



PLOT E AND TELECOM HOUSE

Outline Application
Environmental Statement (ES)

Volume 4: Appendices

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Appendix 2.1

EIA Scoping Report (February 2012)



EIA Scoping Report

Station Hill, Reading

February 2012

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Station Hill, Reading

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1. Introduction

Sackville Developments (Reading) Ltd (hereafter referred to as the 'Applicant') is seeking outline planning permission for the redevelopment of approximately 2.5 hectares (ha) of brownfield land between Reading Mainline Station and Reading town centre (hereafter referred to as the 'Site'). The location of the Site, which is shown in Figure 1, is situated within the administrative boundary of Reading Borough Council (RBC).

The Site is bound by Station Hill and Reading Mainline Station to the north, Station Road to the east, Friar Street to the south, and Greyfriars Road to the west and is bisected by Garrard Street. The indicative planning application boundary is shown on Figure 2.

In 2009 the Applicant submitted an outline application (Ref 09/01079/OUT) for the Site, which was also supported by an Environmental Statement (ES). RBC subsequently granted planning permission in October 2011 for the mixed used scheme comprising residential development (Use Class C3), offices (Use Class B1a), retail (Use Classes A1-A4), community space (Use Class D1), cultural/leisure space (Use Class D1/D2), bowling alley (D2), and health and fitness (Use D2) and associated car and cycle parking, landscaping, infrastructure and public realm works.

In light of current market conditions a new Outline Planning Application for the Site is being prepared by the Applicant and their design team. Although, the revised outline proposals have not yet been finalised, they would be for a lower rise, lower density development, complementing the redevelopment of Reading Mainline Station, which is currently in progress. The proposals are hereafter referred to as the 'Development'. It is currently envisaged that the Development would include in the order of 150 to 300 residential units, 90,000-110,000m² Gross External Area (GEA) of office space, 6,000-8,000m² GEA of retail uses, 900-1,200m² GEA of leisure development, and associated parking and new pedestrian routes through the Site. The existing National Car Parking (NCP) operated Friars Walk car-park on the Site would be remodeled.

1.1 Environmental Impact Assessment

Based on the scale of the Development (in excess of 0.5ha and 10,000m²), the proposal is considered to fall within Schedule 2, Category 10b (urban development project) of The Town and Country Planning (Environmental Impact Assessment) Regulations 2011ⁱ (referred to as 'the EIA Regulations'). As such, the Applicant has commissioned Waterman Energy, Environment & Design (Waterman EED) to undertake an Environmental Impact Assessment (EIA) of the Development.

The EIA process is a means of drawing together, in a systematic way, an assessment of the likely significant environmental effects arising from a development. Where an EIA is required, the relevant information must be provided by the Applicant in a document referred to as an Environmental Statement (ES) which informs the decision making process.

An EIA scoping study has been undertaken as the first stage of the EIA to identify the likely key environmental issues in respect of the Development and the extent to which each environmental topic needs to be investigated within the EIA process and reported in the ES. In order to inform the emerging proposals for the Site, a number of baseline environmental studies of the existing conditions have been undertaken, the findings of which are summarised in this EIA Scoping Report.

A formal request for an EIA Scoping Opinion is being submitted to RBC under the EIA Regulations. This EIA Scoping Report is submitted to RBC to assist the Council in forming their Scoping Opinion on the information to be provided in the ES.

In accordance with Regulation 13 of the EIA Regulations and best practice, the following information is provided within this Report:

- Site location and description including a summary of baseline conditions (Section 2);
- Brief description of the nature and purpose of the Development (Section 3);
- Summary of the consultations that will be undertaken as part of the EIA (Section 4);
- Brief description of the likely significant environmental effects of the Development. The approach and methodology for the assessment of each topic in the EIA is also described (Section 5); and
- Draft structure of the ES (Section 6).

2. The Site

2.1 Site Location and Setting

The Site, which covers approximately 2.5ha is located between Reading town centre and Reading Mainline Station and centred on National Grid Reference (NGR) 471361 173756.

To the north of Garrard Street, the Site is bound by Station Hill, which currently comprises Reading Bus Station, with Reading Mainline Station immediately to the north. Thames Tower and Station Road demarcate the northern part of the eastern boundary of the Site whilst Greyfriars Road bounds the northern part of the western boundary. South of Garrard Street, the Site is bound by retail units and offices, of which some office buildings are currently vacant. Merchant Place runs parallel to the eastern boundary of the Site to the south of Garrard Street, connecting Friar Street with Garrard Street. Merchant Place is lined with a number of retail units, offices and a block of residential apartments. Friar Street, which is demarcated by leisure, retail and offices, forms the southern boundary of the Site. The indicative planning application boundary of the Site is shown on Figure 2.

The Site is dominated by vacant office and leisure buildings and the disused Friars Walk Shopping Centre, together with the NCP-operated Friars Walk multi-storey car park, road infrastructure and hard-standing. The office building located in the western part of the Site, together with some small-scale retail units fronting Station Hill, however, remains occupied. A summary of the buildings and structures on the Site, together with their current uses, is provided in Table 1.

Table 1: Summary of the Existing Site Structures

Building	Details
Xafinity House	A six-storey 'L-shaped' red brick structure located in the north western part of the Site. Car parking is provided at ground level for the occupants of the building with office space above.
Former Mecca Bingo Hall and Bus Station	A vacant pitched corrugated roof concrete structure located towards the north-western part of the Site. The former bus station is located at grade with Garrard Street beneath the former bingo hall, which is raised on columns above ground. Whilst the bingo hall remains vacant, the former bus station is used by taxi's queuing to reach the temporary taxi rank.
Western Tower and connecting Low Rise Block	This fifteen storey tower (above ground level), is rectangular in shape and demonstrates 1970's style of architecture. It is currently vacant and is connected to a three storey low rise block of the same design. The low-rise block is primarily vacant with the exception of a small number of retail units at ground floor.
Friars Walk Multi-storey Car Park	A ten floor (split level) concrete structure with basement and open roof parking space providing 952 spaces.
Friar Walk Shopping Centre	A disused shopping centre which is not accessible to the public.
Friars Walk	An elevated walkway connecting the multi-storey car park with Friars Walk Shopping Centre and Friars Street beyond. The walkway is no longer accessible to the public.

As described in Table 1, many of the buildings on the Site have been vacant and unoccupied for several years. Since the closure of Friars Walk and Friars Shopping Centre, there has been limited pedestrian access across the Site between Reading Mainline Station and Reading town centre. However, the Site is

recognised by RBC as an important gateway between Reading Mainline Station and Reading town centre. Consequently, the Site and immediate surrounding area have been identified by RBC as an area for redevelopment, which is covered by the Reading Central Area Action Planⁱⁱ (RCAAP), Reading Station Area Framework Supplementary Planning Documentⁱⁱⁱ (SPD) and Station Hill South Planning and Urban Design Brief^{iv}.

2.2 Surrounding Land Uses

The Site is surrounded by a mix of commercial, retail and leisure uses, including small-scale high street retail units with offices above, restaurants, public houses and hotels along Station Road to the east of the Site and Friar Street to the south of the Site. A large supermarket is located adjacent to the south-western part of the Site between Garrard Street and Friar Street, whilst an education establishment, a public house and a number of office buildings are located along Greyfriars Road, which runs parallel to the western boundary of the Site. Further office buildings are located on Tudor Road, immediately to the north-west of the Site. Although there are a number of office buildings in proximity to the Site, the majority of office blocks, including Thames Tower, adjoining the north-eastern Site boundary, together with 30 Garrard Street, 49 Garrard Street to the south of the northern part of the Site and 35-38 Friars Street are currently vacant and unoccupied.

Residential properties in the vicinity of the Site are limited. However, a modern nine-storey residential apartment block with external terraces is located 15m east of the Site on Merchants Place. Terraced housing is also located on Stanshawe Road and Vachel Road, approximately 50m west of the nearest point to the Site. Malcolm Place, a modern residential apartment block, is located further afield, approximately 130m west of the Site on Caversham Road (A4155).

Station Hill, immediately to the north of the Site, is currently used as a bus station, providing a direct interchange with Reading Mainline Station. Reading Mainline Station, which forms a major transport interchange, is located approximately 40m north and north-east of the Site. Owing to the current redevelopment of Reading Mainline Station, there is currently no throughway traffic along Station Hill, with the eastern end of Station Hill closed. As a result, a temporary taxi rank has been created immediately outside the main entrance of Reading Mainline Station.

2.3 Site History

In the early 19th century, the Site was undeveloped land located outside the built up area of Reading, to the north of the medieval thoroughfare of Friar Street. Construction of the Great Western Railway and station to the north of the Site on a raised embankment resulted in the development of the Site and surrounding area in the mid-19th century. Although some residential and industrial properties were constructed on the Site at this time, none of the buildings have survived. However, the street pattern that defines the eastern and northern boundaries of the Site was largely in place by 1840.

The apportionment accompanying the Tithe map identifies that the eastern part of the Site was occupied by stables and yards, although the earliest available source to depict these structures is the first edition Ordnance Survey (OS) map of 1879. The OS map of 1879 also shows that Greyfriars Road to the west of the Site had been constructed.

A significant phase of redevelopment for commercial and civic buildings is recorded in the area surrounding the Site in the late 19th century, specifically along Friar Street and Blagrove Street. Development in the early decades of the 20th century was limited to key corner locations in the wider area.

By 1931, a large garage building had been constructed towards the centre of the Site and extended onto land to the east. Other industrial buildings were constructed in the north-east of the Site at this date. A

further large building, probably of industrial use, was constructed in the west of the Site by 1957, although this had been demolished by 1962, when the northern part of the Site was recorded as comprising an at-grade car park.

The later part of the 20th century witnessed significant redevelopment of the Site and its surrounds, including the demolition of all the standing buildings previously recorded on the Site. The block of commercial units and offices (including the Western Tower), as well as a bingo hall standing over the bus station, were both built between 1962 and 1968. The multi-storey car park and the office block in the western part of the Site were constructed between 1968 and 1986.

Further significant development, largely comprising commercial properties, has taken place in the area surrounding the Site since 1986. This has had an important effect on the historic character of the street frontages surrounding it. As such, the area has a largely modern built character in the immediate vicinity of the Site, which is punctuated by survival of individual 19th and early 20th century buildings.

2.4 Site Context

The Site is located in the Station/Riverside major opportunity area as set out in the RCAAP. The RCAAP identifies key opportunities and sets out the planning framework for the area up to 2026. It forms one of the main considerations in determining planning applications within the central Reading area. The RCAAP seeks to ensure that:

“The station/river area will be a flagship scheme, extending the centre and providing a mixed use destination in itself and centred on a redeveloped station and new public transport interchange. It will integrate the transport links and areas northwards towards the river and into the heart of the centre”.

Specifically, Policy RC1c of the RCAAP: Station Hill, states:

“This area will be developed for a mix of uses at a high density, including retail and leisure on the ground and lower floors and residential and offices on higher floors. There will be enhanced links through the sites, and a network of streets and spaces. Frontages on key routes through the site should have active uses. The edge of the site nearest to the areas of traditional terracing west of Greyfriars Road will require careful design treatment”.

The RCAAP is supported by the Reading Area Framework SPD, which sets out the principles and guidelines for development surrounding Reading Mainline Station, including the Site, together with the Station Hill South Planning and Urban Design Brief. The Station Hill South Planning and Urban Design Brief was produced to assist with delivering the redevelopment of the Site whilst ensuring that RBC's planning and design objectives for the Site are met. The key design principles of the brief are:

- Establishing a clear character;
- Allowing for improved freedom of movement;
- Open space and landscape;
- Designing for tall buildings;
- Determining appropriate scale, height and massing;
- Active street frontage;
- Achieving mixed-use development;
- Incorporating high standards of sustainable design;
- Designing in safety and security; and
- Demonstrating viable and flexible phasing.

2.5 Future Baseline

As set out in Section 1, Reading Station is currently being redeveloped (Application Reference 10/01270/LBC and 10/01269/FUL). The proposals include the demolition of the western part of the Station and the existing canopy along the front of the building and the platform 4 canopies attached to the rear of the building together with construction of new northern and southern entrances, a new connecting bridge and new platform canopies. Given that the station upgrade works have consent and are in the process of being implemented, it will be considered as the 'future baseline'. which accounts for the full implementation of the Reading Mainline Station Redevelopment.

2.6 Potentially Sensitive Receptors

A review of existing land uses on the Site, statutory and non-statutory designations in the area was undertaken as part of this scoping study. In addition, some baseline survey work was undertaken to establish the environmental conditions on, and surrounding the Site. This has identified a number of receptors which could potentially be sensitive to environmental effects resulting from the Development. These are set out in Table 2.

Table 2: Potentially Sensitive Receptors

Category	Sensitive Receptor/Land Use	Nearest Approximate Distance from the Site Boundary
Residential properties.	Existing residents surrounding the Site including those on Merchants Place (Projection East and Icon House), Stanshawe Road, Vachel Road and Caversham Road.	15m east.
Commercial properties.	Existing office and retail occupants located in the western and northern part of the Site. Occupants of existing office and retail premises adjacent to the Site, including on Station Road, Friar Street and Greyfriars Road.	On and adjacent to the Site.
Local views.	Local and long distance views to and from the Site.	Sensitive views include those from Listed Buildings and structures (as below).
Built Heritage.	Reading Abbey Scheduled Monument (SM) and associated Forbury Gardens Historic Park and Garden.	300m east.
	High Bridge SM	480m south-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.
	Grade I listed Greyfriars Church.	120m south-west.

Category	Sensitive Receptor/Land Use	Nearest Approximate Distance from the Site Boundary
	Grade I listed St. Mary's Church in St. Mary Butts.	245m south-west
	Grade I Church of St Laurence	280m east.
	Grade II* listed Grade II* listed Town Council Chamber and Offices with Clock Tower	280m east.
	Grade II listed 39 Friar Street.	Adjoins south-east corner of the Site
	Grade II listed 11-15 Friar Street	150m east
	Grade II listed Reading General Station (Three Guineas Public House)	20m north.
	Grade II listed statue of King Edward VII.	40m east
	Grade II listed, 17-27 Station Road (Pearl Assurance Building)	45m east
	Grade II listed Great Western House	50m south-east.
	Grade II Listed 13 & 15 Station Road	60m east
	Grade II Listed Quadrant Walls and Railings to Former No.64 (Greyfriars Vicarage)	100m south-west
	Grade II listed The Mitre Inn (47 West Street including 92 Friar Street)	125m south-west
	Grade II listed Regent Place	130m west
	Grade II listed WI Palmer Memorial Hall	130m south-west
	Grade II listed 147 Friar Street.	150m south-east
	Grade II listed 1-31 Queen Victoria Street (including Nos 148 -150 Friar Street and 24 to 28 Broad Street and 35 to 38 (consec)) Broad Street	150m south-east
	Grade II listed 154 Friar Street	150m south-east
Transportation.	Users of Reading Mainline Railway Station, Reading Bus Station and taxi rank	Adjacent north and north-east.
	Pedestrian, cyclists and other road users in the local area.	Garrard Road, Merchants Place, Station Hill, Station Road, Friar Street and Greyfriars Road.
Controlled waters.	Secondary A Aquifer of superficial deposits and Principal Aquifer of solid geology beneath the Site.	Beneath the Site.

Category	Sensitive Receptor/Land Use	Nearest Approximate Distance from the Site Boundary
	River Thames	420m north
	River Kennet	460m south-east.
Habitats and Species.	Nesting birds (if present).	Adjacent in all directions.

3. The Development Proposals

The outline application proposals for the Site are being designed by Allies and Morrison Architects. Although the design of the Development is still evolving and may be subject to amendment prior to submission of the outline planning application, the Development is anticipated to provide approximately 140,000-170,000m² (GEA) of development to comprise approximately:

- 90,000-110,000m² (GEA) of office (Use Class B1) and ancillary floorspace.
- 11,000-21,000m² (GEA) of residential (Use Class C3). This equates to between 150 and 300 residential units, a number of which will be affordable.
- 6,000-8,000m² GEA of retail (Use Class A1-A5).
- 900-1,200m² of leisure development (Use Class D2); and
- 20,000-25,000m² of car parking. This will involve the adaptation of the existing 952 space public NCP car park on Site with approximately 856 spaces provided (a net reduction of approximately 96 spaces).

The Development will be arranged in approximately seven buildings located on either side of a new pedestrianized north-south route extending between Station Hill and the existing junction of Friars Walk and Friar Street. Garrard Street will be retained and a new east-west route introduced between it and Station Hill.

The Development is being designed to complement the proposed Reading Mainline Station redevelopment. In general terms, the height of buildings will increase from the south western to the north eastern part of the Site. Buildings on the western side of the Site fronting Greyfriars Road will be approximately between 8 and 10 storeys (ground plus 7 to 9 storeys plus plant areas). The buildings on the eastern side of the Site adjacent to the Thames Tower site will range from approximately 13 and 21 storeys (ground plus 12 to 20 storeys plus plant areas). The buildings on the southern part of the site (on either side of Friars Walk) will range from approximately 3 and 6 storeys (ground plus between 2 and 5 storeys).

Garrard Street will continue to be the principal access to the retained car park. It will also act as a service route for existing buildings and proposed new buildings on the western side of the development. Buildings on the western side of the Site will have individual service bays.

The indicative Masterplan is shown in Figure 3.

The range and quantum of land uses, as well as suggested height of development, is considered sufficient information to enable the Council and other Consultees to form an opinion on the scope of the ES and the potential significant environmental effects.

4. Consultations

The process of undertaking consultations assists in identifying the likely environmental and other effects of the Development. It enables the design to be refined to incorporate mitigation measures where feasible, thereby limiting adverse effects and enhancing the benefits of the Development.

As part of the planning process, an on-going programme of consultations has commenced with a number of statutory and non-statutory consultees. Further consultations will be undertaken as part of the EIA process. The following is a draft list of those who have already and who are likely to be included in the overall consultation process:

- RBC Transport, Environmental Health, Housing and Building Control and Planning Departments;
- The Berkshire Unitary Authority, Joint Strategic Planning Unit;
- English Heritage (EH);
- Natural England
- The Environment Agency (EA);
- Highways Agency;
- Berks, Bucks and Oxfordshire Wildlife Trust;
- Thames Water;
- Network Rail; and
- Reading Buses.

5. Key Issues to be Addressed by the EIA

5.1 Introduction

A range of data relating to the Site and surrounding area has been obtained as part of the scoping study, including archive data, published maps and Site surveys. Specialist studies have commenced and will be undertaken throughout the EIA process. These, together with the collection and review of information relating to the Site and surrounding area, are on-going. In addition to informing the design process, this information will be used to establish the baseline conditions of the Site for the ES, including potentially sensitive receptors and assist in the formulation of mitigation measures to reduce any potentially adverse effects that are identified.

The legal minimum requirements for the content of an ES are set out in Schedule 4 of the EIA Regulations. It is recognised that for the ES to fulfil its primary objective of enabling environmental considerations to be incorporated into the decision-making process, it must be focused on the most potentially significant environmental issues. The following sections set out the potentially significant issues to be considered in the ES and therefore defines the focus and scope of the EIA. This has also been informed by the content, and conclusions, of the ES's relating to the Applicant's previous applications for schemes on the Site.

5.2 Alternatives

The EIA process provides a forum through which any alternative development options considered by the developer can be assessed, together with their environmental constraints and effects, prior to the selection of the final and fixed Development. This allows for the Development to evolve in response to the early identification and consideration of environmental constraints and effects.

In accordance with the EIA Regulations, the ES will provide an outline of the main alternatives considered by the Applicant. For this particular project, alternative options will focus upon:

- The 'do nothing' option: this will outline the consequences of no development taking place;
- The 'do minimum' option: this will account for refurbishment of the existing buildings;
- Alternative scheme implementation: – This will include consideration of implementing the Consented Scheme as an alternative to the revised proposals rather than provide full documentation of the many alternative designs which were considered *prior* to the Consented Scheme; and
- 'Alternative designs': this will summarise the progression of the revised design work and how environmental considerations have influenced the overall design process. A summary of the main alternatives considered, such as alternative plan form layouts, building heights and massing will be presented together with a justification for selection of the final design. This section of the ES will describe the changes to the design from the consented scheme.

5.3 The Proposed Development

In accordance with the EIA Regulations, the ES will include a description of the proposed Development as defined by the planning application drawings and other documents submitted for approval. Owing to the outline nature of the planning application, the Development will be defined by a series of design parameters which will set the framework for the next stage of detailed design. The outline planning application will therefore fix elements of the Development to a sufficient degree in order to undertake a robust EIA which will allow the determination of the Development's "...likely significant environmental effects...".

At this stage, it is envisaged that the Development parameters (and therefore the description of the Development within the ES) will include:

- The broad layout of the proposed building blocks;
- Maximum and minimum building heights;
- Maximum and minimum lateral building extents;
- The location of certain land uses across the Site;
- Maximum and minimum floor space for each land use proposed;
- The maximum and minimum number of residential units proposed;
- Means of vehicular access and parking arrangements;
- Maximum and minimum car parking spaces to be provided; and
- Pedestrian and cycle access and circulation.

Scale, layout, means of access, and landscaping and appearance will remain as ‘reserved matters’ at this stage and the development parameters (described on plans in a written description) will be supplemented with indicative information as part of the outline planning application.

The ES will also include an outline surface water drainage strategy and consideration of the proposed utility supply and capacity. In addition, the ES will also include details of the energy strategy for the Site in accordance with RBC requirements. It is important to note that the outline planning application will be supported by a standalone Energy Strategy and Sustainability Statement. The description of the Development will therefore include a summary of both these documents.

The description of the Development as presented in the ES, together with the planning application drawings, will be what is assessed in all technical chapters of the ES.

5.4 Development Programme and Construction

The approximate demolition and construction programme will require careful programming and, in particular, phasing allowing for:

- Comprehensive enabling works including commencement of utilities and service diversions;
- Remediation, decommissioning and demolition of all above ground structures and buildings;
- Groundwork’s such as piling and foundation works;
- Construction of the proposed building blocks;
- Landscaping; and
- Building fit out.

The ES will outline the proposed demolition and construction programme and phasing and provide information on the main stages of the works, together with the likely duration of all activities. The ES will also consider the potential environmental effects associated with the works such as dust, noise, waste and potential pollutant emissions from vehicles and the broad mitigation measures proposed to offset any adverse demolition and construction effects.

Each technical chapter of the ES will give detailed consideration to potentially significant demolition and construction effects specific to the environmental topic area being assessed.

5.5 Socio Economics

5.5.1 Key Issues

The Development includes the provision of office, residential and retail uses. Key issues therefore include:

- Temporary and long-term employment opportunities;
- Provision of new homes and demand on education facilities, primary healthcare facilities and public open space; and
- The potential effect of additional retail and office units and the overall contribution of the Development to the economic objectives of RBC.

5.5.2 Potential Effects

The Development is envisaged to create a range of social and economic effects, some of which will be temporary (such as employment created during the demolition and construction works) and largely of a local scale, whilst others will be long-term and permanent.

In accordance with the key issues outlined above, the socio-economic assessment will examine the following potential effects:

- Generation of temporary demolition and construction employment;
- Creation of new direct and indirect, long-term employment opportunities once the Development is completed and operational;
- Local expenditure generated from residents and employees and contribution to the local economy;
- The provision of new homes and contribution towards local housing targets and requirements;
- Increased demand on education facilities, primary healthcare services and public open space; and
- Improved perception of public safety on the Site.

5.5.3 Approach and Methodology

Quod would undertake a socio-economic assessment of the Development. The proposed methodology includes:

- A consideration of the local and regional social and economic policies;
- Identification of the socio-economic baseline conditions at, and surrounding the Site, using established Government statistical sources such as the Census, official labour market statistics, information from the Applicant;
- Identification and assessment of the likely significant effects using well established, proprietary models, developed specifically for similar major developments to assess construction employment, together with population, employment and spending associated with the completed Development; and
- The preparation of mitigation measures, where appropriate.

5.6 Townscape, Heritage and Visual Impact Assessment

5.6.1 Key Issues

The Site consists of low quality spaces and buildings which largely date to the 1970s. Some of the buildings are unoccupied and in poor condition and none are of architectural or historic merit.

The Site has an important location just south of Reading Mainline Station and just north of the main shopping area. Building heights in the area vary from three to seventeen storeys and the townscape character of buildings close to the Site is largely of low value, although includes some historic buildings which are listed.

Pedestrian routes are restricted and uninviting and pedestrian movement is therefore largely concentrated on the peripheries of the Site.

In the close locality, the Site is most visible from the north when arriving by train. Views from the south and into the Site are restricted by the topography of the area. In the wider area, the Site can be seen from open spaces and elevated vantage points.

The Site contains no listed buildings and is not designated as a conservation area. However, Grade II listed 39 Friar Street adjoins the Site.

There are also a number of listed buildings in the locality of the Site as set out in Table 2. The nearest conservation area, Market Place/ London Street Conservation Area, is located 0.7km east and south west of the Site.

5.6.2 Potential Effects

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

In addition, the provision of new high quality buildings, pedestrian routes and public spaces has the potential to positively alter the existing setting of listed buildings and conservation areas in the vicinity of the Site and thereby to enhance the significance of these designated heritage assets.

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

- Temporary effects of demolition and construction works upon the character and quality of the local townscape and setting of designated heritage assets in the area;
- Permanent changes to the character and quality of development on Site and, thereby, to the local townscape;
- Permanent changes to the character and quality of local, mid and distant views;
- Permanent changes to the setting of designated heritage assets (primarily listed buildings and conservation areas) in the local and wider area; and
- Future changes to the character and quality of the townscape, views and settings of designated heritage assets that are likely to occur as a result of consented cumulative development in the area.

5.6.3 Approach and Methodology

In order to assess the nature and quality of these potential effects, the THVIA will:

- appraise the history and existing quality and character of the townscape, views and settings of designated heritage assets through desk-based analysis and field study;
- identify and make reference to relevant local, regional and national planning policy and guidance;
- identify sensitive and representative views, in agreement with RBC, to enable an assessment of the Proposed Development in the round;
- co-ordinate the production of accurate verified representations (wirelines) of the Proposed Development in the views in conjunction with a professional visualisation company;

- assess potential effects on the views as a result of the Proposed Development;
- evaluate changes to the character and quality of the townscape on Site and in the surrounding area through consideration of the views;
- assess potential effects on the significance of designated heritage assets resulting from changes to their settings; and
- assess potential effects on the future baseline through the insertion of consented schemes in the views (wirelines) and consideration of their cumulative effects on the townscape, on views and on the settings of designated heritage assets.

The assessment will be undertaken with reference to the following key guidance:

- Guidelines for Landscape and Visual Impact Assessment (2002)^v, produced jointly by the Institute of Environmental Assessment (now IEMA) and the Landscape Institute; and
- Planning Policy Statement 5: Planning Policy Statement 5: Planning for the Historic Environment^{vi}.
- Historic Environment Planning Practice Guide to PPS5 (March 2010)^{vii}
- The setting of heritage assets: English Heritage Guidance (May 2011)^{viii}
- By Design. Urban design in the planning system: towards better practice (CABE, April 2000)^{ix}
- Guidance on Tall Buildings (EH/CABE, July 2007)^x

5.7 Archaeology

5.7.1 Key Issues

The southern portion of the Site south of Garrard Street is located within an Area of Archaeological Potential but contains no scheduled monuments or structures. A desk-based Archaeological Assessment was undertaken by Foundations Archaeology in August 2003 and updated in 2007 to establish the archaeological potential of the Site. There are no known records of archaeological evidence within the Site. However, records of archaeological evidence have been recorded in the immediate vicinity. The majority of these records are immediately adjacent to the south of the Site along Friar Street, hence the designation in this area.

Given the previous records and the existing designated area, the Site is considered to have a low-moderate potential for archaeological deposits.

None of the existing buildings or structures within the Site are listed or have special architectural or historic interest. However, as noted previously, the Site is adjacent to 39 Friar Street, a Grade II Listed Building.

5.7.2 Potential Effects

Potential effects on archaeology primarily relate to the possibility for the disturbance, removal or destruction of archaeological deposits during demolition and construction activities on the Site. The scale of the Development suggests that any archaeological remains present within the study area would not survive the redevelopment.

Given the proximity of the Site to 39 Friar Street, there is also potential for direct effects on this listed building during demolition of the existing buildings on Site and during construction.

As set out above, the effects on the setting of built heritage will be considered in the Townscape, Heritage and Visual Impact Assessment.

5.7.3 Approach and Methodology

The 2007 desk-based assessment will be revised to include any recent records and updated in line with PPS 5. The assessment will include:

- A review of updated policy considerations and legislative framework and requirements;
- An historical analysis of the Site and its surroundings including a review of historical maps, documents, plans, historic environment records and previous archaeological excavations near the Site to determine the potential for archaeological remains and their likely significance; and
- Assessment and evaluation of the archaeological and built heritage features of the surrounding area through desk-based analysis and field study;
- Assessment of effects of the Development on potential archaeological resources; and
- Proposed measures to mitigate potential effects which are likely to include analysis of the site investigation data in the first instance and recommendations for a phased programme of archaeological evaluation and mitigation prior to and during demolition and construction works.

The findings of the Archaeological Desk-Based Assessment will be summarised in the ES and the desk assessment appended to the ES.

5.8 Transportation and Access

5.8.1 Key Issues

Due to the location of the Site in central Reading adjacent to the Station Interchange (including bus and taxi stops, limited short stay parking and cycle parking, the Site is well served by public transport and is also easily accessible by foot, cycle and road. This area is currently undergoing redevelopment as part of the Reading Station Area redevelopment proposals. Once complete, there will be a new pedestrian area immediately to the north of Station Hill, with an improved rail station in terms of rail capacity and station facilities.

Public Transport

The railway station and the adjacent bus station form a transport interchange of regional importance used by trains, buses, coaches, taxis, cyclists, cars and pedestrians. The use of these facilities (as improved) is expected to rise over the next 15 years and RBC has stated an intention to support this growth. However, the growth of bus services is somewhat constrained by congestion and the presence of the railway forming a natural barrier to the north.

Pedestrian

Although pedestrian access to and from the Site is very good, current access through the Site is currently very limited. The main access through the Site is Garrard Street which cuts horizontally through the centre of the Site and also, an informal pedestrian route using the former bus station located in the west of the Site. The Site therefore currently acts as a barrier between the existing retail and leisure activities on Friar Street and the main public transport interchange at Reading Mainline Station.

Bicycle

Central Reading currently has a good level of connectivity to the south of the Site through a combination of quiet roads, cycle paths and cycle lanes within the carriageway.

Road

The existing multi-storey car-park provides 952 long stay spaces in close proximity to the railway station. As part of the proposals this will be adapted to provide 856 car parking spaces (a net reduction of circa 96 spaces compared). Due to the wide choice of public transport available to the residents, shop customers and employees, the generation of private vehicle traffic from the Development is anticipated to be limited.

Development objectives relating to transport issues include: improving access to and from the Site by all modes, improving pedestrian linkages and integrating the Site into the local area, and improving the local streetscape in conjunction with RBC.

Within the wider context of the Development, there are also a number of area-wide transport issues, which have to be taken into consideration. These include:

- Congestion;
- The redevelopment of the Station Interchange as currently under construction;
- Proposals by Network Rail to develop the railway station;
- Bus capacity;
- Encouraging the use of more non-private car based transport; and
- Accommodating for the anticipated growth in local transport demand.

5.8.2 Potential Effects

The EIA will address the following anticipated potential transportation and access related effects:

- Temporary disruption to pedestrians, cyclists and road vehicle users during the demolition and construction works;
- Temporary disruption to the servicing and access facilities of nearby properties during the demolition and construction works;
- Temporary generation of heavy goods vehicle (HGV) movements during the demolition and construction works; and
- Effects of the completed and operational Development upon:
 - Traffic flows and capacities of the local highway network;
 - Public transport capacity and accessibility;
 - Pedestrian cycle journeys, accessibility and facilities;
 - Parking supply and demand; and
 - Servicing arrangements of the Site and nearby properties.

5.8.3 Approach and Methodology

The outline planning application will be accompanied by a comprehensive Transport Assessment (TA) undertaken by the Applicant's transport consultants, Peter Brett Associates (PBA). This will be fully scoped with RBC. The TA will include an assessment of the potential effects as outlined above, using traffic models and data agreed with RBC. The TA will also provide justification for the proposed parking strategy.

The ES will summarise the results of the TA in accordance with the requirements of the EIA Regulations. As such, the assessment will identify all likely significant effects, provide an assessment of the environmental effects and a description of appropriate mitigation such as the formulation and

implementation of a Travel Plan. As a minimum, the assessment is likely to include the following main elements:

- Assessment of the proposals against the policy objectives laid down in local and national planning guidance including a comparison of car and cycle parking provision with RBC's standards;
- Evaluation of the accessibility of the Site by public transport;
- A description of the base networks in and around the Site, including information on base traffic flows;
- Prediction of the number of trips generated during the demolition/construction and completed Development stages including number of person trips and number and size of vehicles required to service the scheme;
- Assignment of vehicular trips to the road network;
- Identification of the junctions and links on the local road network that will be affected by the Development related traffic, including a quantification of the reserve capacity, queues and delays at critical junctions;
- An assessment of vehicular access and circulation in and around the Site; and
- An assessment of pedestrian and cyclist access, movement and safety through the Site and the surrounding area and a description of how they are affected by the Development.

5.9 Air Quality

5.9.1 Key Issues

The Environment Act 1995^{xi} provides a system of Local Air Quality Management (LAQM) under which local authorities are required to review and assess the future quality of the air in their area by way of a staged process.

RBC have identified that the main contributor to air pollution in the RBC area is road transport. RBC's Environmental Protection Team has monitored air quality using passive diffusion tubes and continuous monitoring for several years. The closest is located on Caversham Road. This is a roadside location that monitors levels of both nitrogen dioxide (NO₂) and small particulates (PM₁₀).

As a result of the elevated levels of nitrogen dioxide (NO₂) in 2009 RBC declared a single AQMA order covering a large proportion of the town. The declaration is due to potential exceedances of both the long-term annual mean NO₂ objective and the short-term hourly objective. The revised AQMA covers the central area of Reading, Caversham Centre and follows the main radial road and rail routes through the borough. It replaces six smaller fragmented areas which were previously declared in 2006.

It is anticipated that there could be the potential for air quality issues associated with the construction works. This would be in relation to a temporary increase in HGVs on the local road network, operation of plant and the potential for dust generation via physical construction processes.

The Development includes the retention of the existing NCP car-park, which is currently under-utilised. The Development could therefore have potential to increase traffic generation and alter traffic flows and thereby having potential to affect local air quality.

Pollutant concentrations can be elevated alongside rail lines with a large number of diesel locomotive movements. However, in accordance with DEFRA's Technical Guidance Note LAQM.TG(09)^{xii} on Local Air Quality Management since the Site boundary is over 30m from the closest track at Reading Mainline Station pollutants from diesel locomotives are not anticipated to be an issue requiring consideration as part of the EIA.

5.9.2 Potential Effects

Potential effects to be addressed by the ES are as follows:

- Effects on local air quality and sensitive receptors of dust emissions during demolition and construction activities;
- Short term increases in road traffic related pollutants due to increased congestion of Station Approach, Station Road, Greyfriars Road, Garrard Street and Friar Street during construction;
- Long-term effects, on local air quality particularly in relation to NO₂ levels and the AQMA, due to emissions from both private and public vehicles and building services plant associated with the operation of the completed Development; and
- Internal air quality conditions for future residents within the Development.

5.9.3 Approach and Methodology

The air quality assessments will be undertaken by Waterman and will include:

- Liaison with RBC regarding the various assumptions and scenarios to be modelled and to obtain the latest available monitoring data;
- An identification of potentially sensitive receptor locations, both existing and proposed, that could be affected by changes in air quality that result from the demolition/construction and operation of the Development;
- A qualitative assessment of air quality effects from construction works;
- An assessment of the effects of the operational Development from traffic and heating plant and ventilation systems using the ADMS-Roads atmospheric dispersion model. This would use traffic data in an appropriate format derived from the Transport Assessment;
- Comparison of the predicted pollutant concentration with the Air Quality Strategy Objectives;
- Assessment of the significance of effects; and
- Formulation of appropriate mitigation measures where necessary, in particular measures for controlling dust and other emissions during demolition and construction with reference to the Building Research Establishment (BRE) guidance 'Controlling Particles, Vapour and Noise Pollution from Construction Sites' (2003)^{xiii}
- Assessment of residual effects.

5.10 Noise and Vibration

5.10.1 Key Issues

The area surrounding the Site comprises a mix of uses that would to varying degrees be potentially sensitive to noise and/or vibration effects during the demolition of existing buildings on-site and the construction of the Development. The identification and implementation of measures to minimise and control noise and vibration effects on the surrounding sensitive land uses during the construction of the Development and once it is completed is therefore important.

The Site is surrounded by roads, with Reading Mainline Station to the north. As residential accommodation is proposed, it is necessary to ensure that the Site is appropriate for such a land use.

Previous noise and vibration surveys on the Site found that dominant noise and vibration sources are road traffic and rail related. An updated survey was undertaken in December 2011. Again dominant noise was primarily road and rail traffic, with intermittent construction noise associated with the transport

improvements on Station Hill. The updated survey indicates that noise conditions at the boundaries of the Site correspond with Noise Exposure Category (NEC) C.

The only potential source of appreciable environmental vibration in the vicinity of the Site is associated with Reading Mainline Station, located approximately 50m to the north of the Site. However, it is very unusual for rail related vibration to be perceptible 50m or more from railway tracks. Furthermore, as the trains are generally moving slowly into or out of Reading Station, they produce relatively low levels of vibration and previous monitoring concluded that vibration levels in the vicinity of the Site would be imperceptible.

5.10.2 Potential Effects

Potential noise and vibration issues that will be addressed as part of the EIA are as follows:

- Noise and/or vibration effects to nearby buildings and noise sensitive receptors from the demolition of existing buildings, piling and ground excavation works and the subsequent construction of the Development;
- Noise and vibration effects to existing and future residents in the area from vehicle movements generated during the construction of the scheme and once the Development is completed;
- Suitability of the site for residential development based upon existing and future noise sources;
- The effect of building services plant on existing and future noise-sensitive receptors on and surrounding the Site and the routine control of noise from new building plant;
- The effect of noise as a result of noise breakout from proposed leisure uses on existing and future noise-sensitive receptors; and
- Noise generated as a result of service deliveries and collections from the proposed areas of retail and leisure use on existing and future noise-sensitive receptors on and surrounding the Site.

5.10.3 Approach and Methodology

The assessment work will be undertaken by Waterman Energy, Environment and Design and will include:

- The identification of potentially sensitive noise and vibration receptors, both existing and proposed;
- Baseline noise and vibration measurements taken on-site, including long term unattended monitoring (completed in December 2011);
- Estimation of noise generated during each of the main phases of demolition and construction, using the methodology set out in British Standard (BS) BS:5228^{xiv}, and the associated effects on surrounding sensitive receptors;
- Suitability of the Site for residential use with reference to quantitative criteria outlined in PPG24^{xv}, BS:8233^{xvi}, and the World Health Organisation (WHO) guidelines^{xvii} and an outline of any mitigation measures, to ensure there are no significant adverse effects on future users;
- Estimation of changes in road traffic noise levels attributable to the scheme on the basis of the publication Calculation of Road Traffic Noise (CRTN). Calculations will be based on the results of the Transport Assessment Report, for example existing flows, future traffic flows and proportion of HGVs;
- Assessment of noise generated as a result of service deliveries and collections from the proposed site in line with BS8233, WHO 'Guidelines for Community Noise and other relevant guidance';
- Estimation of the effect on noise sensitive receptors from noise generated by building services, using the methodology set out in BS:4142; and
- Formulation of proposals and criteria for the mitigation of identified noise effects, if required.

All relevant technical data will be appended to the ES.

5.11 Ground Conditions

5.11.1 Key Issues

Geological maps for the area suggest that the geology beneath the Site comprises Alluvium, underlain by Valley Gravel, over Upper Chalk. A cover of Made Ground is anticipated. The Valley Gravel and the Upper Chalk are classified as Principal (Major) Aquifers with high soil leaching potential.

To date, no intrusive site investigations have been undertaken. As such, the potential presence of pollutants in the underlying soil and groundwater cannot be quantified. However, the Site has been used for a range of activities, including timber yard, factory, car-park, bus station garages and a coal yard. In addition a number of industrial uses were present surrounding the Site. As such, there is some potential for some contamination to be present. Whilst the existing layer of hardstanding and low permeability Alluvium inhibits the vertical migration of any existing contamination to the aquifers pathways could be created during construction through new piles.

An asbestos survey was carried out by RPS in October 2004. This survey found a wide range of different asbestos containing materials within the Site buildings. This will require removal before demolition works on the buildings is carried out. This work must comply with health and safety requirements.

5.11.2 Potential Effects

Potential effects to be addressed by the EIA include:

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

5.11.3 Approach and Methodology

The assessment will be undertaken by Waterman EED and will include:

- An update of the existing Preliminary Environmental Risk Assessment to include a review of recent available Regulatory Authority records for the Site including discussions with RBC (Planning, Environmental Health and Building Control Departments), the EA and other relevant regulatory bodies;
- The specification of measures to protect Site workers, the general public and the groundwater reserves from contamination throughout the duration of redevelopment works;
- The formulation of procedures for the appropriate handling, licensing and disposal of contaminated and hazardous materials that are removed from the Site (if necessary); and
- Liaison with the project team in relation to the incorporation of pollution prevention measures within the design of the completed Development.

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

5.12 Flood Risk and Surface Water Drainage

5.12.1 Key Issues

There are no surface water features on the Site. The closest watercourse to the Site is that of the River Thames (located approximately 420m north-east of the Site) and the River Kennet (located approximately 480m to the south-east of the Site). The EA's indicative floodplain map shows that the Site does not lie within an area of potential risk from river flooding, however, the fluvial floodplain borders the western boundary of the Site. Given that the Site is greater than 1ha, a Flood Risk Assessment (FRA) will be required to accompany the planning application which would focus on the management of surface water run-off and sustainable drainage systems to ensure the Development does not increase the risk of flooding elsewhere.

5.12.2 Potential Effects

Potential effects to be addressed by the EIA include:

- Effects upon surface water drainage run-off rates and the potential risks associated with all types of flooding;
- Effects of below ground works and structural loadings upon groundwater; and
- Effects of the completed Development's increased population upon foul water drainage capacity.

5.12.3 Approach and Methodology

The FRA for the Development will be undertaken by Waterman Transport and Development. This will include:

- A desk-based review of relevant flooding history for the Site, together with any other additional information from sources obtained from RBC, the EA and Thames Water;
- Agreement of the assessment methodology with RBC and the EA;
- Completion of an FRA in accordance with Planning Policy Statement 25: Development and Flood Risk (PPS25)^{xviii} and relevant EA guidance. The completed and operational Development run-off rates will be agreed with the EA and the FRA will include the specification of a surface water drainage strategy for the Site which will be adopted as part of the Development design. This will give due consideration to the use of Sustainable Urban Drainage Systems (SuDS);
- Liaison with the project team in relation to the incorporation of flood risk measures within the inherent Development design.

The ES will summarise the FRA, and will also consider the proposed demolition and construction effects of construction on groundwater and surface water quality and groundwater flow. The Applicants infrastructure engineers (Hoare Lea) will liaise with Thames Water in relation to the demand for foul drainage and potable water and any required mitigation measures and an outline of the demand and these measures will be set out in the ES. The FRA will be appended to the ES.

5.13 Ecology

5.13.1 Key Issues

The Site does not contain any areas designated in terms of its ecology, contains no formal green space allocation and does not provide suitable habitat for bats. The Site is typically urban in nature and presents limited opportunities for biodiversity in its current state.

A Phase 1 Habitat survey was undertaken in August 2011. This identified that the Site was of low ecological value with negligible potential for protected species. A survey undertaken in 2005 identified two adult black redstarts and at least two recently fledged juveniles, on the roof of a one storey extension approximately 100m from the Site boundary. However, no subsequent surveys have identified this species and the existing buildings on the Site have a negligible potential to support this species. The only bird species identified on the Site during the 2011 survey was feral pigeon.

None of the buildings on the Site were considered to be suitable for roosting bats and given the lack of vegetation the Site was considered to have negligible potential for bats.

5.13.2 Potential Effects

Potential ecological effects may relate to both the demolition and construction of the Development and the site once development is completed. Possible construction phase impacts may include:

- The loss of existing (low value) ruderal plant communities on the Site;
- The loss of potential bird nesting sites; and
- The creation of new habitat which could enhance the ecological value of the Site.

5.13.3 Approach and Methodology

The assessment will be undertaken by Waterman EED and will comprise the following:

- A walkover survey of the Site (which has already been completed in August 2011) to obtain up-to-date information on habitats and plant species present and to confirm the ecological value of the Site;
- A review of the ecological information obtained for the previous assessments of the SH2 Consented Scheme. Assessment of the potential effects to the ecology on-site during the demolition and construction works and once the Development is completed; and
- Identification of measures, where appropriate, to mitigate potential adverse effects and enhance the ecological value of the Site.

5.14 Wind

5.14.1 Key Issues

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

5.14.2 Potential Effects

The wind assessment will focus on the relative safety and comfort of Site users on completion of the Development. The following specific potential effects have been identified:

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

5.14.3 Approach and Methodology

There are widely accepted methodologies for the assessment of wind impacts of new developments. The Lawson Comfort Criteria^{xix} are a 'standard' against which the wind conditions can be compared. The Criteria define different pedestrian activities from sitting, which require low wind speeds in order for people to be 'comfortable', through to more transient activities such as walking, for which pedestrians will tolerate stronger wind conditions and still remain 'comfortable'.

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

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

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

5.15 Daylight, Sunlight and Overshadowing

5.15.1 Key Issues

The changes in building massing, layout and heights due to the Development could result in changes in the amount of daylight, sunlight and overshadowing experienced by occupants of adjacent buildings. Furthermore, the Development contains a range of uses which will require that adequate daylight and sunlight is available for future users. In accordance with BRE guidance, greater daylight and sunlight protection should be afforded to windows that serve residential dwellings and, in particular, principal habitable rooms such as living rooms and family kitchens. The Site is primarily surrounded by commercial properties and infrastructure. However, the following residential properties are located in proximity to the Site:

- Projection East and Icon House new apartment blocks along Merchants Place to the east of the Site;
- 5 – 11 (odd numbers) Vachel Road
- 9 - 17 (odd numbers) Stanshawe Road
- Houses along Tudor Road (vacant and due to be replaced by a new residential scheme);

- Residential unit above the Malt House PH, 53 Greyfriars Road;
- Residential unit above the Gateway PH, 31-33 Greyfriars Road;
- Residential unit above ground floor of 106-108 Friar Street;
- Residential unit above ground floor of 126 Friar Street; and
- Residential unit above ground floor of 32-34 Friar Street.
- Residential unit above ground floor of 25b Friar Street

The design of the Development would also need to ensure that the internal daylight / sunlight conditions for new residents would be acceptable.

No open space amenity areas are currently present within or immediately surrounding the Site.

There are no major intersections or signals present within or immediately surrounding the Site that would necessitate a Solar Glare analysis.

5.15.2 Potential Effects

The following potential effects with respect to daylight, sunlight and overshadowing could result from the Development:

- Changes to the duration and quality of daylight and sunlight as well as the incidence and duration of overshadowing experienced by occupants of the residential properties surrounding the Site;
- Changes to the amount of permanent overshadowing of proposed public amenity spaces within and surrounding the Site; and
- The internal daylight and sunlight conditions within the residential elements of the proposed Development.

5.15.3 Approach and Methodology

Gordon Ingram Associates (GIA), a specialist daylight and sunlight consultancy will undertake an assessment of the Development with respect to the above effects and will review the design as it progresses, to 'design-out' any negative effects where possible.

The daylight, sunlight and overshadowing assessment will be based upon Building Research Establishment (BRE) guidance, 'Site Layout Planning for Daylight and Sunlight: A Good Practice Guide, 2011^{xx}'. Daylight and sunlight assessments of residential properties that could potentially be affected will be undertaken, using a scaled three-dimensional model of the Development proposals.

The results will be evaluated with reference to BRE guidance and relevant British Standards using three sets of analysis for Daylight:

- VSC (Vertical Sky Component);
 - NSL (No Sky Line);
 - ADF (Average Daylight Factor).
- Sunlight will be assessed using APSH (Annual Probable Sunlight Hours).

Transient Overshadowing studies, will be carried out for the Summer and Winter Solstices (June 21 and December 21) and the Spring Equinox (March 21)

All results will be assessed in the context of the BRE 2011 guidance.

The technical analysis of each assessment will be appended to the ES.

5.16 Cumulative Effects

5.16.1 Key Issues

The EIA Regulations require that, in assessing the effects of a particular development proposal, consideration is also given to the cumulative effects that may arise from the proposal in conjunction with other development proposals in the vicinity. Cumulative effects are those effects of a development that may interact in an additive or subtractive manner with the effects of other committed developments that are not currently in existence, but may be by the time the development is implemented.

5.16.2 Potential Effects

Potential cumulative effects can be categorised into two types:

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

5.16.3 Approach and Methodology

Potential Type 1 effects for the Development will be assessed in line with the indicative construction programme to be provided by the Applicant. The potential for cumulative effects during demolition and construction will be assessed. These impacts are often appropriately mitigated by relevant environmental legislation and best practice construction techniques.

A set of specific criteria have been set in order to determine the schemes considered to be 'reasonably foreseeable' to be included within the Type 2 cumulative effects assessment. The criteria are:

- Schemes with planning consent within 1km of the Site which have been granted planning permission where there is a net change in floorspace above 10,000m² and which are considered to have the potential to result in some cumulative effects;
- Schemes with planning consent with a lesser uplift within 200m would be included where these may give rise to significant effects or where these introduce new sensitive receptors;
- Schemes with planning consent further afield where they have the potential to give rise to significant cumulative effects (e.g. tall buildings); and
- Schemes within 200m of the Site which do not have planning permission but where a planning application is expected to be submitted prior to the determination of the Development

A review of planning applications has been undertaken to identify schemes which meet the above criteria and the following schemes are proposed for inclusion in the cumulative assessment:

- Former Sorting Office Caversham Road/ Vastern Road - Outline planning application for business uses (use class B1), residential accommodation (C3), Hotel (C1), retail floor space (A1), food and drink uses (A3, A4 and A5), leisure uses (D2), and associated car parking, open space and landscaping, highways, access and associated works (Application Reference: 11/00276/OUT);
- 5 - 21 Tudor Road - Demolition of existing dwellings and erection of 11 x 1-bed and 18 x 2-bed apartments (Application Reference 11/00625/FUL);
- 29-35 Station Road, Demolition of existing building and the erection of a 22 storey building comprising 103 residential units, two ground floor Class A1 retail and/or Class A3 restaurant units, with a

basement level providing car/cycle parking spaces and refuse storage (Application Reference 04/01395/FUL and 10/00902/EXT)

- Garrard House, 30 Garrard Street, change of use from office (B1) to a 94-bedroom apart hotel (C1), with spa (D2) at basement and cafe (A3) at ground floor level, involving the formation of an additional two storey roof extension (Application Reference 07/01393/FUL and 11/00590/EXT);
- 21 Caversham Road, Demolition of existing building and erection of new building housing retail/office space on the ground floor and 9 x 1 bedroom units above storage (Application Reference 10/00032/FUL)
- 35 - 38 Friar Street, Demolition of existing four storey building (Class A1 retail use on ground floor and Class B1 office use on upper floors) and erection of a seven storey building with Class A1/A2/A3 use on ground floor, Class D2 leisure in basement, and 83 Class C1 hotel use serviced apartments on the upper floors (Application Reference 07/01686/FUL); and
- Thames Tower, for which an application is currently being prepared.

Whilst the planning application for the following is approved, we intend to exclude this as it is no longer considered 'reasonable foreseeable' since RBC are now seeking alternative accommodation.

- Land At Corner Of St. Mary's Butts Hosier Street, Construction of part 4, part 5 storey building (plus basement) to provide a new Civic Headquarters Building for Reading Borough Council, post office and retail units, together with alterations to the existing car park, highway and parking and landscaping at St Mary's Butts to create a new public square.

For schemes where planning consent has not yet been granted, the assessment would be based on the best available information of the proposals. In respect of the pending Thames Tower proposals co-ordination is taking place to ensure that an exchange of information is made such that the EIA for the Development considers the latest proposals for the Thames Tower.

5.17 Defining the Significance of Environmental Effects

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

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

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

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

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

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

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

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

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

Minor significance (either beneficial or adverse):	Slight, very short or highly localised effect;
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Moderate significance (either beneficial or adverse):	Limited effect (by extent, duration or magnitude) which may be considered significant; and
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Substantial significance (either beneficial or adverse):	Considerable effect (by extent, duration or magnitude) of more than local significance or in breach of recognised acceptability, legislation, policy or standards.
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6. Proposed Structure of the Environmental Statement

The proposed structure of the ES is set out below, based on the EIA Regulations, current best practice and the scoping analysis described previously.

The ES will comprise the following:

- Volume 1: Environmental Statement – Main Text
- Volume 2: Townscape, Heritage and Visual Assessment
- Volume 3: Figures
- Volume 4: Technical Appendices
- Non-Technical Summary

Environmental Statement: Volume 1: Main Text

Volume 1 of the ES will comprise a number of technical chapters. The proposed content of the ES, including the corresponding chapter, technical author(s) and/or contributor(s), are set out below in Table 3.

Table 3: ES Chapters and the EIA Project Team

ES Chapter	Author
1. Introduction	Waterman EED
2. EIA Methodology and Consultation	Waterman EED
3. Site Description and Land Uses	Waterman EED
4. Description of the Development	Waterman EED
5. Alternatives and Design Evolution	Waterman EED
6. Development Programme, Demolition and Construction	Waterman EED
7. Socio-Economics	Quod
8. Archaeology and Heritage	Foundations Archaeology
9. Transportation and Access	Peter Brett Associates
10. Air Quality	Waterman EED
11. Noise and Vibration	Waterman EED
12. Ground Conditions	Waterman EED
13. Water Resources	Waterman Transport and Development Limited
14. Ecology	Waterman EED
15. Wind	RWDI
16. Daylight, Sunlight and Overshadowing	Gordon Ingram Associates

ES Chapter	Author
17. Cumulative Effects	Waterman EED
18. Summary of Residual Effects	Waterman EED

Environmental Statement: Volume 2: Townscape, Heritage and Visual Assessment

This volume will provide will be an A3 volume containing both text and supporting visually verified images of the Development.

Environmental Statement: Volume 3: Figures

This volume will comprise figures to support the main text.

Environmental Statement: Volume 4: Technical Appendices

In support of the technical chapters listed above in Volume 1 of the ES, a number of technical reports will be provided as Technical Appendices. These are likely to include the following:

- Socio-economic baseline data;
- Visualisations and Visual Assessment;
- Archaeological Desk Study;
- Transport Assessment;
- Noise Monitoring Data;
- Air Quality Modelling Data
- Preliminary Environmental Risk Assessment;
- Flood Risk Assessment
- Ecological Survey Report;
- Wind Assessment; and
- Daylight, Sunlight and Overshadowing Assessment.

Non-Technical Summary

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

6.1 Structure of the Technical Chapters

Through the EIA process, the likely significant environmental effects of the Development will be assessed. Each environmental issue will be assigned a separate chapter in the ES, and within each of these chapters the assessment will be structured in the following way:

Introduction

The introduction will provide a brief summary of what is considered in the chapter and will state the author.

Planning Policy Context

This section will include a short summary of national, regional and local policies that are directly relevant to the particular environmental issue and assessment. Legislation will also be identified where applicable.

Assessment Methodology and Significance Criteria

The methods used in undertaking the technical study, together with an explanation of the approach to defining the significance of the potential effects, will be outlined in this section with reference to published standard guidelines, best practice and relevant significance criteria.

Baseline Conditions

In order to assess the effects of the Development, this section will determine the environmental conditions that currently exist on the Site, in the absence of redevelopment. These are known as baseline conditions.

This section will also outline the future baseline conditions following the completion of the Reading Mainline Station redevelopment which will be implemented prior to the operation of the Development.

Potential Effects

This section will identify the likely significant effects from the Development as proposed in the outline planning application and will consider the effects during demolition and construction, and once the Development is complete and operational.

Unless stated, the assessments will be undertaken against the future baseline following the completion of the redevelopment of Reading Mainline Station.

Mitigation

This section will set out the mitigation measures proposed. One of the main aims of the EIA is to develop mitigation measures to prevent, reduce and where possible, offset any significant adverse effects of a development. An iterative approach will be adopted towards the design of the Development, which will evolve alongside the EIA process. This will enable many mitigation measures to be effectively designed into the Development, thereby reducing the need for further mitigation. Mitigation measures can relate to design, construction or the activities associated with completed Development.

Residual Effects

This section will identify the remaining residual effects of the Development, assuming implementation of the proposed mitigation measures, and will include an assessment of the significance of those effects in accordance with the criteria set out in the front end of each technical chapter.

Summary and Conclusions

This section will provide a brief summary of the chapter findings.



APPENDICES

Appendix A.

Figures

- Site Location Plan (Fig. 1)
- Existing Site and Surroundings (Fig. 2)
- Indicative Plan of Proposals (Fig. 3)