15 | ISSUED FOR INFORMATION (ILLUSTRATIVE ONLY) | JCB  |
|     |          |                                            |      |
|     |          |                                            |      |
|     |          |                                            |      |
|     |          |                                            |      |
|     |          |                                            |      |
|     |          |                                            |      |
|     |          |                                            |      |
|     |          |                                            |      |
|     |          |                                            |      |

- KEY
- COMBINED APPLICATION BOUNDARY
  - DEVELOPMENT PLOTS
  - PREDOMINANTLY RESIDENTIAL USE

- PREDOMINANTLY CAR PARKING
- PREDOMINANTLY OFFICE USE
- LEISURE USE AT ROOF LEVEL
- POSSIBLE LEISURE USE AT FIRST FLOOR LEVEL

NOTE: SEE DESIGN CODES FOR RULES GOVERNING THE LOCATION OF SETBACKS TO UPPER LEVELS

Allies and Morrison  
85 Southwark Street  
London SE1 0HX  
020 7921 0100  
020 7921 0101  
info@alliesandmorrison.com  
A&M JOB NO: 698

STATION HILL: READING  
ILLUSTRATIVE PLAN:SH3 AND ENLARGED PLOT E  
UPPER FLOOR USES  
698\_04\_216

SCALE 1:500 @A1 1:1000@A3

00  
Revision

## Annex 1 List of Sensitive Receptors To Be Assessed

| Category               | Existing Sensitive Receptor/Land Use                                                            | Nearest Approximate Distance from the Site Boundary |
|------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| Residential Properties | 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                                            |
|                        | 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                                            |
|                        | 25a-25b Friar Street                                                                            | 100m south east                                     |
|                        | 32-34 Friar Street                                                                              | 35m east                                            |
|                        | 1 <sup>st</sup> 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                                      |
|                        | 54 Russell Street                                                                               | 750m south west                                     |
|                        | 107 Castle Hill                                                                                 | 650m south west                                     |
|                        | Alms House Castle Street                                                                        | 475m south west                                     |
|                        | 41 Bath Road                                                                                    | 1500m south west                                    |
|                        | 96 Berkeley Avenue                                                                              | 1500m south west                                    |
|                        | 88 Queens Road                                                                                  | 900m south east                                     |
|                        | Grantley Heights                                                                                | 890m south east                                     |
|                        | 90 Kings Road                                                                                   | 800m south east                                     |
|                        | 119 Caversham Road                                                                              | 400m north                                          |
|                        | 20-30 New Bright Street                                                                         | 650m south                                          |
|                        | 10-20 Hieatt Close                                                                              | 1100m south east                                    |
|                        | 44 Crown Street                                                                                 | 825m south east                                     |
|                        | 6 Tilehurst Road                                                                                | 850m south west                                     |
|                        | Blenheim Terrace, Castle Street                                                                 | 675m south west                                     |
|                        | 162 Castle Hill                                                                                 | 815m south west                                     |
|                        | 31a Vastern Road                                                                                | 370m north                                          |
|                        | 68 George Street                                                                                | 890m north east                                     |
|                        | 10 Trinity Place                                                                                | 600m south west                                     |

| Category              | Existing Sensitive Receptor/Land Use                                                                                                                    | Nearest Approximate Distance from the Site Boundary |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| Hotels                | 33 Caversham Road                                                                                                                                       | 120m west                                           |
|                       | Kennet House, 80-82 Kings Road                                                                                                                          | 680m south east                                     |
|                       | 5 to 21 Tudor Road                                                                                                                                      | 60m west                                            |
|                       | Malmaison, Station Road                                                                                                                                 | 70m east                                            |
|                       | Novotel, Friar Street                                                                                                                                   | 85m east                                            |
|                       | Ibis, Friar Street                                                                                                                                      | 85m east                                            |
| Commercial properties | 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                                           |
| 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 39 Friar Street                                                                                                                         | Adjoins south-east corner of the Site               |
|                       | 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                                            |

| Category             | Existing Sensitive Receptor/Land Use                                                                                                                                     | Nearest Approximate Distance from the Site Boundary |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
|                      | 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                                     |
|                      | 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 and 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 observation in 2012.                                                                                                                                      | On-Site.                                            |
|                      | Peregrine Falcon observation in 2012.                                                                                                                                    | On-Site.                                            |

## **Annex 2      Updated Preliminary Ecology Appraisal and Bat Survey Report**



## **Station Hill, Reading**

### **Preliminary Ecological Appraisal**

August 2018

#### **Waterman Infrastructure & Environment Limited**

Merchants House, Wapping Road, Bristol, BS1 4RW  
[www.watermangroup.com](http://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<br>Principal Ecologist                                             | Lee Mantle<br>Associate Director                                                     | Ben Steele<br>Regional Director                                                       |
|        |             |    |    |    |
| SECOND | August 2018 | Hayley Hockridge<br>Principal Ecologist                                             | Lee Mantle<br>Associate Director                                                     | Ben Steele<br>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**

| <b>Survey</b>                                                            | <b>Date(s)</b>                                                                                                                                             | <b>Area</b>                                                                    | <b>Description</b>                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| '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                                                    | <b>Visit 1:</b> 26 May 2005<br><b>Visit 2:</b> 1 June 2005<br><b>Visit 3:</b> 8 June 2005<br><b>Visit 4:</b> 15 June 2005<br><b>Visit 5:</b> 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                                            | <b>Visit 1:</b> 21 May 2012<br><b>Visit 2:</b> 28 May 2012<br><b>Visit 3:</b> 14 June 2012<br><b>Visit 4:</b> 25 June 2012<br><b>Visit 5:</b> 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                       | <b>Visit 1:</b> 10 June 2014<br><b>Visit 2:</b> 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 | <b>Visit 1:</b> 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                       | <b>Visit 1:</b> 6 March 2015<br><b>Visit 2:</b> 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<sup>1,2</sup>, 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**).

<sup>1</sup> CIEEM (2017). *Guidelines for Ecological Report Writing*. Technical Guidance Series.

<sup>2</sup> 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<sup>3,4,5</sup>. 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) <sup>6</sup> ; 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 <sup>7</sup> ) and Birds of Conservation Concern (Red List <sup>8</sup> ) |
| 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.                                                                                                                                                                                                                                                                                                         |

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

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

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

<sup>6</sup> DCLG (2018). *National Planning Policy Framework*, paragraph 174.

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

<sup>8</sup> [https://www.rspb.org.uk/birds-and-wildlife/bird-and-wildlife-guides/bird-guide/status\\_explained.aspx](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)                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Species included on Schedules II and IV of The Conservation of Habitat and Species Regulations 2017;</p> <p>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</p> <p>Badgers, which are protected under the Protection of Badgers Act 1992.</p> |

## 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)<sup>9</sup>.
- 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)<sup>10</sup>.
- 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 Act<sup>11</sup>, 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 25<sup>th</sup> July 2018 using the Joint Nature Conservancy Council (JNCC)<sup>12</sup> 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.

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

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

<sup>11</sup> ODPM (2006) 'Natural Environment and Rural Communities Act'

<sup>12</sup> 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 guidelines<sup>13</sup>.
- 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*

<sup>13</sup> 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 23<sup>rd</sup> July 2018. The methodology broadly followed those given in Gilbert *et al*, (1998)<sup>14</sup> and the Black Redstart Action Plan Working Group for London (BRAPWGL)<sup>15</sup> 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 reasons<sup>16</sup> 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 Site<sup>17</sup> ; or
  - The feature is of insufficient biodiversity conservation value within the Zol, due to its quality, extent or population size<sup>18</sup>.

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

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

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

<sup>17</sup> 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

<sup>18</sup> 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 12<sup>th</sup> 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) |
|--------------------------------------------------------|--------------------------|-------------------|-----------------------|-------------------------------------------------------------|
| <b>Bats</b>                                            |                          |                   |                       |                                                             |
| Common pipistrelle<br><i>Pipistrellus pipistrellus</i> | Hab Regs, WCA, RBAP      | 10                | 2009 - 2015           | 0.34km south-east                                           |
| Soprano pipistrelle<br><i>Pipistrellus pygmaeus</i>    | Hab Regs, WCA, S41, RBAP | 7                 | 2010 - 2015           | 0.36km south-east                                           |
| Pipistrelle sp<br><i>Pipistrellus sp</i>               | Hab Regs, WCA, RBAP      | 20                | 1993-2015             | 0.41km south-east                                           |
| Daubenton's bat<br><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<br><i>Chiroptera sp</i>               | Hab Regs, WCA, RBAP      | 3                 | 1991 - 2015           | 0.36km south-west                                           |
| <b>Birds</b>                                           |                          |                   |                       |                                                             |
| Dunnock <i>Prunella modularis</i>                      | S41                      | 1                 | 2015                  | 0.86km north-east                                           |
| Black-headed gull<br><i>Chroicocephalus ridibundus</i> |                          | 1                 | 2015                  | 0.86km north-east                                           |
| Swift <i>Apus apus</i>                                 |                          | 91                | 1994 -                | 0.3km east                                                  |
| Peregrine falcon<br><i>Falco peregrinus</i>            | A1, WCA                  | 2                 | 2012                  | On Site (one pair on the former Western Tower)              |
| House martin<br><i>Delichon urbicum</i>                |                          | 1                 | 1991                  | 0.9km south                                                 |
| Grey wagtail<br><i>Motacilla cinerea</i>               |                          | 1                 | 2015                  | 0.86km north-east                                           |
| Black redstart<br><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<br><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 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------|
| <p><u>Xafinity House (B1)</u></p> <p>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.</p>                     |  | Negligible       |
| <p><u>NCP Car Park (B2)</u></p> <p>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.</p> |  | Negligible       |

| Potential Roosting Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Building Photographs                                                                 | Bat Roost Rating  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------|
| <p><u>Friars Walk Shopping Centre (B3)</u></p> <p>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).</p> |    | <p>Low</p>        |
| <p><u>Telecom House (B4)</u></p> <p>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.</p>                                                                                                                                                                                                                               |  | <p>Negligible</p> |
| <p><u>Biscuit Tin Café (B5)</u></p> <p>A café constructed from metal crates. No PRFs were recorded.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  | <p>Negligible</p> |

| Potential Roosting Features                                                                                                                                                                                                                                                                                                                                            | Building Photographs                                                                | Bat Roost Rating  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------|
| <p><u>Sub-stations (B6)</u></p> <p>Two metal sub-stations recently constructed. No PRFs recorded.</p>                                                                                                                                                                                                                                                                  |   | <p>Negligible</p> |
| <p><u>(B6)</u></p> <p>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.</p> |  | <p>Low</p>        |

## 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 29<sup>th</sup> 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 12<sup>th</sup> 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 (1<sup>st</sup> June and 8<sup>th</sup> 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 29<sup>th</sup> 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 <b>low</b> 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.                                            |

| <b>Ecological Feature</b> | <b>Rational</b>                                                                                                                                                                               |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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*"<sup>19</sup>;
  - 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.

<sup>19</sup> 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 young<sup>20</sup>.

#### *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.

<sup>20</sup> 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.

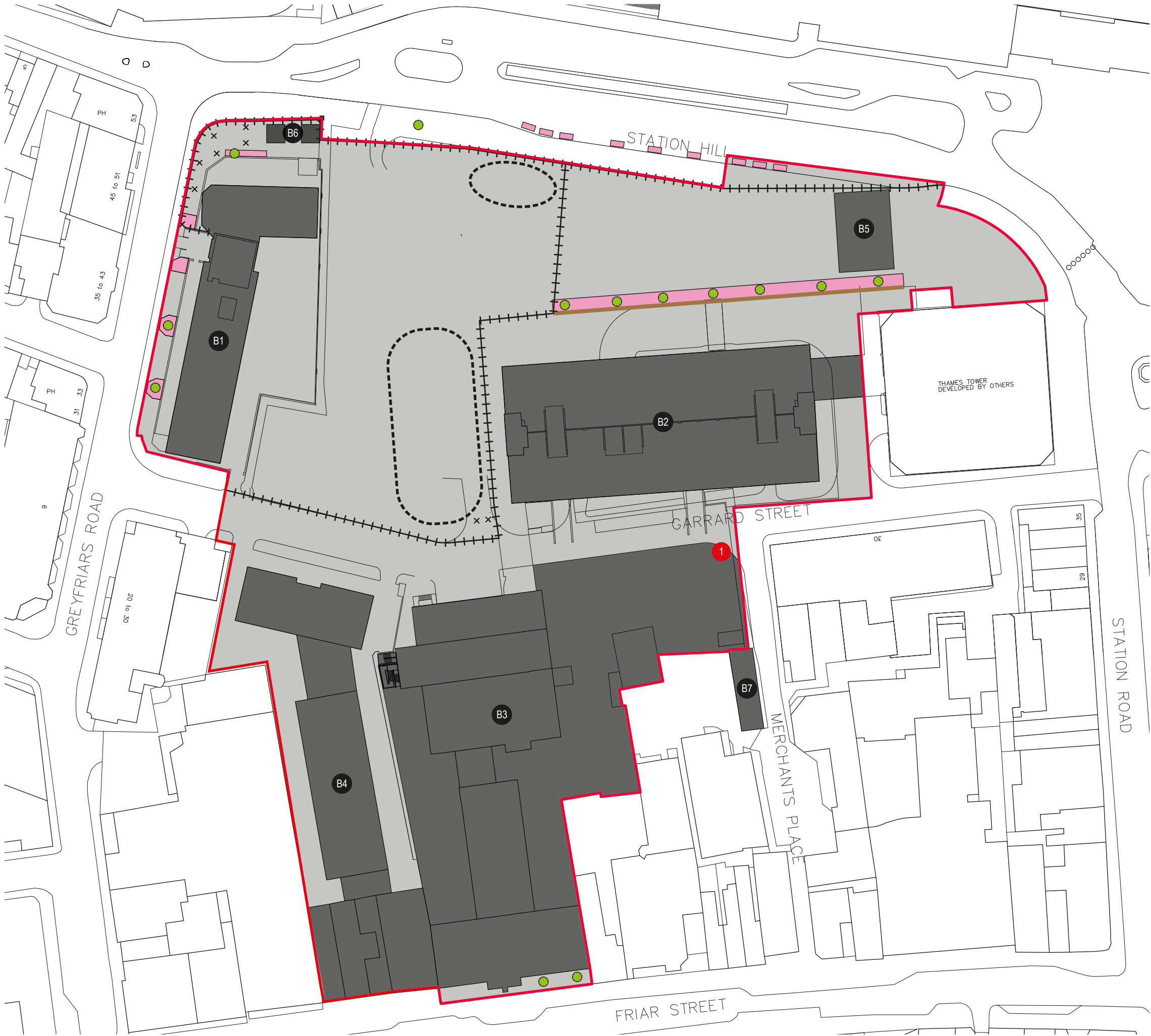
**Table 11: Summary of Additional Ecological Assessments**

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

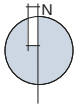
- 6.3. Recommendations have been made within this report to ensure legal compliance and ensure good practice measures are adopted during the Development works. Furthermore, recommendations for ecological compensation and enhancement have been provided to inform the future scheme design process for future 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-inc\swie\projects\wie14788\100\graphics\pea\issued figures



## APPENDICES

## A. Summary of Outline Planning Conditions

| Planning Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Relevant to which Phase / Plot | Comments                                                                                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Condition 22:</p> <p><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></p> <ul style="list-style-type: none"> <li><i>A. Locations and specification for bird nesting habitats for Black Redstarts, Swifts and Peregrine Falcons</i></li> <li><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></li> <li><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></li> </ul> <p><i>These approved habitat mitigation works shall be in place prior to completion of the relevant building/Plot and retained thereafter.</i></p> <p><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></p> | All                            | <p>Condition 22 was discharged for Plot B on 17.10.16 (ref. 151545); and</p> <p>Condition 22 is duplicated on the Plot E / Telecom House consent (151426) and is yet to be discharged.</p> |
| <p>Condition 30:</p> <p><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></p> <p><i>Reason: to ensure that bats, a material consideration, are not adversely affected by the development."</i></p>                                                                                                                                                                                                         | All                            | N/A                                                                                                                                                                                        |
| <p>Condition 31:</p> <p><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></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | All                            | <p>Condition 31 is duplicated on the Plot E / Telecom House consent (151426) and</p>                                                                                                       |

| Planning Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Relevant to which Phase / Plot | Comments                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><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></p> <p><i>Reason: to minimise the impact of the development on bird species."</i></p>                                                                                                                                                                                                                                                                               |                                | is yet to be discharged.                                                                                                                                                       |
| <p>Condition 35:</p> <p><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></p> <p><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></p> | All                            | <p>Condition 35 was discharged 19.03.2015 (ref. 150119); and</p> <p>Condition 35 is duplicated on the Plot E / Telecom House consent (151426) and is yet to be discharged.</p> |

## **B. Planning Policy and Summarised Flora and Fauna Legislation**

### **National Planning Policy**

#### **National Planning Policy Framework, 2018**

- B1. The National Planning Policy Framework<sup>21</sup> (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 revision<sup>22</sup>. However, Government Circular 06/2005<sup>23</sup> - 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;*

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

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

<sup>23</sup> 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 Guidance<sup>24</sup> (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 Strategy<sup>25</sup> was adopted (with alterations) by Reading Borough Council on 27<sup>th</sup> 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:

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

<sup>25</sup> 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 Document<sup>26</sup> 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 2009<sup>27</sup>, 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 Brief<sup>28</sup> 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 Reading<sup>29</sup> 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;*

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

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

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

<sup>29</sup> 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 Plan<sup>30</sup>, 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'<sup>31</sup> covers the period from 2011 to 2020. This now supersedes the UK Biodiversity Action Plan (UK BAP)<sup>32</sup>. 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.

<sup>30</sup> Reading Borough Council (2018) *Submission Draft: Reading Borough Local Plan*.

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

<sup>32</sup> 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 Strategy<sup>33</sup> 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)<sup>34</sup>. 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*'<sup>35</sup>. 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 targets<sup>36</sup>, is passed down to local authorities to implement, mainly through

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

<sup>34</sup> The Reading Biodiversity Action Plan. [http://www.reading.gov.uk/media/5972/Reading-Biodiversity-Action-Plan/pdf/Reading\\_BAP\\_February\\_062.pdf](http://www.reading.gov.uk/media/5972/Reading-Biodiversity-Action-Plan/pdf/Reading_BAP_February_062.pdf) Access in July 2018.

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

<sup>36</sup> <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 2017<sup>37</sup>;
  - The Wildlife and Countryside Act 1981 (as amended)<sup>38</sup>;
  - The Countryside and Rights of Way (CROW) Act 2000<sup>39</sup>; and
  - The Natural Environment and Rural Communities Act 2006<sup>40</sup>.
- 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.

<sup>37</sup> HMSO (2010) The Conservation of Habitats and Species Regulations 2017.

<sup>38</sup> HMSO (1981) 'Wildlife and Countryside Act 1981 (as amended)'

<sup>39</sup> HMSO (2000) 'The Countryside and Rights of Way (CROW) Act'

<sup>40</sup> 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)

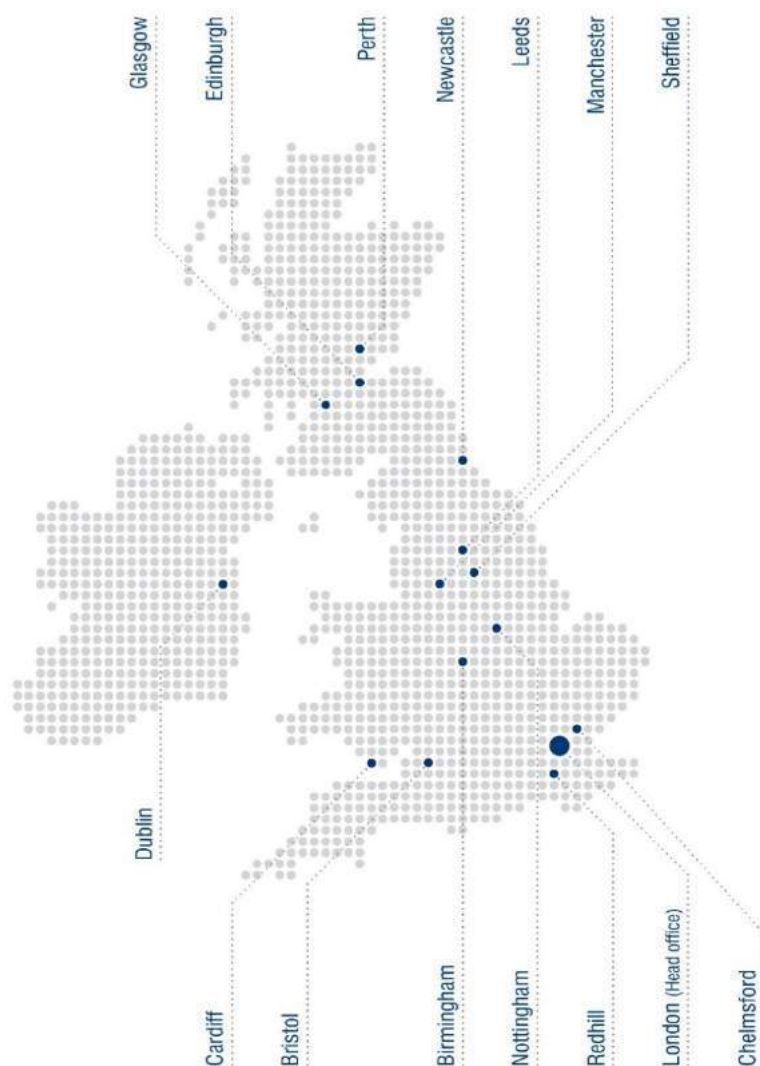


Plate 4 - Linear raised ornamental planting bed located along the southern extent of the temporary events space.



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





## **Station Hill, Reading**

### **Bat Survey Report**

September 2018

#### **Waterman Infrastructure & Environment Limited**

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

[www.watermangroup.com](http://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<br>Principal Ecologist<br>   | Lee Mantle<br>Associate Director<br>  | Ben Steele<br>Regional Director<br>   |
| Final | September 2018 | Hayley Hockridge<br>Principal Ecologist<br> | Ben Steele<br>Regional Director<br> | Ben Steele<br>Regional Director<br> |

### 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 |
|--------------------------------------------------------|---|

## 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 2017<sup>1</sup> and by the Wildlife and Countryside Act 1981 (as amended)<sup>2</sup>. 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 Framework<sup>3</sup> (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 revision<sup>4</sup>. However, Government Circular 06/2005<sup>5</sup> - 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*

<sup>1</sup> HMSO, 2017 'The Conservation of Habitats and Species Regulations'

<sup>2</sup> HMSO, 1981 'The Wildlife and Countryside Act' (WCA) (as amended)

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

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

<sup>5</sup> 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 Guidance<sup>6</sup> (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 Strategy<sup>7</sup> was adopted (with alterations) by Reading Borough Council on 27<sup>th</sup> 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:

- Policy CS36 'Biodiversity and Geology' states:

<sup>6</sup> Department for Communities and Local Government. (2016). *Planning Practice Guidance*. DCLG, London.

<sup>7</sup> Reading Borough Council (January 2015). *Reading Borough Local Development Framework: Core Strategy*.

“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.”

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

- 2.7. Policy DM3 of the Sites and Detailed Policies Document<sup>8</sup> 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”*.

[Reading Borough Local Development Framework, Reading Central Area Action Plan, 2009](#)

- 2.8. The Reading Central Area Action Plan (RCAAP) adopted in 2009<sup>9</sup>, 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](#)

- 2.9. The Station Hill Planning and Urban Design Brief<sup>10</sup> 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...”*;

<sup>8</sup> Reading Borough Council (2012). *Reading Borough Local Development Framework, Sites and Detailed Policies Document, Adopted 2012*

<sup>9</sup> Reading Borough Council (2009). *Reading Borough Local Development Framework: Reading Central Area Action Plan To 2026*.

<sup>10</sup> Reading Borough Council (2007). *Station Hill South Planning and Urban Design Brief*.

- *“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

2.10. The Tree Strategy for Reading<sup>11</sup> 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:

2.11. 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;*
- *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.”*

2.12. 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

2.13. Reading Borough Council are currently producing a new Local Plan<sup>12</sup>, 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.

<sup>11</sup> Reading Borough Council (June 2010). *Tree Strategy for Reading*.

<sup>12</sup> 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*'<sup>13</sup>. 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 targets<sup>14</sup>, 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.

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

<sup>14</sup> <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 guidelines<sup>15</sup>.
- 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.

<sup>15</sup> Collins. J (2016) *Bat Survey for Professional Ecologists: Good Practice Guidelines*. 3<sup>rd</sup> 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)<sup>16</sup>. The average roost emergence time for common pipistrelle is 24.8 minutes after sunset<sup>17</sup>. 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.

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

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

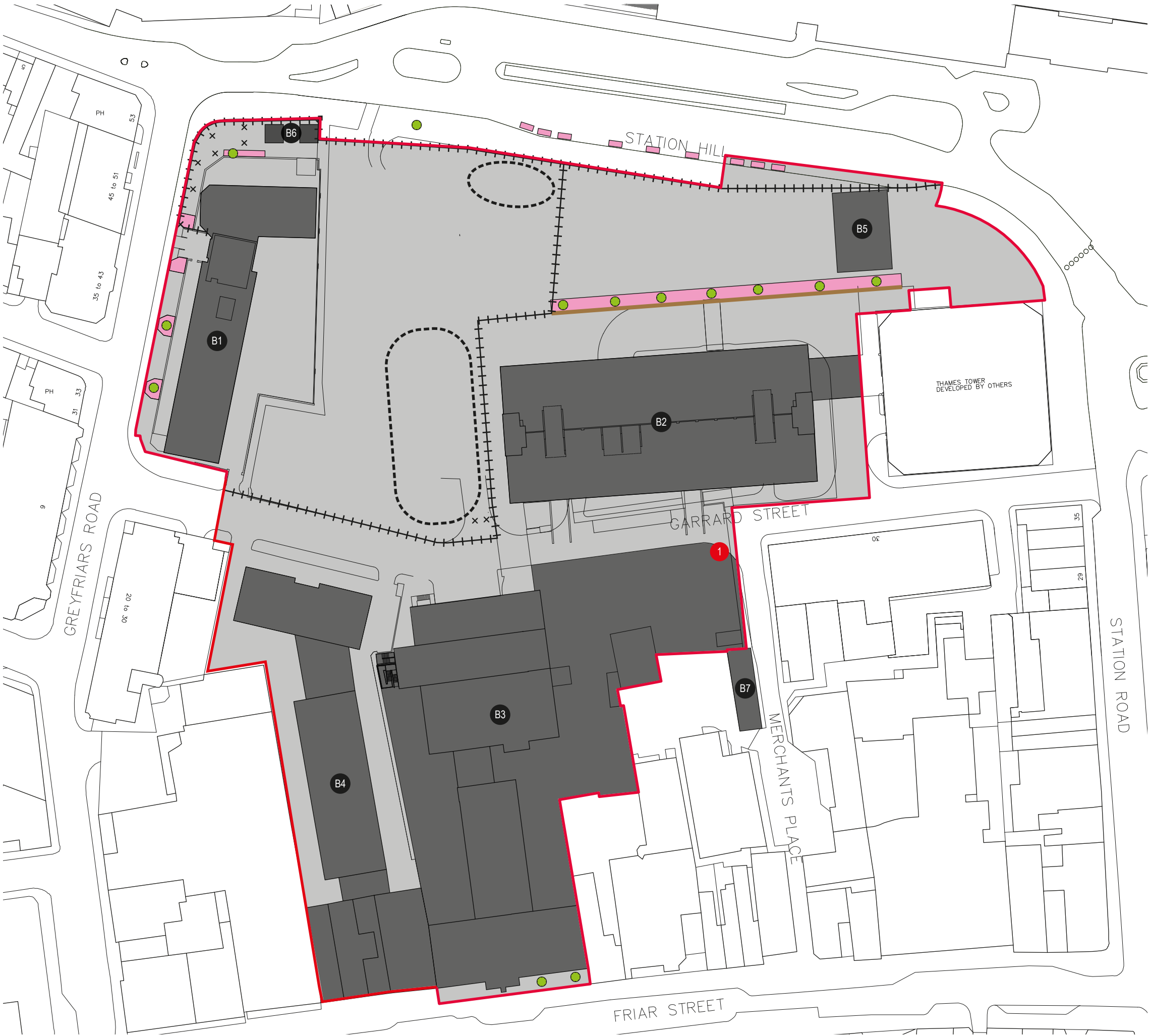
## 5. Conclusions and Recommendations

- 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.

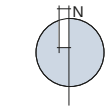
## FIGURES

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

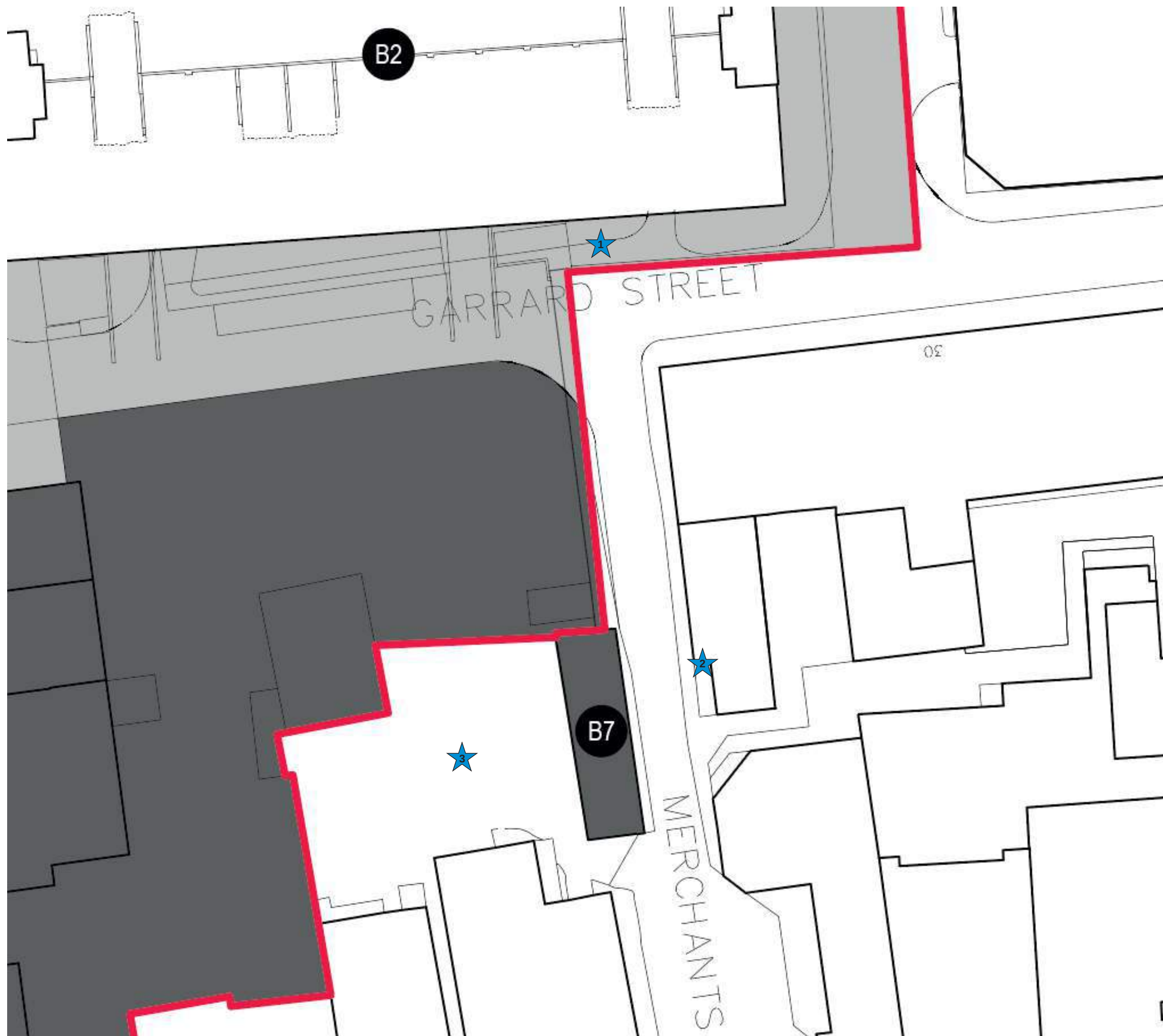
WIE14788-100\_GR\_PEA\_1A

Date

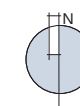
August 2018

File Location

\\s-inc\swie\projects\wie14788\100\graphics\pea\issued figures

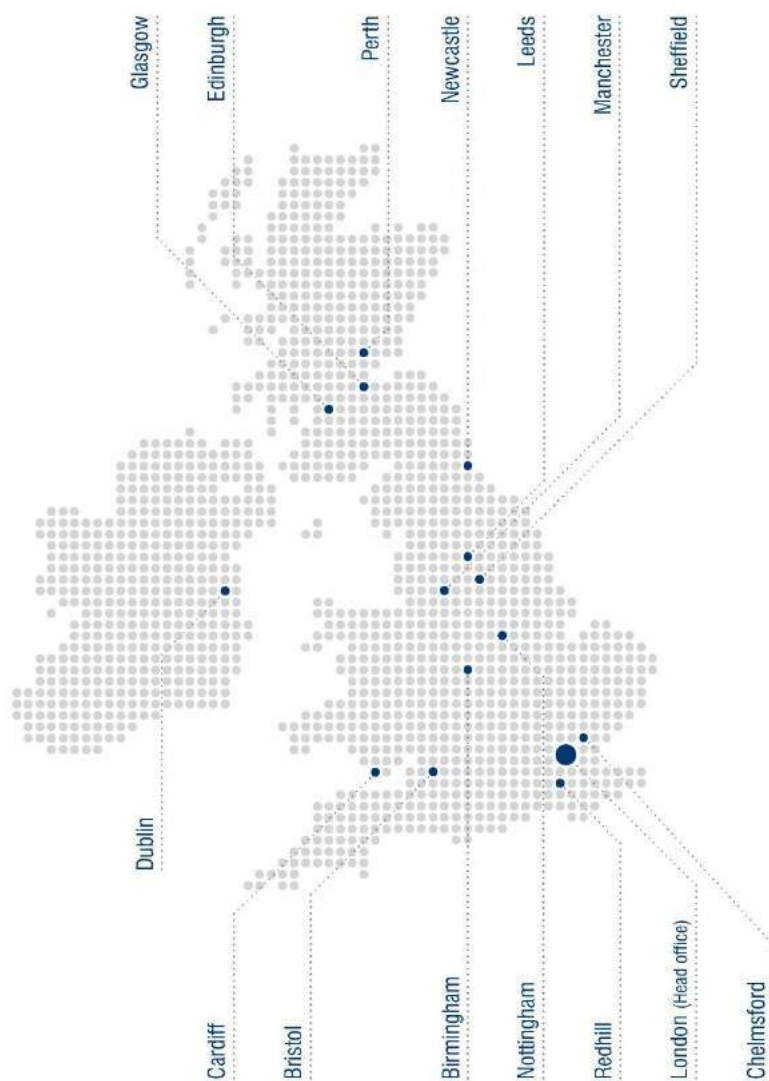


-  Site Boundary
-  Buildings
-  Hardstanding
-  Bat Surveyor Locations



|                 |                                                               |
|-----------------|---------------------------------------------------------------|
| Project Details | WIE14788-100: Station Hill, Reading                           |
| Figure Title    | Figure 2: Bat Surveyor Locations                              |
| Figure Ref      | WIE14788-100_GR_EC_1A                                         |
| Date            | August 2018                                                   |
| File Location   | \\s-inc\swie\projects\wie14788\100\graphics\ec\issued figures |

## UK and Ireland Office Locations



### Annex 3 List of Consented or Reasonably Foreseeable Schemes To Be Assessed Cumulatively

Schemes in greyed out text are assumed to have been superseded by subsequent applications for the same site.

| Site                                                               | Application Reference               | Proposal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Decision / Date     | Distance and direction from the Site (at its closest point)                                                     |
|--------------------------------------------------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------|
| Former Sorting Office Caversham Road/ Vastern Road Reading RG1 1AA | 11/00276/OUT                        | Outline planning application with all matters reserved with the exception of means of access, for the demolition of existing buildings; site preparation; and redevelopment of the application site for a mix of uses from amongst employment and business uses (use class B1) and residential accommodation (C3); Hotel (C1), retail floor space (A1), food and drink uses (A3, A4 and A5), leisure uses (D2), car parking, public and private open space, landscaping works, highways, access and associated works. | Approved 26/03/2012 | 150m north                                                                                                      |
| Building B, Station Hill 3                                         | 151543                              | Reserved Matters application for Building B of Station Hill 3                                                                                                                                                                                                                                                                                                                                                                                                                                                         | N/A                 | Within the Site                                                                                                 |
| 29-35 Station Road, Reading, RG1 1LG                               | Application to be submitted shortly | Demolition of existing building and the erection of an approximately 22 storey building. As advised by Reading Borough Council, model information has been taken from previous application for a similar scheme (Application ref: 04/01395/FUL)                                                                                                                                                                                                                                                                       | N/A                 | 45m south-east<br><b>Assumed to be superseded by the later application below.</b>                               |
| 29-35 Station Road, Reading RG1 1LG                                | 170772                              | Change of use of 1st to 5th floors from Class B1(a) (offices) to C3 (dwelling houses) to comprise 33 x 1-bed flats. Prior Notification under Class O, Part 3 of Schedule 2 of the Town and Country Planning (General Permitted Development) Order 2015 (as amended).                                                                                                                                                                                                                                                  | Approved 10/07/17   | 45m south east.                                                                                                 |
| Garrard House 30 Garrard Street Reading RG1 1NR                    | 150556                              | Extension to include part new fourth floor and new fifth and sixth floors to provide 23 residential units.                                                                                                                                                                                                                                                                                                                                                                                                            | Pending decision    | Immediately adjacent to the east of the Site.<br><b>Assumed to be superseded by the later application below</b> |
| Garrard House 30 Garrard Street Reading RG1 1NR                    | 160328                              | Extension to include part new fourth floor and new fifth and sixth floors to provide 18 residential units.                                                                                                                                                                                                                                                                                                                                                                                                            | Approved 21/06/16   | Immediately adjacent to the east of the Site.                                                                   |

| Site                                                          | Application Reference | Proposal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Decision / Date               | Distance and direction from the Site (at its closest point)               |
|---------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------|
| 52 to 55 Friar Street and 12 Grayfriars 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.                             |
| 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 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. | Resolution to Grant July 2018 | 300m to the east. Potential for cumulative townscape effects.             |
| 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 cafe (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. Potential for cumulative townscape effects. |

## **Technical Appendix 2.4     EIA Scoping Opinion (November 2018)**

Mr A. Hughes  
DP9 Ltd  
100 Pall Mall  
SW1Y 5NQ

By email

*Without Prejudice*

Giorgio Framalicco  
Head of Planning, Development &  
Regulatory Services

Civic Offices, Reading, RG1 2LU

☎ 0118 937 3787

Our Ref: 181820/SCO

Direct: ☎ 0118 937 2980  
e-mail: Stephen.vigar@reading.gov.uk

14 November 2018

Your contact is: Steve Vigar, Planning & Building Control

## **Town and Country Planning (Environmental Impact Assessment)(England) Regulations 2017**

**Request for a Scoping Opinion from the Local Planning Authority under Regulation 15 for a redevelopment consisting of: Demolition of existing buildings and construction of a mixed use development comprising residential development (C3), office development (B1A), retail (etc) uses (A1, A2, A3, A4, A5), leisure development (D2) and associated car parking and public realm works at Station Hill, Reading.**

I refer to the above request for a Scoping Opinion as set out in your letter of 18 October 2018 ref. WIE14788-101-181018-EIA Scoping Request

I supply comments on the basis of the information supplied in the above letter, the submitted site location plan and Annexes 1, 2 and 3.

This request has been considered in accordance with under Regulation 15 Part 4 of The Town and Country Planning (Environmental Impact Assessment) Regulations 2017. The necessary consultations have been carried out and the Authority's formal Scoping Opinion in accordance with the Regulations is set out below.

### *Consultation responses:*

The following bodies have been consulted:

- Natural England (response received)
- Environment Agency (response received)
- RBC Environmental Protection (response received)
- RBC Transport Strategy (the Highway Authority)
- Berkshire Archaeology (response received)
- RBC Ecologist (response received)
- RBC Natural Environment
- RBC Sustainability Team
- Lead Flood Authority (response received)
- RBC Emergency Planner

The comments from consultees are enclosed.

I supply the following additional comments

## **EIA Background and Strategy**

As indicated previously (141124/SCO) it is not appropriate to undertake an EIA on the Telecom House/Plot E scheme application in isolation. The new and updated ES would consider effects of the existing SH3 scheme, amended to reflect the changes to Plots E and F.

The updated ES should also include a comparison of the effects of the SH3 Scheme and the revised proposals.

## ***Proposed Scope of the EIA***

The methodology as described in the 2015 ES is considered to be suitable to apply to the updated ES. The Sensitive Receptors (Annex 1), seem appropriate in line with the previous ES.

In respect of the following Chapters proposed for the updated ES, I respond as follows, where required.

## **Socio-Economics**

The socio-economic effects of the increase in residential floorspace, the reduction in Class B1 floorspace and the shift from owner-occupied to Build-to-Rent should be addressed. Impacts should be assessed in terms of their impact on the Borough as a whole.

## **Archaeology**

No additional comments as per Berkshire Archaeology advice.

## **Transport and Access**

No additional comments as per Highway Authority advice.

## **Noise**

No additional comments as per RBC EHO advice.

## **Air Quality**

No additional comments as per RBC EHO advice.

## **Ground Conditions and Contamination**

No additional comments as per RBC EHO and Environment Agency advice.

## **Surface Water Drainage and Flood Risk**

No additional comments as per Environment Agency and Lead Flood Authority advice.

## **Ecology**

The Updated PEA and Bat Survey Report should be appended to the ES or submitted as a separate document.

## **Wind**

Detailed wind tunnel assessment of the actual building design, rather than just the parameters currently approved in Outline will be required. Specialist advice and third party verification will be required.

## **Daylight, Sunlight and Overshadowing**

Detailed assessment of the actual building design, rather than just the parameters currently approved in Outline will be required. It appears that the proposals will be quite different from those envisaged previously. Specialist advice and third party verification will be required.

## **Townscape, Visual and Heritage Assessment**

The viewpoints to be updated appear reasonable.

View 22 Kings Meadow should include Permission 162166 Former Coopers BMW site, Napier Road. It would also be worth including an additional new view looking west along Napier Road as this is proposed to become a main Mass Rapid Transit transport route into the town.

A view westwards from the top of Shepherds Hill near to the junction with Pitts Lane should be included. Long range views from the east are currently missing from the assessment.

A view towards the site from the environs of Kings Road/Watlington Street, incorporating the new Kings Point, 120 Kings Road development (permission 162087) should be included.

#### **Population and Human Health**

No additional comment at this stage.

#### **Climate Change**

No additional comments in terms of building structure. The energy strategy is subject to ongoing detailed pre-application discussions. The detailed approach will need to be set out in the ES once this has been clarified. A detailed assessment will also be required at planning application stage.

#### **Risk of Major Accidents or Disasters**

No additional comments at this stage, although it should be noted that consultation with emergency services and emergency planners will be carried out once greater detail on the scheme is made available. This will consider the routes and spaces around the buildings as well as the buildings themselves. The assessment will be expected to take into account the Station Hill site as a whole.

#### **Cumulative Assessment**

In addition to the list of cumulative schemes in Annex 3, you are advised to check with the Council regarding any update on the 29-35 Station Road site.

Permission 162166 Former Coopers BMW site, Napier Road - should be included due to the height of the approved building.

Permission 162087, 120 Kings Road should be included.

#### **Conclusion and Decision**

Please note the contents of this letter. These principles should be incorporated into the final ES to accompany an application for planning permission.

This Opinion is provided on the information contained within the scoping request letter only, in the context of current planning policies and regulations. Furthermore, this Opinion is supplied without prejudice to any decision of the Council on this or any other application which has been, or may subsequently be submitted. If you have any queries regarding the above, please contact the case officer.

Yours sincerely

*SDV*

Steve Vigar  
Principal Planning Officer

Date: 01 November 2018  
Our ref: 262377  
Your ref: 181820



Stephen Vigar  
Principal Planning Officer  
Reading Borough Council  
Civic Offices  
Bridge Street  
Reading, RG1 2LU

Hornbeam House  
Crewe Business Park  
Electra Way  
Crewe  
Cheshire  
CW1 6GJ

T 0300 060 3900

**BY EMAIL ONLY**

[stephen.vigar@reading.gov.uk](mailto:stephen.vigar@reading.gov.uk)

Dear Mr Vigar,

**Environmental Impact Assessment Scoping consultation (Regulation 15 (4) of the Town & Country Planning EIA Regulations 2017):** Request for an EIA Scoping Opinion for s.73 Minor Material Amendment (Outline) and Reserved Matters applications pursuant to permissions 151426/OUT and 151427/VAR, involving demolition of existing buildings and construction of a mixed use development comprising residential development (C3), office development (B1A), retail (etc) uses (A1, A2, A3, A4, A5), leisure development (D2) and associated car parking and public realm works.  
**Location:** 56 Station Hill Reading RG1 1NF

Thank you for your consultation dated and received by Natural England on 19<sup>th</sup> October 2018.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

The scoping request is for a proposal that does not appear, from the information provided, to affect any nationally designated geological or ecological sites (Ramsar, SPA, SAC, SSSI, NNR) or landscapes (National Parks, AONBs, Heritage Coasts, National Trails), or have significant impacts on the protection of soils (particularly of sites over 20ha of best or most versatile land), nor is the development for a mineral or waste site of over 5ha.

At present therefore it is not a priority for Natural England to advise on the detail of this EIA. We would, however, like to draw your attention to some key points of advice, presented in annex to this letter, and we would expect the final Environmental Statement (ES) to include all necessary information as outlined in Part 4 of the Town & Country Planning (Environmental Impact Assessment) Regulations 2017. If you believe that the development does affect one of the features listed in paragraph 3 above, please contact Natural England at [consultations@naturalengland.org.uk](mailto:consultations@naturalengland.org.uk), and we may be able to provide further information.

Yours sincerely

Victoria Kirkham  
Consultations Team

## **Annex A – Advice related to EIA Scoping Requirements**

### **1. General Principles**

Schedule 4 of the Town & Country Planning (Environmental Impact Assessment) Regulations 2017, sets out the necessary information to assess impacts on the natural environment to be included in an ES, specifically:

1. A description of the development, including in particular:
  - (a) a description of the location of the development;
  - (b) a description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases;
  - (c) a description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used;
  - (d) an estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases.
2. A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.
3. A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.
4. A description of the factors specified in regulation 4(2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.
5. A description of the likely significant effects of the development on the environment resulting from, inter alia:
  - (a) the construction and existence of the development, including, where relevant, demolition works;
  - (b) the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;
  - (c) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;
  - (d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);
  - (e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;
  - (f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;
  - (g) the technologies and the substances used. The description of the likely significant effects on the factors specified in regulation 4(2) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the project, including in particular those established under Council Directive 92/43/EEC(a) and Directive 2009/147/EC(b).

6. A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.
7. A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.
8. A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.

## **2. Biodiversity and Geology**

### **2.1. Ecological Aspects of an Environmental Statement**

Natural England advises that the potential impact of the proposal upon features of nature conservation interest and opportunities for habitat creation/enhancement should be included within this assessment in accordance with appropriate guidance on such matters. [Guidelines for Ecological Impact Assessment \(EclA\)](#) have been developed by the Chartered Institute of Ecology and Environmental Management (CIEEM) and are available on their website.

EclA is the process of identifying, quantifying and evaluating the potential impacts of defined actions on ecosystems or their components. EclA may be carried out as part of the EIA process or to support other forms of environmental assessment or appraisal.

The National Planning Policy Framework ([NPPF](#)) sets out guidance in S.118 on how to take account of biodiversity interests in planning decisions and the framework that local authorities should provide to assist developers.

### **2.2. Internationally and Nationally Designated Sites**

Natural England undertakes an initial assessment of all development consultations, by determining whether the location to which they relate falls within geographical 'buffer' areas within which development is likely to affect designated sites. The proposal is located outside these buffer areas and therefore appears unlikely to affect an Internationally or Nationally designated site. However, it should be recognised that the specific nature of a proposal may have the potential to lead to significant impacts arising at a greater distance than is encompassed by Natural England's buffers for designated sites. The ES should therefore thoroughly assess the potential for the proposal to affect designated sites, including Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites and Sites of Special Scientific Interest (SSSI). Should the proposal result in an emission to air or discharge to the ground or surface water catchment of a designated site then the potential effects and impact of this would need to be considered in the Environmental Statement

Local Planning Authorities, as competent authorities under the provisions of the Conservation of Habitats and Species Regulations 2017, should have regard to the Habitats Regulations Assessment process set out in Regulation 63 of the Habitats Regulations in their determination of a planning application. Should a Likely Significant Effect on a European/Internationally designated site be identified or be uncertain, the competent authority (in this case the Local Planning Authority) may need to prepare an Appropriate Assessment, in addition to consideration of impacts through the EIA process.

Statutory site locations can be found at [www.magic.gov.uk](http://www.magic.gov.uk). Further information concerning particular statutory sites can be found on the [Natural England website](#).

### 2.3. Protected Species

The ES should assess the impact of all phases of the proposal on protected species. Records of protected species should be sought from appropriate local biological record centres, nature conservation organisations, groups and individuals; and consideration should be given to the wider context of the site for example in terms of habitat linkages and protected species populations in the wider area, to assist in the impact assessment.

The conservation of species protected by law is explained in Part IV and Annex A of Government Circular 06/2005 *Biodiversity and Geological Conservation: Statutory Obligations and their Impact within the Planning System*. The area likely to be affected by the proposal should be thoroughly surveyed by competent ecologists at appropriate times of year for relevant species and the survey results, impact assessments and appropriate accompanying mitigation strategies included as part of the ES.

Natural England has adopted [standing advice](#) for protected species. It provides a consistent level of basic advice which can be applied to any planning application that could affect protected species. It also includes links to guidance on survey and mitigation.

Natural England does not hold comprehensive information regarding the locations of species protected by law, but advises on the procedures and legislation relevant to such species.

### 2.4. Regionally and Locally Important Sites

The ES should thoroughly assess the impact of the proposals on non-statutory sites, for example Local Wildlife Sites (LoWS), Local Nature Reserves (LNR) and Regionally Important Geological and Geomorphological Sites (RIGS). Natural England does not hold comprehensive information on these sites. We therefore advise that the appropriate local biological record centres, nature conservation organisations, Local Planning Authority and local RIGS group should be contacted with respect to this matter.

### 2.5. Biodiversity Action Plan Habitats and Species

The ES should thoroughly assess the impact of the proposals on habitats and/or species listed in the UK Biodiversity Action Plan (BAP). These Priority Habitats and Species are listed as 'Habitats and Species of Principal Importance' within the England Biodiversity List, recently [published](#) under the requirements of S14 of the Natural Environment and Rural Communities (NERC) Act 2006. Section 40 of the NERC Act 2006 places a general duty on all public authorities, including local planning authorities, to conserve and enhance biodiversity. Further information on this duty is available in the Defra publication '[Guidance for Local Authorities on Implementing the Biodiversity Duty](#)'.

Government Circular 06/2005 states that BAP species and habitats, 'are capable of being a material consideration...in the making of planning decisions'. Natural England therefore advises that survey, impact assessment and mitigation proposals for Habitats and Species of Principal Importance should be included in the ES. Consideration should also be given to those species and habitats included in the relevant Local BAP.

The record centre for the relevant Local Authorities should be able to provide the relevant information on the location and type of BAP habitat for the area under consideration.

## **3. Landscape, Access and Recreation**

### 3.1. Landscape and Visual Impacts

The consideration of landscape impacts should reflect the approach set out in the *Guidelines for Landscape and Visual Impact Assessment* (Landscape Institute and the Institute of Environmental Assessment and Management, 2013, 3rd edition), the *Landscape Character Assessment Guidance for England and Scotland* (Scottish Natural Heritage and The Countryside Agency, 2002) and good practice. The assessment should also include the cumulative effect of the development with other relevant existing or proposed developments in the area. In this context Natural England would expect the cumulative impact assessment to include those proposals currently at Scoping stage. Due to the

overlapping timescale of their progress through the planning system, cumulative impact of the proposed development with those proposals currently at Scoping stage would be likely to be a material consideration at the time of determination of the planning application.

The assessment should refer to the relevant [National Character Areas](#) which can be found on our website. Links for Landscape Character Assessment at a local level are also available on the same page.

### **3.2. Access and Recreation**

The ES should include a thorough assessment of the development's effects upon public rights of way and access to the countryside and its enjoyment through recreation. With this in mind and in addition to consideration of public rights of way, the landscape and visual effects on Open Access land, whether direct or indirect, should be included in the ES.

Natural England would also expect to see consideration of opportunities for improved or new public access provision on the site, to include linking existing public rights of way and/or providing new circular routes and interpretation. We also recommend reference to relevant Right of Way Improvement Plans (ROWIP) to identify public rights of way within or adjacent to the proposed site that should be maintained or enhanced.

## **4. Land use and soils**

Impacts from the development should be considered in light of the Government's policy for the protection of the best and most versatile (BMV) agricultural land as set out in paragraph 112 of the NPPF. We also recommend that soils should be considered under a more general heading of sustainable use of land and the valuing of the ecosystem services they provide as a natural resource in line with paragraph 109 of the NPPF.

Soil is a finite resource that fulfils many important functions and services (ecosystem services) for society; for instance as a growing medium for food, timber and other crops, as a store for carbon and water, as a reservoir of biodiversity and as a buffer against pollution. It is therefore important that the soil resources are protected and used sustainably. The Natural Environment White Paper (NEWP) '*The Natural Choice: securing the value of nature*' (Defra, June 2011), emphasises the importance of natural resource protection, including the conservation and sustainable management of soils and the protection of BMV agricultural land.

Development of buildings and infrastructure prevents alternative uses for those soils that are permanently covered, and also often results in degradation of soils around the development as result of construction activities. This affects their functionality as wildlife habitat, and reduces their ability to support landscape works and green infrastructure. Sealing and compaction can also contribute to increased surface run-off, ponding of water and localised erosion, flooding and pollution.

Defra published a Construction [Code of Practice for the sustainable use of soils on construction sites](#) (2009). The purpose of the Code of Practice is to provide a practical guide to assist anyone involved in the construction industry to protect the soil resources with which they work.

As identified in the NPPF new sites or extensions to new sites for Peat extraction should not be granted permission by Local Planning Authorities or proposed in development plans.

General advice on the agricultural aspects of site working and reclamation can be found in the Defra [Guidance for successful reclamation of mineral and waste sites](#).

## **5. Air Quality**

Air quality in the UK has improved over recent decades but air pollution remains a significant issue; for example over 97% of sensitive habitat area in England is predicted to exceed the critical loads for ecosystem protection from atmospheric nitrogen deposition ([England Biodiversity Strategy](#), Defra 2011). A priority action in the England Biodiversity Strategy is to reduce air pollution impacts on biodiversity. The planning system plays a key role in determining the location of developments which may give rise to pollution, either directly or from traffic generation, and hence planning decisions can

have a significant impact on the quality of air, water and land. The assessment should take account of the risks of air pollution and how these can be managed or reduced. Further information on air pollution impacts and the sensitivity of different habitats/designated sites can be found on the Air Pollution Information System ([www.apis.ac.uk](http://www.apis.ac.uk)). Further information on air pollution modelling and assessment can be found on the Environment Agency website.

## **6. Climate Change Adaptation**

The [England Biodiversity Strategy](#) published by Defra establishes principles for the consideration of biodiversity and the effects of climate change. The ES should reflect these principles and identify how the development's effects on the natural environment will be influenced by climate change, and how ecological networks will be maintained. The NPPF requires that the planning system should contribute to the enhancement of the natural environment "by establishing coherent ecological networks that are more resilient to current and future pressures" ([NPPF](#) Para 109), which should be demonstrated through the ES.

Mr Stephen Vigar  
Reading Borough Council  
Civic Offices  
Bridge Street  
Reading  
Reading  
RG1 2LU

**Our ref:** WA/2018/125888/01-L01  
**Your ref:** 181820  
**Date:** 02 November 2018

Dear Mr Vigar

**Request for an EIA scoping opinion for s.73 minor material amendment (outline) and reserved matters applications pursuant to permissions 151426/OUT and 151427/VAR, involving demolition of existing buildings and construction of a mixed use development comprising residential development (c3), office development (b1a), retail (etc) uses (a1, a2, a3, a4, a5), leisure development (d2) and associated car parking and public realm works.  
56 Station Hill, Reading, RG1 1NF.**

Thank you for your consultation on the above EIA scoping opinion.

The site lies within Flood Zone 1 with a small part lying within Flood Zone 2 in accordance with our flood risk mapping. Flood Zone 1 has a low probability of flooding in accordance with table 1 'flood risk' in the Planning Practice Guidance. The site also lies within a secondary aquifer.

### **Environment Agency position**

We have no comments to make on the proposed minor material amendments. Please be aware we have made a response on planning application 151426/OUT requiring conditions for site investigation, remediation and piling in relation to land contamination and groundwater quality.

### **Final Comments**

Once again, thank you for contacting us. Our comments are based on our available records and the information as submitted to us.

Please quote our reference number in any future correspondence.

If you have any queries please contact me.

Cont/d..

Yours sincerely

**Miss Michelle Kidd**  
**Planning Advisor**

Direct dial 02030259712

E-mail [planning\\_THM@environment-agency.gov.uk](mailto:planning_THM@environment-agency.gov.uk)

Your Ref: 181820

My Ref: EP /633491

Date consultation received: 19/10/2018      Date: 6 November 2018

**Premises Address: 56 Station Hill Reading RG1 1NF**

**Application For: : Request for an EIA Scoping Opinion for s.73 Minor Material Amendment (Outline) and Reserved Matters applications pursuant to permissions 151426/OUT and 151427/VAR**

I have no comments on this application that would impact on the proposed scope of the EIA.

If you have any queries please contact me.

Kind regards,

Rebecca Moon -  
Senior Environmental Health Officer

**From:** MacDonald, Fiona <Fiona.MacDonald@reading.gov.uk>  
**Sent:** 01 November 2018 11:40  
**To:** Vigar, Stephen  
**Subject:** 181820 56 Station Hill, Reading - scoping opinion [OFFICIAL]

Dear Steve

Many thanks for consulting us on this scoping opinion request. I have been through the detail on line and considered the proposed scope of the EIA. The originally proposed methods for managing archaeological potential within the site, as laid out in the accompanying letter, are still relevant to these proposed alterations, and therefore we are in agreement with the conclusion that archaeology does not need to be covered further in the EIA. As noted in the applicant's submission, a multi-phase programme of investigation will be required, and therefore a condition relating to this will be needed, should the application be consented

I trust this suits, but as always, please don't hesitate to contact me if you have any queries about these issues or our response

Best wishes

Fiona

**Fiona Macdonald MA(Oxon) MCIfA**

**Principal Archaeologist**

Berkshire Archaeology | Environment and Neighbourhood Services

Berkshire Record Office  
9 Coley Avenue  
Reading  
RG1 6AF

[www.berkshirearchaeology.org.uk](http://www.berkshirearchaeology.org.uk)

Berkshire Archaeology is an archaeological advice service for Bracknell Forest, Reading, Slough, Wokingham and the Royal Borough of Windsor and Maidenhead

---

This email has been scanned by the Symantec Email Security.cloud service.

---

## Joanna Bagley

---

**From:** rbc@gsecology.co.uk  
**Sent:** 07 November 2018 13:20  
**To:** Vigar, Stephen  
**Subject:** 181820 - 56 Station Hill Reading RG1 1NF

**This is an EXTERNAL EMAIL. STOP. THINK before you CLICK links or OPEN attachments.**

Hi Steve,

The EIA scoping letter states that this application will be accompanied by an updated preliminary ecological appraisal and bat survey. I agree with this approach, although this could be appended to the EIA or submitted as a separate document.

Kind regards,

Giles

Reading Borough Council Ecology Consultations

GS Ecology Ltd.

Email: [RBC@gsecology.co.uk](mailto:RBC@gsecology.co.uk)

W: [www.gsecology.co.uk](http://www.gsecology.co.uk)

Registered office: 119 Highgrove Street, Reading, Berks, RG1 5EJ Company Number: 7025591



Virus-free. [www.avg.com](http://www.avg.com)

Click [here](#) to report this email as spam.

---

This email has been scanned by the Symantec Email Security.cloud service.

---

## Joanna Bagley

---

**From:** Cook, Darren <Darren.Cook@reading.gov.uk>  
**Sent:** 06 November 2018 11:33  
**To:** Vigar, Stephen  
**Subject:** 181820 Station Hill  
**Attachments:** CMK16291.doc

Hi Steve,

I am happy that the level of scoping identified in the documents provided is sufficient in terms of impact on Transport and SuDS

Kind regards,

Darren Cook  
Transport Development Control Manager  
Transport | Directorate of Environment and Neighbourhood Services (DENS)

Reading Borough Council  
Civic Offices  
Bridge Street  
Reading  
RG1 2LU

0118 937 2612 (72612)  
07814 169457

Website | Facebook | Twitter | YouTube

-----Original Message-----

From: Kilbee, Christina  
Sent: 19 October 2018 08:02  
To: Cook, Darren  
Subject: Consultation on Planning Application 181820

This is to advise you that the above application has been submitted to the Planning Department.  
If you have any comments to make relating to the above development please provide them by return email or memo by the date shown on the attached memo.



## **Technical Appendix 7.1    Health Impact Assessment**



**HATCH**  
**REGENERIS**

# Station Hill, Reading: Health Impact Assessment

A Report by Hatch Regeneris  
March 2019

# Station Hill, Reading: Health Impact Assessment

March 2019

[www.hatchregeneris.com](http://www.hatchregeneris.com)

# Contents Page

---

|           |                           |          |
|-----------|---------------------------|----------|
| <b>1.</b> | <b>Introduction</b>       | <b>1</b> |
|           | The Development Proposals | 1        |
|           | Assessment Methodology    | 1        |
|           | Local Context             | 2        |

---

|           |                   |          |
|-----------|-------------------|----------|
| <b>2.</b> | <b>Assessment</b> | <b>4</b> |
|-----------|-------------------|----------|

---

|           |                            |           |
|-----------|----------------------------|-----------|
| <b>3.</b> | <b>Summary/Conclusions</b> | <b>20</b> |
|-----------|----------------------------|-----------|



# 1. Introduction

- 1.1 The national Planning Practice Guidance (PPG) states that local planning authorities should ensure that the healthcare infrastructure implications of any relevant proposed local development are considered. The PPG also refers to HIA as a useful tool to assess and address the impacts of development proposals (paragraph ref 53-004-20140306). Furthermore, the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 states that 'population and human health' is a factor that should be assessed as part of an EIA.
- 1.2 In order to meet these requirements, Hatch Regeneris has prepared a Health Impact Assessment (HIA) which should be read in conjunction with the Socio-economics ES Chapter of the ES Addendum.
- 1.3 The remainder of this section describes the proposed Development, sets out the methodology for undertaking the HIA and provides an overview of the profile of the local population. Section 2 comprises the HIA itself.

## The Development Proposals

---

- 1.4 The Station Hill Site (hereafter referred to as 'the Site') is situated within the town centre of Reading and currently comprises of Xafinity House, the NCP Car Park, Friars Walk Shopping Centre and Telecom House together with a Temporary Events Space and open land and hard standing where former buildings have been demolished.
- 1.5 In March 2013, an Outline Planning Application was submitted for the demolition of all the existing buildings and structures within the 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 subsequently granted planning consent by Reading Borough Council (RBC) in January 2015 (hereafter the 2015 Consented Scheme).
- 1.6 In August 2015, two further planning applications were submitted to extend and amend Plot E of the 2015 Consented Scheme to incorporate an adjacent site referred to as the Telecom House Site. These two applications were granted planning consent in July 2016 and are together referred to in this report as the '2016 Consented Scheme'.
- 1.7 Following acquisition of the Site in 2018, SH Reading Master LLP (the Applicant) is seeking to make minor changes to Plots E and F of the 2016 Consented Scheme to respond to a series of design changes. These changes, referred to as the 'Proposed Amendments' would be made by means of a planning application known as a Section 73 Minor Material Amendment Application. At the same time, further design details will be submitted for Plots E and F (known as reserved matters applications). The 2016 Consented Scheme as altered by the Proposed Amendments is hereafter referred to as the 'Development'.

## Assessment Methodology

---

- 1.8 There is no formal guidance from Reading Borough Council on the requirements to undertake an HIA. Therefore, this assessment uses the Healthy Urban Living Unit (HUDU) Rapid Health Impact Assessment (HIA) Tool which has been designed to use existing evidence to assess the likely health impacts of development plans and proposals and recommend measures to address negative impacts and maximise benefits. The process looks at the positive and negative impacts of a development as well as assessing the indirect implications for the wider community.

- 1.9 The Rapid HIA tool includes 11 different categories, which influence the health and well-being of an area. It does not identify all issues related to health and wellbeing but focuses on the built environment and issues directly or indirectly influenced by planning decisions. The 11 categories are:
- Housing quality and design
  - Access to healthcare services and other social infrastructure
  - Access to open space and nature
  - Air quality, noise and neighbourhood amenity
  - Accessibility and active travel
  - Crime reduction and community safety
  - Access to healthy food
  - Access to work and training
  - Social cohesion and lifetime neighbourhoods
  - Minimising the use of resources
  - Climate change.
- 1.10 For each category, the rapid HIA tool has been completed drawing on documents such as the Environmental Impact Assessment (EIA), Design and Access Statement (DAS), Transport Statement (TS), Energy Statements and community engagement responses. These documents provide the detailed information in terms of the method of assessing impacts for each of the specialist areas. Where appropriate, these documents have been referenced and supplemented with information from discussions with the appropriate technical leads for each of the specialist areas.

## Local Context

---

- 1.11 The Site is situated within Abbey ward in central Reading. A summary of the key demographic characteristics of the area is provided below:
- According to the ONS 2017 Mid-Year Population Estimates (MYPE) Abbey ward has a population of 14,300 accounting for 8.7% of the total population of Reading.
  - The working age population of Abbey ward represents around 77% of the total population of the ward, which is above the average of both Reading (67%) and the South East (62%). In contrast, Abbey ward has a lower than average proportion of those aged 65 and over (6%).
  - Between the two census dates (2001 and 2011) the population of Abbey ward increased by 53% (+4,400) far outstripping the growth in population experienced by any other ward in Reading over the same period. This level of growth equated to 35% of the overall growth experienced by the Borough.
  - According to the Annual Population Survey (2017), economic activity rates in the Borough (79.6%) were slightly below that of the South East (81.4%) however unemployment rates were lower at 2.4% compared to 3.2% for the region. Data from the 2011 census suggests that Abbey ward performs above the Reading average in terms of economic activity.
  - Around 48% of those aged 16 and over in the borough have a Level 4 qualification or above which above the regional average of 41%.

- According to the 2011 Census. Abbey ward had 6,780 dwellings, however, this figure is likely to have increased significantly as a result of the delivery of new housing in the town centre since 2011. In addition, the ward has one of the highest levels of outstanding planning permissions for new housing to be delivered over the coming years.
- According to the Census, over 72% of the dwellings within the ward were flats/apartments which is well above the Reading average (32%) but is to be expected for a town centre location. The private rented sector accounts for a higher proportion of households (51.5%) compared to Reading (26.1%) whereas the owner-occupied sector is less well represented in Abbey ward (28%).

1.12 The South Reading<sup>1</sup> Clinical Commissioning Group Locality Profile (2016) sets out the health needs of the area's local population and informs the priorities for the GP commissioners locally. The locality profile includes several key points of note, such as:

- A younger adult population than that seen nationally.
- There are disparities in opportunity across South Reading. Three of the area's neighbourhoods are in the 20% most deprived nationally and the most deprived areas are in parts of Whitley, Church and Norcot wards,
- Life expectancy of local residents within South Reading falls markedly behind the national picture. Life expectancy at birth for men is 77.2 years, which is significantly worse than the national average (79.2 years). Whilst life expectancy for woman (81.7 years) is also markedly worse than the national average (83 years).
- Obesity is less prevalent amongst South Reading residents (7.2%) relative to the national average (9.5%).
- South Reading residents overall experience with their GP service was deemed to be good/very good by 83% of patients, marginally below the national average (85%).

<sup>1</sup> Reading is divided into two CCG areas comprising South Reading and Reading North and West. The South Reading CCG area includes 10 wards within Reading Borough Council (Abbey, Battle, Church, Katesgrove, Minster, Norcot, Park, Redlands, Tilehurst and Whitley) and covers 68% of the Council's total population.

## 2. Assessment

**Table 1.1 Housing Quality and Design**

| Assessment criteria                                                                                                                       | Relevant? | Details/ evidence                                                                                                                                                                                                                                                                                                                                                                                | Potential health impact | Recommended mitigation or enhancement measures                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| 1.1 Does the proposal seek to meet all 16 design criteria of the Lifetime Homes Standard or meet Building Regulation requirement M4 (2)?  | Yes       | The Design & Access Statement (DAS) for Plots E & F <sup>2</sup> (the only residential Plots within the Development), confirm that the proposed Development complies with the criteria of Building Regulation Part M, BS 8300 and best practice.<br>The landscape, architecture and the accommodation provided has been designed to meet the accessibility needs of all potential users.         | Neutral                 | No further mitigation measures required                                                                                        |
| 1.2 Does the proposal address the housing needs of older people, i.e. extra care housing, lifetime homes and wheelchair accessible homes? | Yes       | The DAS for Plots E & F indicates that dwellings are designed so that they could be adapted in the future. The DAS also indicates that the ground floor levels have been designed to be step free and designated apartments will be wheelchair adaptable to meet the specific requirements of residents. The number of wheelchair accessible units is to be agreed with Reading Borough Council. | Positive                | S106 matters to confirm number, size and tenure of wheelchair accessible homes                                                 |
| 1.3 Does the proposal include homes that can be adapted to support independent living for older and disabled people?                      | Yes       | The DAS for Plots E and F confirms that building and apartment design is compliant with Building Regulation Part M.                                                                                                                                                                                                                                                                              | Positive                | No further mitigation measures required.                                                                                       |
| 1.4 Does the proposal include a range of housing types and sizes, including affordable housing responding to local housing needs?         | Yes       | Plots E and F of the proposed Development (the only residential elements) will comprise build-to-rent homes of which 10% will be affordable. The Socio-Economics ES Chapter confirms that the proposed mix responds to local housing need and will contribute to local and Borough wide housing targets.                                                                                         | Positive                | The precise number of affordable homes and mixture of both size and tenure is to be agreed as part of a Section 106 Agreement. |
| 1.5 Does the proposal contain homes that are highly energy efficient (e.g. a high SAP rating)                                             | Yes       | The proposed Development has been developed in consideration of energy efficiency and environmental performance, following the principles of the energy hierarchy – Be Lean – Be Clean – Be Green.                                                                                                                                                                                               | Positive                | Adopt the recommendations set out within the Energy Strategy.                                                                  |

<sup>2</sup> CRTKL (March 2019): Station Hill, Reading – Design and Access Statement Plots E and F

The Energy Strategy<sup>3</sup> prepared by Hoare Lea for Plots E and F confirms that SAP 10 will be the adopted standard for the scheme when built. The proposals seek to reduce emissions by incorporating passive design and energy efficiency measures (such as the use of high quality building fabric, and energy efficient heating and lighting systems). The Strategy recommends an 'all electric approach' using an electric heating and hot water strategy for the development. Accordingly, this would provide a more robust and 'real' ongoing carbon savings due to the decarbonisation of the grid supply and therefore future proof the development. In addition, it would not contribute towards air pollution in the centre of Reading as would arise from boiler and Combined Heat and Power systems.

**Table 1.2 Access to Healthcare Services and Other Social Infrastructure**

| Assessment criteria                                                                                                               | Relevant? | Details/evidence                                                                                                                                                                                                                                                                                        | Potential health impact | Recommended mitigation or enhancement measures                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.1 Does the proposal retain or re-provide existing social infrastructure?                                                        | N/A       | N/A                                                                                                                                                                                                                                                                                                     | N/A                     | N/A                                                                                                                                                                                                            |
| 2.2 Does the proposal assess the impact on healthcare services?                                                                   | Yes       | The Socio-Economics ES Chapter assesses the impact of the proposed Development on GP primary healthcare. The ES Chapter concludes that once occupied, the proposed Development would accommodate between 950 and 1,100 residents. These residents may place additional pressure on existing facilities. | Adverse                 | Mitigation in the form of Community Infrastructure Fund/S106 agreement may be required to offset pressure on existing primary care providers. These measures would likely reduce the health impact to neutral. |
| 2.3 Does the proposal include the provision, or replacement of a healthcare facility and does the facility meet NHS requirements? | N/A       | N/A                                                                                                                                                                                                                                                                                                     | N/A                     | N/A                                                                                                                                                                                                            |
| 2.4 Does the proposal assess the capacity, location and accessibility of other social infrastructure, e.g. schools,               | Yes       | The Socio-Economics ES Chapter assesses the impact of the proposed Development on local schools and open space including play space. The ES Chapter concludes that there will be demand for around 51 primary school places which may have a minor adverse impact on                                    | Adverse/Neutral         | Community Infrastructure Fund/S106 agreement may be required to offset pressure on existing primary school facilities. This will likely reduce the impact to neutral.                                          |

<sup>3</sup> Hoare Lea (February 2019): Station Hill Phase 1 Reading, Sustainability, Energy Strategy

|                                                                                                  |    |                                                                                                                                                                                                                                               |         |                                          |
|--------------------------------------------------------------------------------------------------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------------------------------------|
| social care and community facilities?                                                            |    | existing provision in the local area. It concludes there is sufficient capacity at secondary school level to cater for the increase in demand.                                                                                                |         |                                          |
| 2.5 Does the proposal explore opportunities for shared community use and colocation of services? | No | Leisure uses will be provided in Plot F which will be available for use by the local community. In addition, the local community will have access to the 5,500 sq. m of public realm space that is to be provided as part of the Development. | Neutral | No further mitigation measures required. |

Table 1.3 Access to Open Space and Nature

| Assessment criteria                                                                                                    | Relevant? | Details/evidence                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Potential health impact | Recommended mitigation or enhancement measures |
|------------------------------------------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------------------------------------|
| 3.1 Does the proposal retain and enhance existing open and natural spaces?                                             | Yes       | The proposed Development will result in the enhancement of the area outside Reading Mainline Station and will be integrated with the new bus interchange and taxi drop-off zone. The new public realm will require the addition of new steps and ramps to address a circa 4m change in ground level resulting from the lowering of land immediately to the west of Station Square to the level of the newly-refurbished pedestrian tunnel running under the railway line.                                                                                                                              | Positive                | No further mitigation measures required.       |
| 3.2 In areas of deficiency, does the proposal provide new open or natural space, or improve access to existing spaces? | Yes       | The proposed Development seeks to provide a new civic square for Reading and improve connections between Reading Mainline Station and the town centre. In particular, the DAS of the 2016 Consented Scheme <sup>4</sup> and that of Plots E & F state that a number of new public spaces would be introduced. These include Central Square, The Arcade and Friars Walk.<br><br>In addition, as set out in the DAS of the 2016 Consented Scheme, the design of the proposed Development also seeks to provide a variety of new open spaces accessible to residents, employees and visitors to the area. | Positive                | No further mitigation measures required.       |
| 3.3 Does the proposal provide a range of play spaces for children and young people?                                    | Yes       | The DAS for Plots E & F confirms that incidental play opportunities will be integrated in the landscape where possible through public realm furniture and detailing and access to natural features. All ages will be catered for in a variety of ways with overlapping play features and age categories.                                                                                                                                                                                                                                                                                               | Positive                | No further mitigation measures required.       |

<sup>4</sup> Allies & Morrison (March 2013): Station Hill, Reading Design and Access Statement AND Allies & Morrison (July 2015): Plot E and Telecom House, Outline Application, Design and Access Statement, July 2015

|                                                                                           |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |                                                               |
|-------------------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------------------------------------------------------|
| 3.4 Does the proposal provide links between open and natural spaces and the public realm? | Yes | The proposed Development does not connect directly to any green and/ or open spaces, with the closest open space being Forbury Gardens a short distance away to the east (approximately 200m). However, the proposed Development will create two new routes going north-south and west-east with the aim of improving the links through the Site, and to the public realm locally.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Positive | No further mitigation measures required.                      |
| 3.5 Are the open and natural spaces welcoming and safe and accessible for all?            | Yes | <p>The DAS of the 2016 Consented Scheme and the DAS of Plots E and F indicates that the masterplan has considered various aspects of crime and safety to minimise opportunities for crime on-Site.</p> <p>Open spaces and new public realm areas created as part of the proposed Development have been designed to promote safety by establishing long views. In addition, the detailed design will adopt a non-cluttered approach and the careful positioning of trees and street furniture. In addition, the DAS of the 2016 Consented Scheme and the DAS for Plots E &amp; F state that the public realm has been designed to create level access into the new buildings. The proposed mix of retail and residential uses would not only animate the Site, but also create a 24-hour presence. The combination of uses will maximise natural surveillance from commercial and residential occupiers thereby reducing opportunities for crime and improving perceptions of safety.</p> | Positive | No further mitigation measures required.                      |
| 3.6 Does the proposal set out how new open space will be managed and maintained?          | No  | The Applicant will be managing Friars Walk but detail will be set out in an Estate Management Plan. In addition, the DAS for Plots E & F indicates that soft and hard landscaping will be designed with minimal maintenance requirements in mind.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Neutral  | Detailed Estate Management Plan to be agreed and implemented. |

Table 1.4 Air Quality and Noise

| Assessment criteria                                                                            | Relevant? | Details/evidence                                                                                                                                                             | Potential health impact | Recommended mitigation or enhancement measures                                                                                                   |
|------------------------------------------------------------------------------------------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.1 Does the proposal minimise construction impacts such as dust, noise, vibration and odours? | Yes       | The Noise and Air Quality Assessments of the 2015 ES <sup>5</sup> confirm that the approach to construction will seek to minimise the potential of dust, noise and vibration | Neutral                 | Implementation of mitigation measures as set out in the Noise and Air Quality Assessments of the 2015 ES (i.e. Chapters 11 and 10 respectively), |

<sup>5</sup> Waterman (August 2015): Plot E and Telecom House Outline Application Environmental Statement (ES)

|                                                                                       |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |                                                                                                                                                        |
|---------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                       |     | effects at source through appropriate environmental management controls.                                                                                                                                                                                                                                                                                                                                                                                                                               |          | including implementation of a Construction Environmental Management Plan.                                                                              |
|                                                                                       |     | The Transport Assessment <sup>6</sup> found that during construction and demolition, the total number of vehicles requiring access to the Site will peak at 35 vehicles per day (or 70 vehicle movements), which is assessed as being insignificant. This would be expected to have a negligible effect on air quality and noise. The Transport Assessment confirms that during construction, a number of environmental management controls would be implemented to reduce potential negative effects. |          |                                                                                                                                                        |
| 4.2 Does the proposal minimise air pollution caused by traffic and energy facilities? | Yes | Both Noise and Air Quality Assessments prepared as part of the 2015 ES confirm that the proposed Development seeks to minimise air pollution and noise caused by traffic and energy facilities both during construction and demolition, as well as during the operational phases.                                                                                                                                                                                                                      | Neutral  | Implementation of mitigation measures identified in Air Quality Assessment (Chapter 10 of the 2015 ES), together with implementation of a Travel Plan. |
|                                                                                       |     | Overall, the Air Quality Assessment found that any emissions from plant operating on-Site would be small in comparison with the emissions from current road traffic. Furthermore, once operational, the proposed Development is anticipated to result in a negligible effect on nitrogen dioxide levels and fine particulates.                                                                                                                                                                         |          |                                                                                                                                                        |
|                                                                                       |     | Prior to construction, measures to control traffic to and from the site will be discussed and agreed with RBC. However, the most effective mitigation would be for construction traffic to avoid using sensitive roads (residential roads etc), where possible and to be constrained to non-peak times.                                                                                                                                                                                                |          |                                                                                                                                                        |
|                                                                                       |     | During operation, the overall effects of the proposed Development on air quality are assessed to be negligible, requiring no specific mitigation measures. The implementation of a Travel Plan will help to minimise air pollution caused by traffic by promoting walking, cycling and the use of public transport.                                                                                                                                                                                    |          |                                                                                                                                                        |
| 4.3 Does the proposal minimise noise pollution                                        | Yes | As mentioned previously, the proposed Development seeks to minimise noise pollution caused by traffic and                                                                                                                                                                                                                                                                                                                                                                                              | Negative | Implementation of mitigation measures identified in the Noise Assessment                                                                               |

<sup>6</sup> Peter Brett Associates (March 2013): Station Hill, Reading Transport Assessment, March 2013 and Peter Brett Associates (July 2015) Station Hill - Telecom House, Reading Transport Statement

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                         |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| caused by traffic and commercial uses? | <p>commercial uses both during the construction and operational phases. During construction, noise pollution will be minimised at source. However, the Noise and Vibration Assessment found that during construction there is potential for some temporary adverse effects as a result of demolition, earth moving, piling, concreting and pavement operations.</p> <p>As mentioned previously, the Transport Assessment confirms that at peak construction, the Site will see around 70 vehicle movements per day. Overall, it assessed to be a small amount when compared with the noise from vehicles on the surrounding local road network.</p> <p>Once operational, the major sources of noise pollution are anticipated to be traffic noise and daily operations at Reading Mainline Station. To reduce the noise effects on residential amenity, mitigation would be required in the form of suitable glazing combined with an appropriate ventilation strategy.</p> <p>The proposed Development will include a mix of uses, including retail (A1-A5), community (D2) and commercial (B1) uses, all of which will generate service and delivery noise. However, at this stage of the design process, it is not possible to accurately quantify the number of delivery vehicles that may be associated with the retail units, as these are likely to vary in accordance with the end use. It is therefore proposed that discussions would be held with RBC regarding servicing and delivery management once the retail end users are known.</p> | presented in Chapter 11 of the 2015 ES. |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|

Table 1.5 Accessibility and Active Travel

| Assessment criteria                                                                     | Relevant? | Details/evidence                                                                                                                                                                                             | Potential health impact | Recommended mitigation or enhancement measures |
|-----------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------------------------------------|
| 5.1 Does the proposal prioritise and encourage walking (such as through shared spaces?) | Yes       | The DAS of the 2016 Consented Scheme states that the proposed Development will improve connections between Reading Mainline Station and the town centre and create two new pedestrian routes across the Site | Positive                | Implementation and monitoring of the SWFTP.    |

|                                                                                                                                  |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                             |
|----------------------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------------------------------------|
|                                                                                                                                  |     | <p>(one running west-east, and other running north-south). The DAS also states that the public realm layout will give priority to pedestrians (including those with mobility, visual and other impairments) over all other users.</p> <p>More detail about the ways the proposed Development will prioritise and encourage walking is set out in the Site-Wide Framework Travel Plan (SWFTP)<sup>7</sup> which identifies a series of measures to be implemented such as creating a new public realm that promotes both walking and cycling, as well as hosting lunchtime/ evening walking and cycling events.</p>                                                                                                                                 |          |                                             |
| 5.2 Does the proposal prioritise and encourage cycling (for example by providing secure cycle parking, showers and cycle lanes)? | Yes | <p>The DAS of the 2016 Consented Scheme identifies pedestrians as having priority. However, cycling is encouraged, and cyclists are listed below pedestrians in terms of priority users in the DAS.</p> <p>In addition to the measures identified above, the SWFTP also proposes to provide up to 700 cycle parking spaces for residents, commercial users and those visiting for retail and leisure. Furthermore, the SWFTP proposes the inclusion of showers, changing and drying rooms, and lockers within the commercial and retail units. Cycling proficiency training (provided in collaboration with RBC), and the provision of cycling equipment for employees interested in taking up cycling is also suggested as part of the SWFPT.</p> | Positive | Implementation and monitoring of the SWFTP. |
| 5.3 Does the proposal connect public realm and internal routes to local and strategic cycle and walking networks?                | Yes | The proposed Development is ideally located to promote walking and cycling to and from all amenity areas in the town centre. The Site is located within close proximity to the Reading Town Centre Cycle Route as well as R1 and R10 cycle routes. In addition, the Site is located very close the R2, R3, R5, R6, R20, R30, R50 cycle routes, and NCN Route 4.                                                                                                                                                                                                                                                                                                                                                                                    | Positive | No further mitigation measures required.    |
| 5.4 Does the proposal include traffic management and calming measures to help reduce and minimise road injuries?                 | Yes | <p>As mentioned previously, the Masterplan prioritises walking and cycling over and above all other modes of transport within the Site. This will be achieved in several ways, including through design and implementation of the SWFTP.</p> <p>The DAS for Plots E &amp; F indicates that access to service yards and/ or car park entrances are to be located away</p>                                                                                                                                                                                                                                                                                                                                                                           | Positive | Implementation and monitoring of the SWFTP. |

<sup>7</sup> Peter Brett Associates (July 2015): Station Hill, Site Wide Framework Travel Plan

|                                                                                                                                                                 |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                 |     | <p>from pedestrian areas, and that the number of openings into service yards will be consolidated to one section of the façade to keep the disruption to the length of active frontage to a minimum.</p> <p>The SWFTP identifies a number of measures to manage the level of vehicular movements through the Site. These include providing a car club vehicle for residents, promoting car sharing, and encouraging the use of public transport, all of which will result in fewer cars throughout the Site, especially cars with single occupants in them.</p>                                                                                                                                                                                                                                                                                         |          |                                                                                                        |
| 5.5 Is the proposal well connected to public transport, local services and facilities?                                                                          | Yes | <p>The Site is located within close proximity to the town centre and can be easily reached on foot. The DAS of the 2016 Consented Scheme states that the proposed Development seeks to complement and seamlessly integrate with the improvements to the public realm and upgraded transport interchanges immediately to the east of the Site (i.e. the upgraded Reading Mainline Station and bus interchange). This is re-iterated in the SWFTP which identifies measures to promote the use of public transport facilities and encourage sustainable travel behaviours.</p>                                                                                                                                                                                                                                                                            | Positive | Implementation and monitoring of the SWFTP.                                                            |
| 5.6 Does the proposal seek to reduce car use by reducing car parking provision, supported by the controlled parking zones, car clubs and travel plans measures? | Yes | <p>As outlined above, the Masterplan for the proposed Development encourages walking, and places private vehicle use as the lowest priority. The Transport and Accessibility Chapter of the 2015 ES states that the Site has around 1,460 parking spaces (although there are now only 1089 car parking spaces as a result of the demolition that has taken place since the Transport and Accessibility Chapter of the 2015 ES was prepared). The Masterplan proposes to decrease this to between 500-1,000 parking spaces. Most of the parking amenity will be provided within the reconfigured MSCP. In addition, the SWFTP identifies several measures to encourage car sharing, and proposes parking facilities for different transport modes including bicycles and motorbikes, in addition to the implementation of controlled car park entry.</p> | Neutral  | Implementation and monitoring of the SWFTP.                                                            |
| 5.7 Does the proposal allow people with mobility problems or a disability to access buildings and places?                                                       | Yes | <p>As mentioned previously, the proposed Development seeks to give pedestrians priority. This includes people with a disability and/ or needing wheelchair access. The DAS of the 2016 Consented Scheme states that step free/ level access will be provided to all buildings (i.e.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Positive | Future reserved matters applications across the wider Site will confirm the proposed design standards. |

dwellings, retail and commercial units) and the improved public realm.

**Table 1.6 Crime Reduction and Community Safety**

| Assessment criteria                                                  | Relevant? | Details/evidence                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Potential health impact | Recommended mitigation or enhancement measures |
|----------------------------------------------------------------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------------------------------------|
| 6.1 Does the proposal incorporate elements to help design out crime? | Yes       | <p>The DAS of the 2016 Consented Scheme indicates that the proposed Development has had regard to various guidance to design out crime, including:</p> <ul style="list-style-type: none"> <li>• Manual for Streets by the Department for Transport and Office for the Deputy Prime Minister (2007);</li> <li>• Safer Places, The Planning System and Crime Prevention (2004);</li> <li>• Secured by Design; and</li> <li>• Crime Prevention Through Environmental Design (CPTED).</li> </ul> <p>The DAS also states that Secured by Design principles have been employed in the Masterplanning process to achieve a high overall standard of security. Some of the design measures considered include:</p> <ul style="list-style-type: none"> <li>• maximising the length of façade at ground floor level that is active, and to have a mix of retail and residential entrances;</li> <li>• open, uncluttered and well-lit open spaces with clear lines of sight;</li> <li>• retail uses with a high degree of transparency between public realm and the building interior;</li> <li>• the use of CCTV, and residential entrances fitted with a PAC entry system;</li> <li>• balconies and roof terraces designed to overlook public spaces providing natural surveillance; and</li> <li>• key principles of design for newly-created public realm, to include long views, and a non-cluttered approach.</li> </ul> <p>In addition, the DAS states that the design of the proposed Development will promote a sense of ownership and encourage human activity to reduce the risk of crime and promote a sense of safety at all times.</p> | Neutral                 | No further mitigation required.                |

|                                                                                                                        |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |                                          |
|------------------------------------------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------------|
| 6.2 Does the proposal incorporate design techniques to help people feel secure and avoid creating 'gated communities'? | Yes | The proposed Development promotes a mixture of uses including public and private places. As identified in the DAS for Plots E & F, the courtyards will be visible from people's homes, roofs and garden terraces, and would include shared gardens and children's place spaces.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Neutral  | No further mitigation measures required. |
| 6.3 Does the proposal include attractive, multi-use public spaces and buildings?                                       | Yes | The proposed Development will create a significant new mixed-use district. The DAS of the 2016 Consented Scheme expresses the ambition to have a mixture of retail and residential uses as well as a number of public-private spaces, such as courtyards and children's play spaces.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Positive | No further mitigation measures required. |
| 6.4 Has engagement and consultation been carried out with the local community?                                         | Yes | <p>The Statement of Community Engagement (prepared in March 2013)<sup>8</sup> confirms that significant consultation has been undertaken at various stages of the design process, with the key guiding principles being to:</p> <ul style="list-style-type: none"> <li>• inform local representatives;</li> <li>• engage with the local community;</li> <li>• reach out to the wider community to identify comments, concerns and address these where necessary;</li> <li>• endeavour to reach out to 'hard to reach' groups; and</li> <li>• gain an understanding of local views.</li> </ul> <p>In practical terms, community engagement included pre-application meetings with officers, discussions at scoping stage, engagement with elected members and stakeholders, and presentations to a number of committees and other consultees. Public consultation via website, media coverage, posters, feedback forms and a public exhibition has also been undertaken.</p> | Neutral  | No further mitigation measures required. |

Table 1.7 Access to Healthy Food

| Assessment criteria                                                         | Relevant? | Details/evidence | Potential health impact | Recommended mitigation or enhancement measures |
|-----------------------------------------------------------------------------|-----------|------------------|-------------------------|------------------------------------------------|
| 7.1 Does the proposal facilitate the supply of local food, i.e. allotments, | No        | N/A              | N/A                     | N/A                                            |

<sup>8</sup> Green Issues (March 2013): Station Hill, Reading Statement of Community Engagement

|                                                                                                                 |     |                                                                                                                                                                                                                                                                                                                                   |                   |                                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------|
| community farms and farmers' markets?                                                                           |     |                                                                                                                                                                                                                                                                                                                                   |                   |                                                                                                                                  |
| 7.2 Is there a range of retail uses, including food stores and smaller affordable shops for social enterprises? | Yes | The proposed Development includes up to a maximum of 13,500 m <sup>2</sup> of Use Class A1-A5 retail floorspace with the flexibility to include a range of unit sizes and respond to local demand.                                                                                                                                | Neutral           | No further mitigation measures required.                                                                                         |
| 7.3 Does the proposal avoid contributing towards an overconcentration of hot food takeaways in the local area   | N/A | At this stage, the Applicant would like to retain flexibility with regards to the uses that may choose to locate within the retail units proposed (use class A1-A5). However, the Applicant has confirmed the scheme will be managed by an Estates Team who will ensure there is not an over concentration of hot food takeaways. | Neutral/ Negative | Consider retail uses in the northern part of the Site at future reserved matters applications, and through discussions with RBC. |

Table 1.8 Access to Work and Training

| Assessment criteria                                                                                                                                 | Relevant? | Details/evidence                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Potential health impact | Recommended mitigation or enhancement measures                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| 8.1 Does the proposal provide access to local employment and training opportunities, including temporary construction and permanent 'end-use' jobs? | Yes       | <p>The Socio-Economic ES Chapter finds there will be the equivalent of an average of 1,270 temporary construction jobs generated each year over the proposed Development's construction period (six years). An assessment of the costs associated with the demolition and construction of Plots E &amp; F is anticipated to equate to an average of 700 temporary jobs during each year of construction.</p> <p>Once completed, according to the Socio-Economic Chapter the proposed Development will generate between 4,950 and 9,100 long-term jobs across a range of sectors and occupations. It is likely that a proportion of these jobs will be filled by residents of Reading Borough.</p> | Positive                | Measures to target local employment during both construction and operation to be secured through a Section 106 agreement.      |
| 8.2 Does the proposal provide childcare facilities?                                                                                                 | No        | The proposed Development does not currently include provision of built-in childcare facilities.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Neutral/ Negative       | Contributions may be required via S106 agreement/ CIL, in order to improve the capacity of existing providers where necessary. |
| 8.3 Does the proposal include managed and affordable workspace for local businesses?                                                                | No        | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | N/A                     | N/A                                                                                                                            |
| 8.4 Does the proposal include opportunities for work for local                                                                                      | Yes       | Although there are no detailed procurement arrangements in place to date, the Applicant is willing to engage with RBC on this matter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Neutral/Positive        | Measures to promote local procurement during both construction                                                                 |

people via local procurement arrangements?

and operation to be secured through a Section 106 agreement.

**Table 1.9 Social Cohesion and Lifetime Neighbourhoods**

| Assessment criteria                                                                                                                                                                         | Relevant? | Details/evidence                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Potential health impact | Recommended mitigation or enhancement measures                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9.1 Does the proposal connect with existing communities, i.e. layout and movement which avoids physical barriers and severance and land uses and spaces which encourage social interaction? | Yes       | The proposed Development connects well to the areas of the town adjacent. The creation of two new routes going north-south and west-east through the proposed Development will improve connections both within the Site and to / from the surrounding areas. In addition, the provision of 5,500 sqm of public realm will create space in which the local community can interact.                                                                                                                                                                                                                                 | Positive                | No further mitigation measures required.                                                                                                                                                                                                                                                                                                                                                                                              |
| 9.2 Does the proposal include a mix of uses and a range of community facilities?                                                                                                            | Yes       | Although there are no specific community uses proposed as part of the Development the proposed mix of uses will create an active, dynamic environment which will substantially improve this area of the town centre for the local community. The proposed mix of uses including residential, retail, offices, leisure, public realm and open space will be accessible to the local residents and visitors creating improved amenity.                                                                                                                                                                              | Positive                | No further mitigation measures required.                                                                                                                                                                                                                                                                                                                                                                                              |
| 9.3 Does the proposal provide opportunities for the voluntary and community sectors?                                                                                                        | Yes       | The proposals include a range of retail and office space which may provide opportunities for voluntary and community sectors to occupy space.<br><br>In addition, the variety of public realm and amenity space provided as part of the Development will be accessible to all and could be used by local community groups.                                                                                                                                                                                                                                                                                        | Positive                | No further mitigation measures required.                                                                                                                                                                                                                                                                                                                                                                                              |
| 9.4 Does the proposal address the principles of Lifetime Neighbourhoods?                                                                                                                    | Yes       | The proposed Development addresses the following principles of Lifetime Neighbourhoods: <ul style="list-style-type: none"> <li>Access – multiple pedestrian and cycling routes will be provided throughout the Site, which will enable residents to connect with people and services in the immediate neighbourhood and beyond. Pedestrian access within the site has been designed to meet the needs of all users (including disabled and wheelchair users) by creating a barrier-free environment.</li> <li>Services and amenities – the proposed Development includes new retail (use class A1-A5),</li> </ul> | Positive                | Planning conditions and reserved matters application to specify in more detail how the proposed Development addresses the principles of Lifetime Neighbourhoods, such as: <ul style="list-style-type: none"> <li>Specify the provision of affordable housing by tenure;</li> <li>Ensure there is safe and affordable access to key amenities, both within the Site of the proposed Development and/or Reading town centre.</li> </ul> |

and commercial office (use class B1) floorspace which will provide local amenity and employment opportunities, in addition to complementing the existing offer.

- Built and public realm – the proposed Development aspires to meet Secured by Design standards by providing safe and welcoming environments, in addition to good access to a range of different types of open space which will promote social interaction and active lifestyles.
- Social networks/ wellbeing – the creation of the new public realm will provide an environment for social interaction amongst the local community.
- Housing – the Proposed Development includes a mix of homes of different sizes and tenures, a proportion of which will be affordable, in addition to housing that is wheelchair accessible and adaptable for the elderly.

**Table 1.10 Minimising Use of Resources**

| Assessment criteria                                    | Relevant? | Details/evidence                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Potential health impact | Recommended mitigation or enhancement measures |
|--------------------------------------------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------------------------------------|
| 10.1 Does the proposal make best use of existing land? | Yes       | <p>The Masterplan for the proposed Development has been designed to respond to its context and better integrate the Site with the rest of Reading town centre. Both the DAS of the 2016 Consented Scheme and the DAS for Plots E &amp; F confirm this and that the proposed Development is entirely located on previously developed/ brownfield land.</p> <p>Best use of existing land is also promoted by the fact that the proposed Development seeks to bring back in use a part of the town that has previously experienced decline and has been lying vacant for a period of time. In addition, the proposed Development promotes best use of land by creating new routes through the Site and improving connections with its immediate surroundings.</p> | Positive                | No further mitigation measures required.       |

|                                                                                    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10.2 Does the proposal encourage recycling (including building materials)?         | Yes | <p>The Sustainability Statement for the 2016 Consented Scheme<sup>9</sup> confirms that the proposed Development has set a target to achieve a 30% reduction in construction waste (by volume) compared with industry standards.</p> <p>Furthermore, the Sustainability Statement confirms that the proposed Development has a target for at least 80% of all non-hazardous construction and demolition waste (by volume) to be diverted from landfill. The re-use of materials arising from the demolition process has been considered and could include the use of recycled aggregates for use on-Site where feasible.</p> <p>Once construction is complete, the minimisation of operational waste will also be promoted. The Sustainability Statement confirms that dedicated waste stores which will have easy access will be provided for the commercial spaces. In addition, information in relation to waste reduction and recycling will be made available within Building User Guides provided to each tenant.</p> | Positive | <p>Implementation of a Site Waste Management Plan during construction.</p> <p>Implementation of a Waste Management Strategy during operation.</p> <p>Provision of Building User Guides to future tenants.</p> |
| 10.3 Does the proposal incorporate sustainable design and construction techniques? | Yes | <p>The inclusion of sustainable design and construction techniques have been considered in the Sustainability Statement for the 2016 Consented Scheme.</p> <p>The Sustainability Statement for the 2016 Consented Scheme confirms there is a target for 15% of all materials sourced to be from reclaimed and/ or recycled sources, that preference will be given to materials which are locally and responsibly sourced, and that all timber used on Site and in buildings will be sourced in accordance with the UK Government's Timber Procurement Policy.</p> <p>A full review of the materials specified for the development will be undertaken at the detailed design stage using the BRE's Green Guide in its specification. The materials chosen will be sensitive to the local character of the area, and resilient enough to ensure long-life whilst also reducing the need for maintenance.</p>                                                                                                                  | Neutral  | No further mitigation measures required.                                                                                                                                                                      |

<sup>9</sup> Hoare Lea (July 2015) Station Hill Updated Sustainability Statement Rev C

The proposed Development seeks to achieve high levels of energy efficiency: firstly, by reducing energy demand and secondly through use of low and zero carbon technologies.

Table 1.11 Climate Change

| Assessment criteria                                                                                                                                                  | Relevant? | Details/evidence                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Potential health impact | Recommended mitigation or enhancement measures                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11.1 Does the proposal incorporate renewable energy?                                                                                                                 | Yes       | The Energy Strategy for Plots E and F indicates that Photo-voltaic (PV) cells will be installed on the roof of Plots E and F. The potential to incorporate additional renewable energy sources on Plots within the remainder of the Site will be considered at the Reserved Matters stage for these Plots.                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Positive                | Reserved matters application for remainder of the Site to consider additional renewable energy sources.<br><br>No further mitigation measures required for Plots E and F. |
| 11.2 Does the proposal ensure that buildings and public spaces are designed to respond to winter and summer temperatures, i.e. ventilation, shading and landscaping. | Yes       | The Sustainability Statement for the 2016 Consented Scheme confirms that the health and wellbeing of the buildings' users has been considered and indicates that facades will be optimised to maximise natural daylight penetration and views out whilst also reducing summer solar gains. Furthermore, it confirms that all areas will be ventilated to the required standards, and the potential for natural ventilation investigated.<br><br>The Daylight, Sunlight and Overshadowing ES Chapter (Chapter 16) for Plots E & F confirms that the residential units have been designed to maximise daylight and sunlight whilst acknowledging the urban location. The majority of the future residential units will meet the BRE Guidelines for daylight and sunlight. | Neutral                 | Reserved matters application for remainder of the Site to identify detailed design measures.                                                                              |
| 11.3 Does the proposal maintain or enhance biodiversity?                                                                                                             | Yes       | The Site is not subject to any nature conservation designations. A Preliminary Ecology Appraisal of the Site <sup>10</sup> identified a small area of vegetation/ amenity grassland, and a few ornamental shrubs and trees. Bat surveys undertaken in August 2018 <sup>11</sup> confirmed that there are no bats roosting in the buildings, and that the effects on bats remains negligible.                                                                                                                                                                                                                                                                                                                                                                            | Positive                | No further mitigation measures required.                                                                                                                                  |

<sup>10</sup> Waterman (August 2018): Station Hill, Reading Preliminary Ecology Appraisal

<sup>11</sup> Waterman (September 2018): Station Hill, Reading Bat Survey Report

|                                                                          |     |                                                                                                                                                                                                                                                                                                                                                                                                   |         |                                          |
|--------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------------------------------------|
|                                                                          |     | The landscape design of Plots E and F includes native species planting and bird boxes to enhance the ecological value of the Site. The landscape design of future phases of development will also consider ecological enhancements.                                                                                                                                                               |         |                                          |
| 11.4 Does the proposal incorporate sustainable urban drainage techniques | Yes | Surface water run off would be attenuated in below ground cellular storage tanks and oversized pipes before discharging to the Thames Water sewer network. These SuDS options have been assessed as being the most suitable for use at this Site. A full review of SuDS options is provided in the Drainage Strategy of the 2016 Consented Scheme <sup>12</sup> and Plots E and F <sup>13</sup> . | Neutral | No further mitigation measures required. |

<sup>12</sup> Hoare Lea (13.07.15): Redevelopment of Station Hill & Garrard Street, Reading – Stormwater Drainage Strategy Revision D

<sup>13</sup> Ramboll (March 2019): Station Hill, Reading Phase 1 Drainage Strategy and SUDS Report

### 3. Summary/Conclusions

3.1 The findings of the HIA suggest that the Development will lead to a number of positive health impacts. These can be summarised as follows:

- **Housing:** the Development will provide between 475 and 550 residential units of varying size and tenure contributing to Reading Borough's annual housing target as well as helping to meet local demand for family housing and affordable housing.
- **Access to Work and Training:** the proposed Development will provide up to 137,700 sq. m of commercial floorspace including office, retail and leisure uses generating over 9,000 FTE jobs providing opportunities for employment across a range of sectors and occupations including for local residents. In addition, during the demolition and construction phase, temporary employment opportunities will be generated.
- **Social Cohesion:** The proposed Development connects well to the areas of the town adjacent. The creation of two new routes going north-south and west-east through the proposed Development will improve connections both within the Site and to / from the surrounding areas. In addition, the provision of 5,500 sqm of public realm will create space in which the local community can interact.
- **Improved amenity space:** the Scheme includes private and communal outdoor amenity space including 5,500 sqm of public realm.
- **Pedestrian and Cycling Activity:** The proposed Development has strong public transport links and prioritises pedestrian and cycling modes of travel, both in terms of accessing the Site and within the Site itself.
- **Best use of existing land:** The Site meets the principle of paragraph 11 of the NPPF by reusing land that has previously been developed for a mix of uses.
- **Energy Efficiency:** The proposed Development includes an 'all electric' approach to energy, providing a robust and 'real' ongoing carbon saving resulting in future proofing of the development. In addition, it would not contribute to air pollution in central Reading as would arise from boiler and Combined Heat and Power systems.

3.2 The HIA has identified a number of mitigation or enhancement measures which should be considered as the design develops. The key measures are:

- Further consideration and detail to determine the type and tenure of affordable housing provision within the overall 10% proposed on Plots E and F, and the number and tenure of wheelchair accessible homes.
- Contributions may be required via planning conditions in order to improve the capacity of existing primary school and GP facilities where necessary.
- Implementation of the Site Wide Framework Travel Plan in line with the principles and timelines set out to promote sustainable modes of transport.
- Measures to promote local procurement during both construction and operation to be secured through a Section 106 agreement.
- Detailed Estate Management Plan to be agreed and finalised as part of Planning Condition or Section 106 Agreements.
- Implementation of all embedded mitigation and mitigation measures proposed in the Environmental Statement together with those set out in the Energy Strategy, Sustainability Strategy and Transport Statement.





**HATCH**  
**REGENERIS**

[www.hatchregeneris.com](http://www.hatchregeneris.com)

London: +44(0)207 336 6188

Manchester: +44(0)161 234 9910



## **Technical Appendix 13.1    Flood Risk Assessment Addendum**



## **Station Hill, Reading**

### **Flood Risk Assessment Addendum**

March 2019

#### **Waterman Infrastructure & Environment Limited**

2nd Floor, South Central, 11 Peter Street, Manchester, M2 5QR  
[www.watermangroup.com](http://www.watermangroup.com)





**Client Name:** Station Hill Master LLP  
**Document Reference:** WIE14788-100-R-9-4-1-FRA  
**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                            |
|-------|--------------|---------------------------------------|------------------------------------|----------------------------------------|
| First | January 2019 | Connor Henderson<br>Graduate Engineer | Donal O'Donovan<br>Senior Engineer | Brendan McCarthy<br>Technical Director |

### Comments

|        |               |                                       |                                    |                                        |
|--------|---------------|---------------------------------------|------------------------------------|----------------------------------------|
| Second | February 2019 | Connor Henderson<br>Graduate Engineer | Donal O'Donovan<br>Senior Engineer | Brendan McCarthy<br>Technical Director |
|--------|---------------|---------------------------------------|------------------------------------|----------------------------------------|

### Comments

|       |               |                                       |                                    |                                        |
|-------|---------------|---------------------------------------|------------------------------------|----------------------------------------|
| Third | February 2019 | Connor Henderson<br>Graduate Engineer | Donal O'Donovan<br>Senior Engineer | Brendan McCarthy<br>Technical Director |
|-------|---------------|---------------------------------------|------------------------------------|----------------------------------------|

|        |            |                                       |                                    |                                        |
|--------|------------|---------------------------------------|------------------------------------|----------------------------------------|
| Fourth | March 2019 | Connor Henderson<br>Graduate Engineer | Donal O'Donovan<br>Senior Engineer | Brendan McCarthy<br>Technical 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

|                                                |          |
|------------------------------------------------|----------|
| <b>1. Introduction .....</b>                   | <b>1</b> |
| <b>2. Flood Risk Overview .....</b>            | <b>2</b> |
| Fluvial Flood Risk.....                        | 2        |
| <b>3. Surface Water Drainage Strategy.....</b> | <b>3</b> |
| <b>4. Conclusions .....</b>                    | <b>4</b> |

## Appendices

- A. Location Plan
- B. Environment Agency Correspondence
- C. Ramboll Drainage Strategy

## 1. Introduction

- 1.1. A Flood Risk Assessment (FRA) was undertaken by Waterman Infrastructure and Environment (reference: CIV13174 ES 003 A02) in March 2013 on behalf of Sackville Developments (Reading) Limited to support an outline planning application for a proposed development at Station Hill, Reading (planning reference: 130436). Subsequent to the approval of the 2013 application in 2015 (hereafter referred to as the 2015 Consented Scheme), an area of land adjacent to the Station Hill Site, known as Telecom House, was acquired and an outline planning application and Section 73 application to extend and amend the 2015 Consented Scheme to incorporate Telecom House were submitted concurrently in August 2015 (planning references 151426 and 151427). These applications were granted consent in July 2016 (hereafter the 2016 Consented Scheme). Waterman prepared a full new FRA to consider the Station Hill Site as amended and extended by Telecom House to support the updated application in 2015 (reference: CIV13174 ES 004 A03). This is hereafter referred to as the '2015 FRA'.
- 1.2. Following acquisition of the Site from Sackville Developments (Reading) Limited in 2018, SH Reading Master LLP (the Applicant) is seeking to make minor changes to Plots E and F of the 2016 Consented Scheme to respond to a series of design changes. These changes, referred to as the 'Proposed Amendments' would be made by means of a Section 73 Minor Material Amendment Application. At the same time, Reserved Matters Applications will be submitted for Plots E and F. Plots E and F are collectively known as 'Phase 1'. The remainder of the Site would be taken forward as 'Phase 2' at a later date and remains unchanged from the 2016 Consented Scheme.
- 1.3. The Proposed Amendments to Plots E and F pertinent to the FRA comprise in summary:
  - A change in use from privately owned apartments to rented apartments within a building (or buildings) owned by a single company known as Build to Rent. This results in more apartments being provided than originally assumed in the 2015 ES;
  - A change in the shape of Plot E to create two open courtyards rather than single courtyard enclosed by a perimeter block;
  - Extending the lower ground floor of Plots E and F such that they create a combined lower ground floor level for more efficient car parking and servicing;
  - Setting back the upper floor levels of Plot F to create more space between the upper levels of Plot E and Plot F;
  - A change in the retail floor space areas provided in Plot F; and
  - A change in levels along the new Friars Walk so that it is level with steps and a lift access down to Garrard Street in the north rather than stepped as previously proposed.
- 1.4. Plots A, B, C, D and G would remain the same as in the previous application. Appendix A includes a Site location plan and Parameter Plan for the Development showing the location of each plot.

## 2. Flood Risk Overview

- 2.1. The Environment Agency (EA), Reading Borough Council (RBC) and Thames Water (TW) have been re-consulted as part of this FRA Addendum to confirm whether there have been any updates to the baseline information that would alter the findings of the 2015 FRA.
- 2.2. Based on a review of the EA's 'Flood Risk from Surface Water' and 'Flood Risk from Reservoirs' mapping, the risk of flooding from pluvial and artificial sources of flooding has not changed and the findings of the 2015 FRA therefore remain valid. Pluvial and artificial sources of flooding are therefore not discussed further in this report.
- 2.3. The lower ground elements of Plots E and F have been extended to form one combined floor, however, no new basements are proposed. Therefore, the findings of the 2015 FRA remain valid in relation to groundwater flooding and are not discussed further in this report.
- 2.4. Within the EA's consultation response (Appendix B), they stated that updated hydraulic modelling had been carried out for the River Thames between Sandford and Mapledurham in 2018, subsequent to the 2015 application being submitted. Therefore, fluvial flood risk is investigated further in this FRA, to take into consideration the updated hydraulic modelling.

### Fluvial Flood Risk

- 2.5. The EA have provided modelled floodplain flood levels in the vicinity of the Site for both the 2011 Mapledurham to Sonning modelling, assessed within the 2015 FRA, and the newer 2018 Sandford to Mapledurham modelling (included in Appendix B).
- 2.6. Based on the 2011 modelling, which currently remains the basis of the Flood Map for Planning, the Site lies entirely within Flood Zone 1, with a probability of flooding of less than 1 in 1,000 or 0.1% annual exceedance probability (AEP). However, the western boundary of the Site is very close to the edge of Flood Zone 2 (greater than 1 in 1,000 or 0.1% AEP).
- 2.7. As can be seen from the outlines from the 2018 modelling (page 7 of the Product 4 document included in Appendix B), flood water reaches the railway embankment approximately 160m to the north west of the Site, however it does not pass under the embankment and therefore poses no risk to the Site during the 1 in 100 (1%), 1 in 100 (1%) plus 35% climate change allowance, the 1 in 100 (1%) plus 70% allowance for climate change or the 1 in 1,000 year (0.1% AEP) scenarios that are required for assessment of the planning application. The Site therefore remains within Flood Zone 1, with a probability of flooding of less than 1 in 1,000 (0.1% AEP).
- 2.8. The maximum flood level during the 1 in 100 year (1% AEP) plus 35% climate change event would be 38.33m AOD at Flood Point 6, located approximately 260m to the north of the Site.
- 2.9. The 1 in 1,000 year (0.1% AEP) maximum flood level would be 38.47m AOD, again located at Flood Point 6. The surrounding ground levels would remain the same as existing and would ramp up to a minimum on-site ground level of 39.00m AOD within Garrard Street and the car parking area at lower ground level (Appendix A), providing 0.53m freeboard above the maximum flood level. Ground levels across the rest of the Site would remain the same as described within the 2015 FRA.
- 2.10. The 2018 modelling indicates that the Site is at a lower risk of flooding than the 2011 modelling. The reason for this has been queried with the EA and they have confirmed that this is the most accurate data available to date.
- 2.11. Maps of historical flooding provided by the EA (Appendix B) confirm that there have been no historic incidents of any type of flooding at the Site. The risk of flooding from fluvial and tidal sources therefore remains low, as reported in 2015 FRA.

### **3. Surface Water Drainage Strategy**

- 3.1. Surface water drainage for the 2015 application was assessed within a standalone report produced by Hoare Lea and referenced within the 2015 FRA. This has now been updated and a standalone report has been produced by Ramboll (Appendix C).
- 3.2. The updated drainage strategy follows the same principles as the 2015 drainage strategy in attenuating surface water drainage in geocellular tanks and oversized pipes before discharging to the Thames Water sewer network.
- 3.3. The 2015 drainage strategy set out that Plot E would discharge at a rate of 42.47 l/s with a maximum of 197m<sup>3</sup> of storage volume provided to restrict flow to this rate. It was set out that Plot F would discharge at a rate of 20.16 l/s with a maximum of 94m<sup>3</sup> of storage volume provided.
- 3.4. The updated drainage strategy proposes to restrict surface water discharge to the 2015 rates and has updated the attenuation calculations to include a 40% allowance for the impacts of climate change in line with current guidance. Following this approach, 223m<sup>3</sup> of attenuation would be required in Plot E to restrict discharge to 42.47 l/s and 94m<sup>3</sup> would be required in Plot F to restrict discharge to 20.16 l/s.
- 3.5. No changes have been made to the surface water drainage strategy for the remainder of the Site.

## **4. Conclusions**

- 4.1. The Section 73 and Reserved Matters applications do not materially alter the content, results or conclusions of the 2015 FRA submitted as part of the outline planning application in August 2015, with regard to pluvial, artificial sources, groundwater flooding and the surface water drainage strategy. The original assessment can therefore be relied upon in relation to these items.
- 4.2. The updated 2018 modelling of the River Thames provided by the EA indicates that the maximum flood extent is located approximately 160m to the north of the Site, to the north of the railway embankment. Based on a maximum flood level of 38.47m AOD, located approximately 260m to the north of the Site, 0.53m freeboard would be provided to the lower ground level of 39.00m AOD. Therefore, the risk of flooding from fluvial sources remains low.
- 4.3. Ramboll have produced an updated drainage strategy for Plots E and F. The discharge rates would be 42.47 l/s for Plot E and 20.16 l/s for Plot F in line with the 2015 FRA, with 223m<sup>3</sup> and 94m<sup>3</sup> of storage provided in each plot respectively. The surface water drainage strategy for the remainder of the Site remains unchanged.

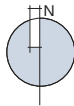


## APPENDICES



## **A. Site Plans**

- Site Location Plan
- Proposed Development Plan



|                 |                                                               |
|-----------------|---------------------------------------------------------------|
| Project Details | WIE14788-100: Station Hill, Reading                           |
| Figure Title    | Figure 1: Site Location                                       |
| Figure Ref      | WIE14788-100_GR_FRA_1A                                        |
| Date            | 2019                                                          |
| File Location   | \\s-inc\wie\projects\wie14788\100\graphics\fra\issued figures |



Parameter Plan\_Block E - Building Plots

1 : 500

KEY

APPLICATION BOUNDARY

DEVELOPMENT PLOTS  
NOTE: DARKER SHADING REFLECTS TALLER PERMISSIBLE HEIGHTS

ZONE FOR ARCADE  
(MIN. HEIGHT +48.5M AOD, MAX HEIGHT +54M AOD)

LIMIT OF DEVIATION 1.5M

LIMIT OF DEVIATION +/- 2.5M

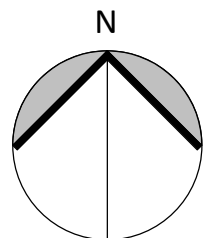
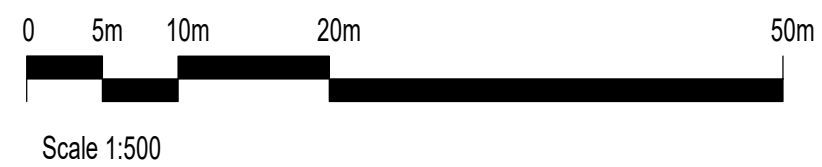
LIMIT OF DEVIATION 2.5M

LIMIT OF DEVIATION 5M

LIMIT OF DEVIATION 10M (PLOT A ONLY)

NOTE:  
SEE DESIGN CODES FOR RULES GOVERNING SETBACKS TO UPPER LEVELS

--- PLOT OUTLINE



GENERAL NOTES

All rights reserved.

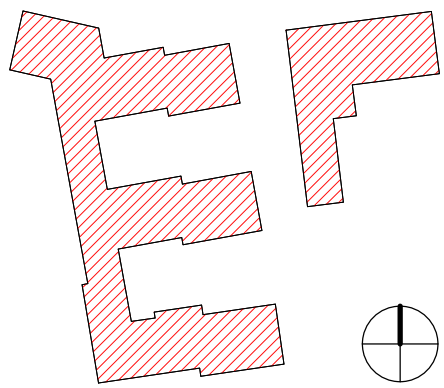
All drawings and written material appearing here, constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect.

Notes and material designations are typical for similar conditions unless otherwise indicated.

Do not scale from this drawing.

|         |           |                     |     |     |
|---------|-----------|---------------------|-----|-----|
| P1      | 2019-0211 | Issued for Planning |     |     |
| REV No. | DATE      | DESCRIPTION         | DWN | CHK |

KEY PLAN



PROJECT

Station Hill, Reading

CLIENT

SH Reading Master LLP

**CALLISONRTKL**  
A DESIGN CONSULTANCY OF ARCADIS

CallisonRTKL - UK Ltd.  
25 Farringdon Street, 10th Floor  
London EC4A 4AB  
T: +44(0)20 7306 0404

SHEET IDENTIFICATION

TITLE

Building Parameters - Combined - Building Plots

STATUS

Planning

|                |             |              |
|----------------|-------------|--------------|
| PROJECT NUMBER | DATE DRAWN: | 02/11/19     |
| 050-170073     | SCALE @ A1: | As indicated |
|                | DRAWN BY:   | Author       |
|                | CHECKED BY: | Checker      |

|                          |          |       |      |
|--------------------------|----------|-------|------|
| PROJECT ORIGINATOR       | ZONE     | LEVEL | TYPE |
| SHR - CRL - SB - ZZ - PL |          |       |      |
| ROLE NUMBER              | REVISION |       |      |
| A - 100-122- P1          |          |       |      |



## **B. Environment Agency Correspondence**

## Connor Henderson

---

**From:** Connor Henderson  
**Sent:** 13 December 2018 15:19  
**To:** 'enquiries\_THM@environment-agency.gov.uk'  
**Subject:** RE: THM106755\_MM - Station Hill, Reading - Flood Risk Enquiry

Good Afternoon,

Thanks for getting back to us with this.

Please could you confirm if the 2018 Sandford to Mapledurham modelling covers this site?

I note that in the 2011 modelling, there are flow routes through the railway embankment at Cow Lane, Caversham Road and Vastern Road, however, these are not present within the 2018 modelling. Please could you confirm the reason for this and whether or not this is an accurate representation.

Many Thanks,

**Connor Henderson**  
**Graduate Engineer**  
**Waterman Infrastructure & Environment Ltd**

Pickfords Wharf | Clink Street | London SE1 9DG  
t +44 207 928 7888 | 03300602814  
[www.watermangroup.com](http://www.watermangroup.com) | [LinkedIn](#) | [Twitter](#)

 Please consider the environment before printing this e-mail. Thank you!

---

**From:** Enquiries\_THM <[enquiries\\_THM@environment-agency.gov.uk](mailto:enquiries_THM@environment-agency.gov.uk)>  
**Sent:** 04 December 2018 13:34  
**To:** Brendan McCarthy <[brendan.mccarthy@watermangroup.com](mailto:brendan.mccarthy@watermangroup.com)>  
**Subject:** THM106755\_MM - Station Hill, Reading - Flood Risk Enquiry

Dear Mr McCarthy,

### Reference: THM106755

Please note, the Product 4 will cover your points 1, 2, 4-6. For point 3, the Kennet model does not extend to your site. Please let me know if you still wish for a Product 6, 7. I will send a separate email later today with the Product 6-7 for the 2011 Thames model. We have provided the modelled data from the 2011 Thames (Mapledurham to Sonning) and 2018 Thames (Sandford to Mapledurham) models. Flood zone 2 is based on the model extents for 2011 which we have provided.

For point 7, there is no groundwater levels available within a 500 m radius of the area on which the site sits.

### Provision of Modelled Flood Levels for: Site at Station Hill, Reading, RG1 1NR

Thank you for your request for modelled flood levels. We respond to these requests under the Freedom of Information Act 2000 and Environmental Information Regulations 2004. Please find attached the requested data (referred to as product 4).

Please be aware that the Environment Agency supply data, but we do not interpret it for use in a Flood Risk Assessment. Flood Risk Assessment's should be completed by a suitably competent and qualified person.

You may be interested in the following guidance / information publically available:

- **‘Planning Practice Guidance’** - provides information about planning considerations in areas at risk of flooding. <https://www.gov.uk/government/collections/planning-practice-guidance>
- **‘Planning applications: assessing flood risk’** - information about completing Flood Risk Assessments. <https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications>
- **‘Site specific flood risk assessment: Checklist’** – a checklist to help ensure you have considered all the relevant factors in your flood risk assessment. <https://www.gov.uk/guidance/flood-risk-and-coastal-change#Site-Specific-Flood-Risk-Assessment-checklist-section>

We recommend that you discuss your proposals with the Local Planning Authority at the earliest opportunity. They will be able to advise you on a wide range of planning matters in addition to flood risk.

Please note: Due to recent changes in guidance on the allowances for climate change, the 20% increase in river flows should no longer to be used for development design purposes. The data included in this product can be used for interpolation of levels as part of an intermediate level assessment. For further advice on the new allowances please visit <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances> .

Please refer to the table below for the permitted use of the supplied information.

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                                        | Product 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Description                                 | Detailed Flood Risk Assessment Map for <b>site at Station Hill, Reading, RG1 1NR</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Licence                                     | <a href="#">Open Government Licence</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Information Warning - OS background mapping | <i>The mapping of features provided as a background in this product is © Ordnance Survey. It is provided to give context to this product. The Open Government Licence does not apply to this background mapping. You are granted a non-exclusive, royalty free, revocable licence solely to view the Licensed Data for non-commercial purposes for the period during which the Environment Agency makes it available. You are not permitted to copy, sub-license, distribute, sell or otherwise make available the Licensed Data to third parties in any form. Third party rights to enforce the terms of this licence shall be reserved to OS.</i> |
| Attribution                                 | Contains Environment Agency information © Environment Agency and/or database rights.<br><br>Contains Ordnance Survey data © Crown copyright 2017 Ordnance Survey 100024198.                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

I hope that we have correctly interpreted your request.

Please be aware that many of our datasets are now available online. Simply visit [environment.data.gov.uk](https://environment.data.gov.uk)

We respond to requests for recorded information that we hold under the Freedom of Information Act 2000 (FOIA) and the associated Environmental Information Regulations 2004 (EIR).

Please get in touch if you have any further queries or contact us within two months if you'd like us to review the information we have sent.

Yours sincerely,

**Miss. Mehvish Maghribi**  
**Customers and Engagement Team Officer**



---

**From:** Brendan McCarthy [<mailto:brendan.mccarthy@watermangroup.com>]

**Sent:** 03 December 2018 14:22

**To:** Enquiries, Unit <[enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk)>

**Cc:** Connor Henderson <[connor.henderson@watermangroup.com](mailto:connor.henderson@watermangroup.com)>

**Subject:** RE: Station Hill, Reading - Flood Risk Enquiry

Good morning,

I was wondering if you could advise when we are likely to get a response to our query below, the information is required urgently.

I understood it would be four weeks, which would be on Wednesday, are you still on track to achieve this?

Kind regards,

Brendan

**Brendan McCarthy**  
**Technical Director**  
**Waterman Infrastructure & Environment Ltd**

Pickfords Wharf | Clink Street | London SE1 9DG  
t +44 207 928 7888 | d +44 3300 602 468 | m +44 7795 460 858  
[www.watermangroup.com](http://www.watermangroup.com) | [LinkedIn](#) | [Twitter](#)

 Please consider the environment before printing this e-mail. Thank you!

---

**From:** Connor Henderson

**Sent:** 07 November 2018 14:08

**To:** 'enquiries@environment-agency.gov.uk' <[enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk)>

**Subject:** Station Hill, Reading - Flood Risk Enquiry

Good Afternoon,

I am writing in regards to a proposed development located at Station Hill, Reading, approximate postcode RG1 1NR. Please see the attached location plan for your information.

We have been commissioned to investigate the risk of flooding to the proposed development and to produce a FRA. We would therefore appreciate it if you could provide the following information.

1. According to your online Flood Map for Planning, the site lies within Flood Zone 1, denoting a low risk of flooding from tidal and/or fluvial flooding. Please could you confirm your understanding of this and confirm any development restrictions or specific development requirements that may apply to the site.
2. Please could you provide your full Product 4 dataset for the site, to include modelled tidal and/or fluvial flood levels for all return periods available, the statutory defence level in the vicinity of the site and how often they are maintained and inspected.

3. Could you please confirm that the modelled flood extents and levels include the most up to date climate change allowances. If the climate change allowances are out of date, please could you provide your Products 6 and 7 for the River Kennett and Thames for the site via a sharefile link, if possible.
4. Please could you provide any further information that you hold on flood defences in the vicinity of the site, including any plans for future flood alleviation schemes.
5. Could you please provide any information on historic flood events at or in the vicinity of the site, to include dates, extent and cause of flooding, if known.
6. Please could you provide a map showing the location of any main rivers and ordinary watercourses within the vicinity of the site.
7. Could you please confirm the likely groundwater levels in the vicinity of the site.

We are also writing to Reading Borough Council and Thames Water to obtain any information that they may hold. If you are aware of any other parties that may hold information useful to our investigations, please do let me know.

Many Thanks  
Connor

**Connor Henderson**  
**Graduate Engineer**  
**Waterman Infrastructure & Environment Ltd**

Pickfords Wharf | Clink Street | London SE1 9DG  
t +44 207 928 7888 | 03300602814  
[www.watermangroup.com](http://www.watermangroup.com) | [LinkedIn](#) | [Twitter](#)

 Please consider the environment before printing this e-mail. Thank you!

---

Waterman Group is a multidisciplinary consultancy providing sustainable solutions to meet the planning, engineering design and project delivery needs of the property, infrastructure, environment and energy markets.

---

This message contains confidential information and is intended only for the individual named. If you are not the named addressee you should not disseminate, distribute or copy this email. Please notify the sender immediately if you have received this email by mistake and delete it from your system. Email transmission cannot be guaranteed to be secure or error-free as information could be intercepted, corrupted, delayed, lost, destroyed, incomplete, or contain viruses. The sender does not accept liability for any errors or omissions in the contents of this message, which arise as a result of email transmission. All reasonable precautions have been taken to see that no viruses are present in this email. Waterman Group cannot accept liability for loss, disruption or damage however caused, arising from the use of this email or attachments and recommend that you subject these to virus checking procedures prior to use. Email messages may be monitored and by replying to this message the recipient gives their consent to such monitoring.

---

Waterman Group Plc., Pickfords Wharf, Clink Street, London SE1 9DG, is a company registered in England and Wales with company registration number 2188844.

This message has been scanned and no issues were discovered.  
Click [here](#) to report this email as spam

Information in this message may be confidential and may be legally privileged. If you have received this message by mistake, please notify the sender immediately, delete it and do not copy it to anyone else.

We have checked this email and its attachments for viruses. But you should still check any attachment before opening it.

We may have to make this message and any reply to it public if asked to under the Freedom of Information Act, Data Protection Act or for litigation. Email messages and attachments sent to or from any Environment Agency address may also be accessed by someone other than the sender or recipient, for business purposes.

Click [here](#) to report this email as spam

## Product 4 (Detailed Flood Risk) for Proposed development at Station Hill, Reading, RG1 1NR

### Our Ref: THM106755\_MM

Product 4 is designed for developers where Flood Risk Standing Advice FRA (Flood Risk Assessment) Guidance Note 3 Applies. This is:

- i) "all applications in Flood Zone 3, other than non-domestic extensions less than 250 sq metres; and all domestic extensions", and
- ii) "all applications with a site area greater than 1 ha" in Flood Zone 2.

#### Product 4 includes the following information:

Ordnance Survey 1:25k colour raster base mapping;  
Flood Zone 2 and Flood Zone 3;  
Relevant model node locations and unique identifiers (for cross referencing to the water levels, depths and flows table);  
Model extents showing *defended* scenarios;  
FRA site boundary (where a suitable GIS layer is supplied);  
Flood defence locations (where available/relevant) and unique identifiers; (supplied separately)  
Flood Map areas benefiting from defences (where available/relevant);  
Flood Map flood storage areas (where available/relevant);  
Historic flood events outlines (where available/relevant, not the Historic Flood Map) and unique identifiers;  
Statutory (Sealed) Main River (where available within map extents);

#### A table showing:

- i) Model node X/Y coordinate locations, unique identifiers, and levels and flows for *defended* scenarios.
- ii) Flood defence locations unique identifiers and attributes; (supplied separately)
- iii) Historic flood events outlines unique identifiers and attributes; and
- iv) Local flood history data (where available/relevant).

#### Please note:

If you will be carrying out computer modelling as part of your Flood Risk Assessment, please request our guidance which sets out the requirements and best practice for computer river modelling.

This information is based on that currently available as of the date of this letter. You may feel it is appropriate to contact our office at regular intervals, to check whether any amendments/ improvements have been made. Should you re-contact us after a period of time, please quote the above reference in order to help us deal with your query.

This information is provided subject to the enclosed notice which you should read.

This letter is not a Flood Risk Assessment. The information supplied can be used to form part of your Flood Risk Assessment. Further advice and guidance regarding Flood Risk Assessments can be found on our website at:

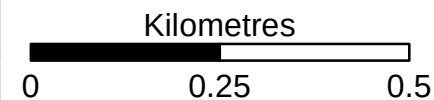
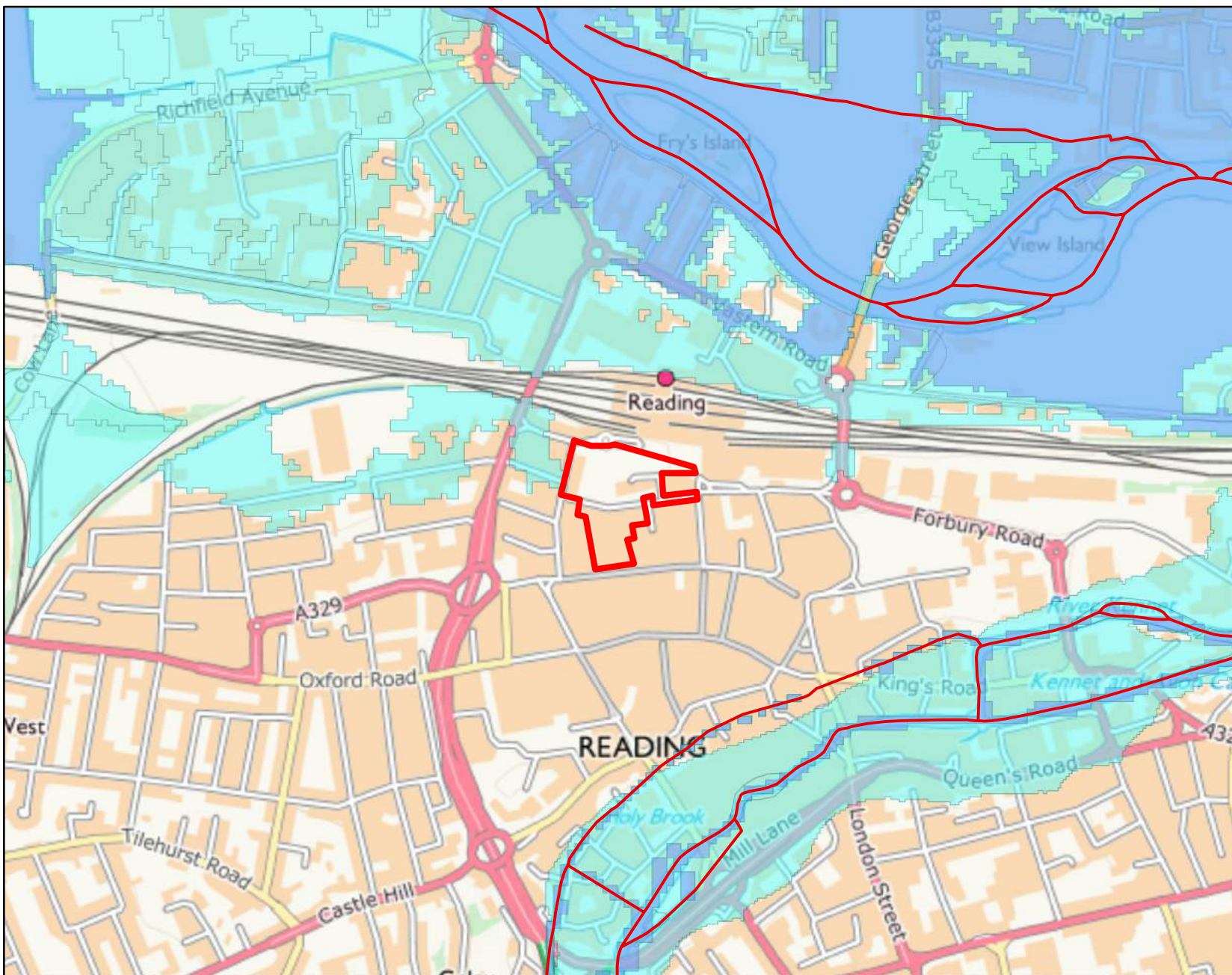
<https://www.gov.uk/guidance/flood-risk-assessment-local-planning-authorities>

If you would like advice from us regarding your development proposals you can complete our pre application enquiry form which can be found at:

<https://www.gov.uk/government/publications/pre-planning-application-enquiry-form-preliminary-opinion>

# Flood map for planning centred on site at Station Hill, Reading, RG1 1NR

Created on 30 November 2018 REF: THM106755\_MM



## Legend

- Main River
- Flood defences
- Areas benefiting from flood defences
- Flooding from rivers or sea (FZ3)
- Extent of extreme flood (FZ2)
- Flood Map - flood storage areas

Flooding from rivers or sea without defences (Flood Zone 3) shows the area that could be affected by flooding:

- from the sea with a 1 in 200 or greater chance of happening each year
- or from a river with a 1 in 100 or greater chance of happening each year.

The Extent of an extreme flood (Flood Zone 2) shows the extent of an extreme flood from rivers or the sea with up to a 1 in 1000 chance of occurring each year.

## Defence information

THM106755\_MM

Defence Location: No defences on Main River

Description: This location is not currently protected by any formal defences and we do not currently have any flood alleviation works planned for the area. However we continue to maintain certain watercourses and the schedule of these can be found on our internet pages.

## Model information

THM106755\_MM

Model: Thames (Mapledurham to Sonning) 2011

Description: The information provided is taken from the Thames (Reading Complex Change) Flood Alleviation Study completed in June 2011. The study was carried out using 2D modelling software (ISIS-Tuflow).

Model design runs:

1 in 5 / 20% Annual Exceedance Probability (AEP); 1 in 20 / 5% AEP; 1 in 50 / 2% AEP; 1 in 100 / 1% AEP; 1 in 1000 / 0.1% AEP and 1 in 100+20% / 1% AEP plus 20% increase in flows

Mapped Outputs:

1 in 5 / 20% AEP; 1 in 20 / 5% AEP; 1 in 50 / 2% AEP; 1 in 100 / 1% AEP and 1 in 1000 / 0.1% AEP

Model accuracy:

Levels  $\pm$  250mm

## Model information

THM106755\_MM

Model: Thames (Sandford to Mapledurham) 2018

Description: The information provided is from the Abingdon Flood Schemes mapping completed in June 2017. The previous model 1D model was updated to a 1D-2D model (Flood modeller-Tuflow). The updated model will also be used to assess downstream effects due to flood alleviation options in Oxford and Abingdon.

Model design runs:

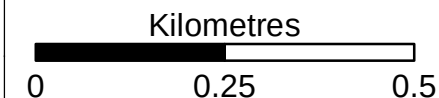
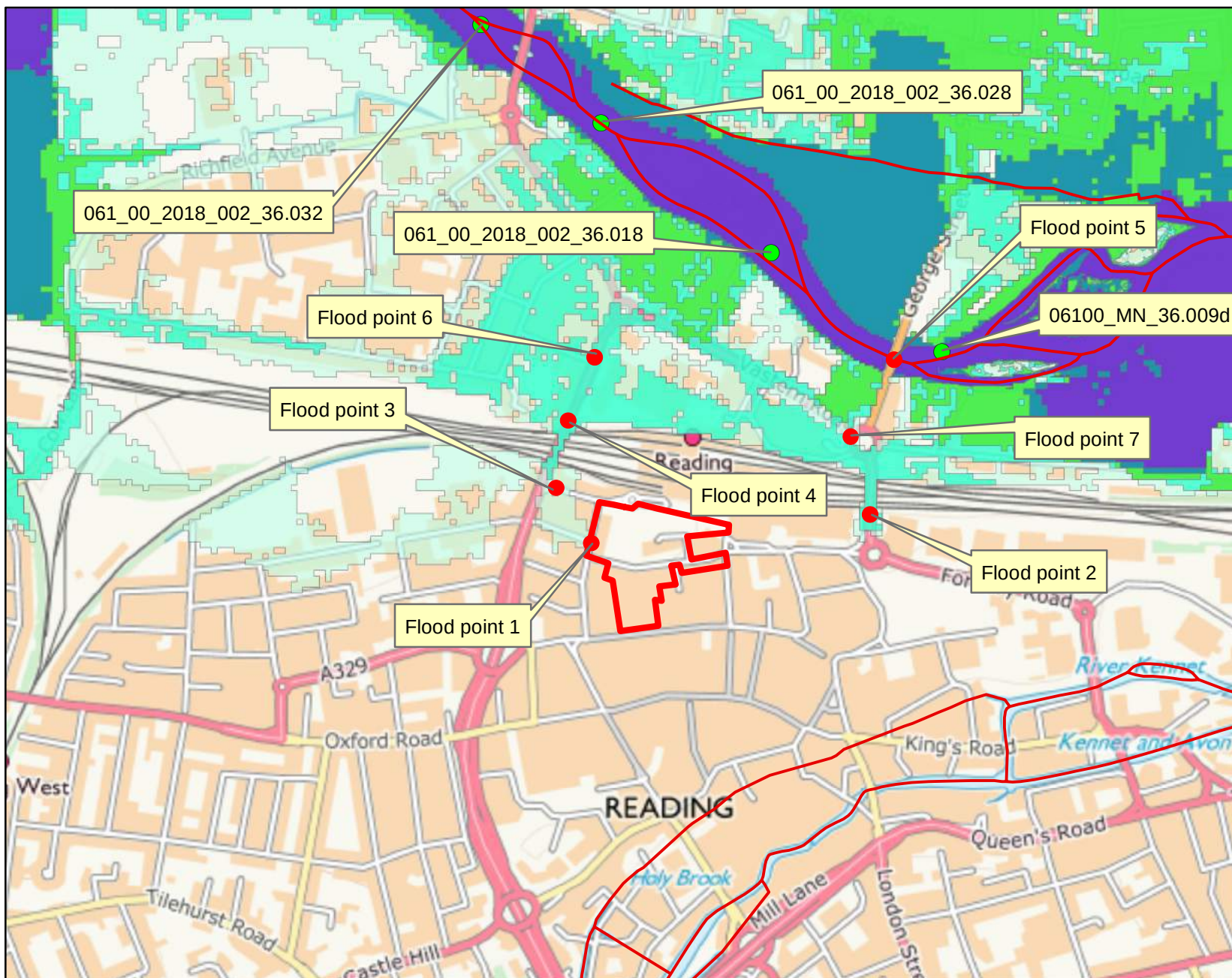
1 in 2/ 50% AEP; 1 in 5 / 20% AEP; 1 in 10/ 10% AEP; 1 in 20 / 5% AEP; 1 in 50/ 2% AEP; 1 in 75 / 1.3% AEP; 1 in 100 / 1% AEP, 1 in 100+25% / 1% + 25% AEP with climate change; 1 in 100+35% / 1% + 35% AEP with climate change; 1 in 100+70% / 1% + 70% AEP with climate change; 1 in 200/ 0.5% AEP and 1 in 1000 / 0.1% AEP.

Mapped outputs:

1 in 2/ 50% AEP; 1 in 5 / 20% AEP; 1 in 10/ 10% AEP; 1 in 20 / 5% AEP; 1 in 50/ 2% AEP; 1 in 75 / 1.3% AEP; 1 in 100 / 1% AEP, 1 in 100+25% / 1% + 25% AEP with climate change; 1 in 100+35% / 1% + 35% AEP with climate change; 1 in 100+70% / 1% + 70% AEP with climate change; 1 in 200/ 0.5% AEP and 1 in 1000 / 0.1% AEP.

# Detailed FRA Map centred on site at Station Hill, Reading, RG1 1NR

Created on 4 December 2018 REF: THM106755\_MM



## Legend

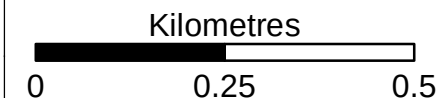
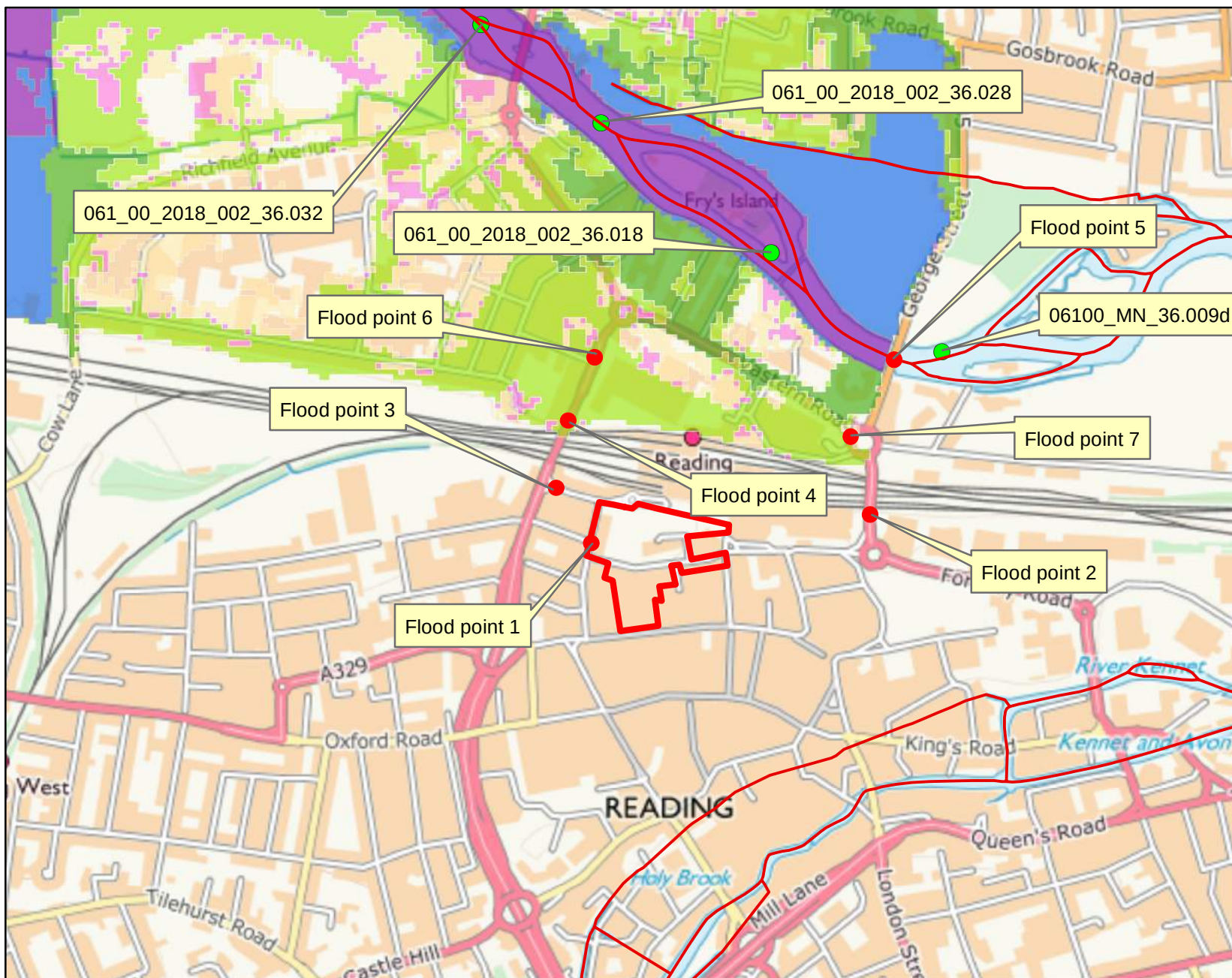
- Main River
- Model Nodes
- 20% AEP Flood Outline
- 5% AEP Flood Outline
- 1% AEP Flood Outline
- 1%+20% AEP Flood Outline
- 0.1% AEP Flood Outline

AEP = Annual Exceedance Probability  
The probability of a flood of a particular magnitude, or greater, occurring in any given year

Where available climate change extents have been calculated with an additional flow added to an AEP event. An example of how this is written is 1%+20% AEP.

# Detailed FRA Map centred on site at Station Hill, Reading, RG1 1NR

Created on 4 December 2018 REF: THM106755\_MM



## Legend

- Main River
- Model Nodes
- 20% AEP Flood Outline
- 5% AEP Flood Outline
- 1% AEP Flood Outline
- 1%+25% CC AEP Flood Outline
- 1%+35% CC AEP Flood Outline
- 1%+70% AEP Flood Outline
- 0.1% AEP Flood Outline

AEP = Annual Exceedance Probability  
The probability of a flood of a particular magnitude, or greater, occurring in any given year

Where available climate change extents have been calculated with an additional flow added to an AEP event. An example of how this is written is 1%+20% AEP.

## Modelled in-channel flood flows and levels

THM106755\_MM

The modelled flood levels and flows for the closest most appropriate model node points for your site that are within the river channel are provided below:

| Node label             | Model                                 | Easting | Northing | Flood Levels (mAOD) |        |        |                                 |                                 |                                 |                                 |          |
|------------------------|---------------------------------------|---------|----------|---------------------|--------|--------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|----------|
|                        |                                       |         |          | 20% AEP             | 5% AEP | 1% AEP | 1% AEP (+20% increase in flows) | 1% AEP (+25% increase in flows) | 1% AEP (+35% increase in flows) | 1% AEP (+70% increase in flows) | 0.1% AEP |
| 061_00_2018_002_36.032 | Thames (Sandford to Mapledurham) 2018 | 471075  | 174646   | 218.79              | 283.66 | 382.28 | 0.00                            | 484.80                          | 512.15                          | 624.31                          | 585.50   |
| 061_00_2018_002_36.028 | Thames (Sandford to Mapledurham) 2018 | 471287  | 174474   | 218.79              | 282.17 | 376.75 | 0.00                            | 474.55                          | 501.04                          | 609.06                          | 571.28   |
| 061_00_2018_002_36.018 | Thames (Sandford to Mapledurham) 2018 | 471586  | 174244   | 218.77              | 265.74 | 327.36 | 0.00                            | 403.00                          | 423.32                          | 514.97                          | 481.80   |
| 06100_MN_36.009d       | Thames (Mapledurham to Sonning) 2011  | 471887  | 174071   | 36.97               | 37.33  | 37.76  | 37.92                           | 0.00                            | 0.00                            | 0.00                            | 38.12    |
|                        |                                       |         |          |                     |        |        |                                 |                                 |                                 |                                 |          |
|                        |                                       |         |          |                     |        |        |                                 |                                 |                                 |                                 |          |
|                        |                                       |         |          |                     |        |        |                                 |                                 |                                 |                                 |          |
|                        |                                       |         |          |                     |        |        |                                 |                                 |                                 |                                 |          |
|                        |                                       |         |          |                     |        |        |                                 |                                 |                                 |                                 |          |
|                        |                                       |         |          |                     |        |        |                                 |                                 |                                 |                                 |          |
|                        |                                       |         |          |                     |        |        |                                 |                                 |                                 |                                 |          |
|                        |                                       |         |          |                     |        |        |                                 |                                 |                                 |                                 |          |

| Node label            | Model                                 | Easting | Northing | Flood Flows (m3/s) |        |        |                                 |                                 |                                 |                                 |          |
|-----------------------|---------------------------------------|---------|----------|--------------------|--------|--------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|----------|
|                       |                                       |         |          | 20% AEP            | 5% AEP | 1% AEP | 1% AEP (+20% increase in flows) | 1% AEP (+25% increase in flows) | 1% AEP (+35% increase in flows) | 1% AEP (+70% increase in flows) | 0.1% AEP |
| 061_00_2018_002_36.03 | Thames (Sandford to Mapledurham) 2018 | 471075  | 174646   | 37.23              | 37.65  | 38.19  | 0.00                            | 38.49                           | 38.57                           | 38.81                           | 38.74    |
| 061_00_2018_002_36.02 | Thames (Sandford to Mapledurham) 2018 | 471287  | 174474   | 37.18              | 37.59  | 38.09  | 0.00                            | 38.33                           | 38.38                           | 38.57                           | 38.51    |
| 061_00_2018_002_36.01 | Thames (Sandford to Mapledurham) 2018 | 471586  | 174244   | 37.08              | 37.50  | 38.02  | 0.00                            | 38.26                           | 38.31                           | 38.47                           | 38.42    |
| 06100_MN_36.009d      | Thames (Mapledurham to Sonning) 2011  | 471887  | 174071   | 216.09             | 274.04 | 336.47 | 352.07                          | 0.00                            | 0.00                            | 0.00                            | 382.04   |
|                       |                                       |         |          |                    |        |        |                                 |                                 |                                 |                                 |          |
|                       |                                       |         |          |                    |        |        |                                 |                                 |                                 |                                 |          |
|                       |                                       |         |          |                    |        |        |                                 |                                 |                                 |                                 |          |
|                       |                                       |         |          |                    |        |        |                                 |                                 |                                 |                                 |          |
|                       |                                       |         |          |                    |        |        |                                 |                                 |                                 |                                 |          |
|                       |                                       |         |          |                    |        |        |                                 |                                 |                                 |                                 |          |
|                       |                                       |         |          |                    |        |        |                                 |                                 |                                 |                                 |          |
|                       |                                       |         |          |                    |        |        |                                 |                                 |                                 |                                 |          |

Note:

Due to changes in guidance on the allowances for climate change, the 20% increase in river flows should no longer to be used for development design purposes. The data included in this Product can be used for interpolation of levels as part of an intermediate level assessment.

For further advice on the new allowances please visit  
<https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>

## Modelled floodplain flood levels

THM106755\_MM

The modelled flood levels for the closest most appropriate model grid cells for your site are provided below:

| 2D grid cell reference | Model                                 | Easting | Northing | flood levels (mAOD) |         |         |                                 |                                 |                                 |                                 |          |
|------------------------|---------------------------------------|---------|----------|---------------------|---------|---------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|----------|
|                        |                                       |         |          | 20% AEP             | 5% AEP  | 1% AEP  | 1% AEP (+20% increase in flows) | 1% AEP (+25% increase in flows) | 1% AEP (+35% increase in flows) | 1% AEP (+70% increase in flows) | 0.1% AEP |
| Flood point 1          | Thames (Mapledurham to Sonning) 2011  | 471267  | 173745   | No data             | No data | No data | No data                         |                                 |                                 |                                 | 38.45    |
| Flood point 2          | Thames (Mapledurham to Sonning) 2011  | 471763  | 173787   | No data             | No data | No data | 37.97                           |                                 |                                 |                                 | 38.26    |
| Flood point 3          | Thames (Mapledurham to Sonning) 2011  | 471206  | 173834   | No data             | No data | No data | No data                         |                                 |                                 |                                 | 38.45    |
| Flood point 4          | Thames (Mapledurham to Sonning) 2011  | 471231  | 173954   | No data             | No data | No data | 38.18                           |                                 |                                 |                                 | 38.45    |
| Flood point 5          | Thames (Mapledurham to Sonning) 2011  | 471801  | 174054   | 36.96               | 37.31   | 37.74   | 37.88                           |                                 |                                 |                                 | 38.07    |
| Flood point 6          | Thames (Sandford to Mapledurham) 2011 | 471278  | 174060   | No data             | No data | No data |                                 | 38.28                           | 38.33                           | 38.53                           | 38.47    |
| Flood point 7          | Thames (Sandford to Mapledurham) 2011 | 471733  | 173920   | No data             | No data | No data |                                 | No data                         | No data                         | 38.10                           | 38.06    |
|                        |                                       |         |          |                     |         |         |                                 |                                 |                                 |                                 |          |
|                        |                                       |         |          |                     |         |         |                                 |                                 |                                 |                                 |          |
|                        |                                       |         |          |                     |         |         |                                 |                                 |                                 |                                 |          |

This flood model has represented the floodplain as a grid.  
The flood water levels have been calculated for each grid cell.

### Note:

Due to changes in guidance on the allowances for climate change, the 20% increase in river flows should no longer to be used for development design purposes. The data included in this Product can be used for interpolation of levels as part of an intermediate level assessment.

For further advice on the new allowances please visit  
<https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>