

St James Group Limited

**Former Royal Mail Sorting
Office, Twickenham**

EIA Scoping Report

Project Ref: 26503

Doc Ref: Revision 2

May 2012

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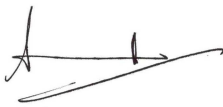
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Appendix B – Extract from EIA Regulations

Appendix C – Indicative ES Contents

1 Introduction

1.1 Project Background

1.1.1 This EIA Scoping Report has been prepared in respect of a forthcoming planning application to be submitted by St James Group Ltd for a proposed development known as the Former Royal Mail Sorting Office, Twickenham. The application relates to a mixed use development comprising predominantly residential, community, and food and beverage space.

1.1.2 The site is located next adjacent to London Road, close to Twickenham Railway Station, and between the railway and the River Crane.

1.2 Purpose of this Report

1.2.1 Due to the nature of the proposed development, St James intends to undertake an Environmental Impact Assessment (EIA) of the proposed development which will be documented in an Environmental Statement (ES). The ES, which will be prepared in compliance with the requirements of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (the EIA Regulations), will be submitted with the planning application.

1.2.2 Understanding the potential effects of the development on the environment is an integral part of the design process currently underway for the proposed development at the former Royal Mail Sorting Office, Twickenham. In light of the conclusion regarding the need for an EIA, this report documents the scoping exercise that has been undertaken to identify the nature and extent of the significant environmental issues potentially associated with the proposed development. Accordingly this report details how the environmental issues are being examined and how it is proposed that they are to be progressed as part of the EIA of the development. The aim is to ensure that the development has due regard for the environment, minimises adverse environmental effects, and takes advantage of opportunities for environmental enhancement.

1.2.3 This report provides information to key consultees regarding the proposals and sets out the intended scope of the EIA and content of the ES. On the basis of this report, St James Group Ltd therefore requests the London Borough of Richmond-upon-Thames's Scoping Opinion in accordance with Regulation 13 of the EIA regulations.

1.3 Study Team

1.3.1 The project team undertaking the EIA is as follows:

- CgMs: Archaeology;
- Foot Anstey: Daylight & Sunlight;

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- Peter Brett Associates LLP: EIA Coordination, Transport, Flood Risk, Noise & Vibration, Air Quality, Socio-Economics and Waste;
- RSK: Land & Water Quality; and
- The Ecology Consultancy: Ecology.

1.4 Report Structure

1.4.1 This report continues with the following:

- **Chapter 2** Environmental Setting;
- **Chapter 3** The Proposed Development;
- **Chapter 4** Planning Policy Context;
- **Chapter 5** Description of the EIA Process;
- **Chapter 6** Proposed Scope of the EIA
- **Chapter 7** Topics Included in EIA Scope;
- **Chapter 8** Topics Not Included in EIA Scope; and
- **Chapter 9** Summary & Next Steps

2 Environmental Setting

2.1 Location

- 2.1.1** The site is located approximately on Grid Reference TQ159737, and occupies an area of approximately 2.3 hectares. An Indicative Site Location Plan is provided in **Appendix A**, although it should be noted that planning application boundary will be clarified through the on-going design and consultation process.
- 2.1.2** The site is located on the Former Royal Mail Sorting Office, with London Road (A310) forming the eastern boundary and the railway and the River Crane the southern and northern boundaries respectively.
- 2.1.3** There is a small area of Metropolitan Open Land, which includes an Astro Turf sports pitch and outward bound facilities, between the central area of the site and the River Crane. The site excludes this Metropolitan Open Land and four terraced railway cottages (and adjacent disused railway substation) between the southern boundary and the railway line.
- 2.1.4** The site is less than 1km from both Twickenham town centre and the rugby stadiums.
- 2.1.5** Heatham House is located to the north of the River Crane close to the site's north eastern corner. This grade II listed building is occupied by youth centre.

2.2 Site Description

- 2.2.1** The eastern half of the site comprises of vacant sorting office buildings, which are one to two storey and generally in a dilapidated condition, and yards/car parks covered in hard standing. A line of mature trees separates the eastern section of the site from the River Crane.
- 2.2.2** The western half of the site comprises the Metropolitan Open Land, which is also designated as an Other Site of Nature Importance. There is no public access to this area which comprises dense scrub and woodland. The site does not form part of any statutory designated sites of nature conversation importance.
- 2.2.3** The site is accessed directly from London Road, on the elevated section over the railway. There is also a ramp adjacent to the road bridge which provides access to Brewery Lane and the railway cottages.
- 2.2.4** The River Crane is entirely confined with a concrete channel adjacent to the site and flows in an easterly direction prior to discharging into the River Thames approximately 2km to the north east. The online EA Flood Maps indicate that the site is located 'outside the extent of extreme flood'. The extent of the extreme flood is generally accepted to be equivalent to the extent of the 0.1% annual probability (1 in 1,000 year) flood, and according to Planning Policy Statement 25 (PPS25) land located outside this flood extent is classified as Flood Zone 1 (Low Probability of Flooding).

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- 2.2.5** The noise climate at the site is dominated by noise from the local road network and railway line, with noise also noticeable from planes associated with Heathrow airport.
- 2.2.6** The London Borough of Richmond-upon-Thames (LBRuT) has declared an Air Quality Management Area (AQMA) for the entire borough (therefore including the site) with particular emphasis placed on the emission of nitrogen dioxide and fine particulates.
- 2.2.7** Planning permission was granted on 30 March 2012 for the redevelopment of Twickenham Railway Station. This will entail a new ticket office and concourse, 115 residential units, 734m² of commercial space, car and cycle parking and a pedestrian route along the River Crane. The development will be in three blocks of two to seven storeys.

3 Proposed Development

- 3.1.1** The proposals will entail the comprehensive redevelopment of the former Sorting Office site and the retention of the Metropolitan Open Land within the site.
- 3.1.2** A residential-led mixed use development is proposed, which will provide a mix of houses and apartments (along with associated car parking) and commercial space.
- 3.1.3** It is expected that the major uses to be included within the development will include the following:
- Residential – from 80 to 115 units;
 - A3 use (Food & Beverage/Retail) - up to 3,000m²;
 - B1 (Business) up to 2,000m²; and
 - Community building potentially including D1 & D2 uses for community purposes.
- 3.1.4** It is anticipated that the apartments and commercial uses will be located in the eastern section of the site, within buildings between three and six storeys, with house located in the centre of the site.
- 3.1.5** A new footpath is proposed all the way through the site connecting London Road to the areas to the west of the site.
- 3.1.6** Sustainability will be an important consideration within the proposed development and the sustainability performance of the development will be documented in a Sustainability and Energy Statement to be submitted with the planning application. Other application documents will include Design and Access Statement, Planning Statement, Statement of Community Involvement, and a Transport Statement.
- 3.1.7** It is anticipated at this early stage that construction would take, subject to planning permission, approximately two years with potentially significant construction phase environmental effects being managed through a Construction Management Plan. St James is registered with the Considerate Constructors Scheme.

4 Planning Policy Content

4.1 Planning Policy

4.1.1 Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that where the development plan contains relevant policies, applications for development which are in accordance with the plans should be allowed unless material considerations indicate otherwise. The current Development Plan for the site comprises:

- London Plan 2011;
- LB Richmond-upon-Thames Core Strategy (adopted April 2009);
- LB Richmond-upon-Thames Unitary Development Plan (adopted March 2005) – Saved Policies (March 2008); and
- LB Richmond-upon-Thames Development Management Plan DPD (adopted November 2011).

4.1.2 The National Planning Policy Framework was published in March 2012. This provides the Coalition Government's overarching policy framework for planning in England and replaced the previous series of Planning Policy Guidance and Planning Policy Statements.

LB Richmond-upon-Thames Core Strategy (adopted April 2009)

4.1.3 The site falls outside the 'key shopping frontage' and Twickenham town centre. Paragraph 6.1.5 of the Core Strategy sets out that Richmond and Twickenham centres with their accessible locations and established range of services provide the most sustainable options for development in the Borough, especially office and retail provision and increased densities of housing.

4.1.4 Policy CP9 (Twickenham Town Centre) states that:

"Subject to CP 7, encourage higher density residential development including affordable and small units and car free development, in the town centre and tall buildings in the station area only"

4.1.5 Paragraph 6.1.7 focuses on Twickenham and sets out policy objectives to maximise the benefits from redevelopment opportunities, including the Post Office Sorting Office site. Opportunities should be taken to improve pedestrian and cycle links including new pedestrian routes along the Crane Valley and across the River to Ham.

4.1.6 Policy CP2(C) sets out that the Council will increase the use of renewable energy by requiring all new development to achieve a reduction in carbon dioxide emissions of 20% from on-site renewable energy generation unless it can be demonstrated that such provision is not feasible, and by promoting its use in existing development.

- 4.1.7** Policy CP7 states that all new development should recognise distinctive local character and contribute to creating places of a high architectural and urban design quality that are well used and valued.
- 4.1.8** Policy CP12 states that the Council will seek to improve the River Crane strategic corridor to provide an attractive open space with improvements to the biodiversity. Developments in and adjacent to the River Crane corridor will be expected to contribute to improving the environment and access, in line with planning guidance. The Council has developed the Crane Valley Planning Guidelines for the main area of potential change, which includes the Royal Mail Sorting Office.
- 4.1.9** Policy CP15 sets a baseline affordable housing target of 50% of all new units, with a tenure mix of 40% housing for social rent and 10% immediate housing, on sites capable of ten or more units gross.
- 4.1.10** Policy CP19 (A) states a diverse and strong local economy will be supported by retaining land in employment uses for business, industrial and storage. Furthermore, CP19 (D) sets out mixed use schemes will be required to retain the level of existing employment floorspace. However, the inclusion of residential use within mixed use schemes will not be appropriate where it would be incompatible with established employment uses on neighbouring sites.

LB Richmond-upon-Thames Unitary Development Plan (adopted March 2005) – Saved Policies (March 2008 incorporating updated Proposals Map April 2009)

- 4.1.11** The Royal Mail site is the subject of site specific policy in the form of ‘saved’ UDP policy T3 – although this excludes the open space land that comprises the western half of the site. The full policy text is as follows:

“Provide either education use (post 16) or a mix of uses to take advantage of public transport accessibility and to maximise benefits to the town centre. The established use of the site is for public service, including substantial employment, this means that priority should be given to public service/ employment uses particularly the need for facilities for post 16 education needs in the Borough or any uses that could be serviced by rail. The site has potential for a mixture of town centre uses and consideration could also be given to the potential for hotel, leisure and residential uses. Forty per cent of any residential element should be affordable housing; other housing should be developed at a high density with small units and without on-site parking. The site is not appropriate for retail uses which would draw trade from the designated frontages and lead to the elongation of the centre.”

- 4.1.12** Only where fairly and reasonably related to the proposed development, the proposals will allow for the provision of a riverside walk along the River Crane, to link to the existing River Crane Walk, and a link along the railway to the rugby stadia (see Proposal T17). Features of nature conservation importance should be preserved and enhanced.
- 4.1.13** Proposals should take a comprehensive approach, taking into account related town centre sites particularly Twickenham Railway Station (T17) and the Station Yard (T23), and the contribution of the proposal towards the area as a whole.

LB Richmond-upon-Thames Development Management Plan DPD (adopted November 2011)

4.1.14 The Development Management Plan ('DMP') was adopted in November 2011. Policy DM DC 3 (Taller Buildings) states that taller buildings will be inappropriate in all areas of the borough, except the identified areas within Twickenham and Richmond. This includes the Sorting Office site. Proposals for taller buildings within these areas will need to:

- Be well designed and to make a positive contribution towards the skyline and the surrounding area;
- Respect, preserve and enhance the borough's heritage assets, their significance and wider historic environment including The Royal Botanic Gardens Kew World Heritage Site, Listed Buildings, Registered Parks and Gardens, Conservation Areas, Buildings of Townscape Merit, their settings and views of local and strategic importance, including the view from Richmond Hill;
- Respect the local context and character and to be designed in a way that relates to the scale, height, mass, urban pattern and grain, materials, streetscape, open spaces and built form of an area, and the wider townscape, riverscape and landscape, including the impact on parking;
- Respect the amenity and privacy of nearby residential areas, including microclimate and overshadowing;
- Demonstrate a high level commitment to sustainable design and construction;
- Include a mix of uses, including functions that are accessible to the public, particularly at ground floor level (such as restaurants), in order to ensure successful integration into the surrounding area;
- Include safe, attractive, comfortable and accessible amenity/open spaces designed to support social interaction and engender a sense of place; and
- Buildings will require a full design justification based on a thorough townscape appraisal and historic area assessment, and will be evaluated using the criteria for evaluation identified in CABE/ English Heritage Guidance 2007 and local guidance.

4.1.15 The policy quotes the Twickenham (Supplementary Policy Document published with detailed design guidance) which states that:

"On the Sorting Office – buildings up to 4/5 storeys at the highest point and should step down towards the west end of the site to 3 storeys and 2/3 storeys towards Heatham House, whose setting should be conserved and enhanced;"

4.1.16 Finally, the policy advises that:

“Any buildings or features taller than the above will only be acceptable subject to a full design justification based on a comprehensive townscape appraisal and there being significant local community support for the public benefits of the overall scheme.”

4.2 Other Documentation

Twickenham Town Centre Area Action Plan (2012)

4.2.1 The Council are currently undertaking consultation on a Pre-Publication Twickenham Town Centre Area Action Plan. The AAP contains policy TW 3 regarding the site.

4.2.2 The following documents will also be pertinent to detailed scheme considerations:

- Crane Valley Planning Guidelines SPG (April 2005);
- Design Quality SPG (February, 2006);
- Sustainable Construction Checklist (August 2006, amended January 2009); and
- Twickenham Station and Surroundings SPD (adopted October 2010).

5 EIA Process

5.1 EIA Regulations

5.1.1 Procedures relating to the assessment of the environmental effects of development are described in the Town and Country Planning (Environmental Impact Assessment) Regulations 2011, known as the 'EIA Regulations'. These implement EC Directive 85/337/EEC, as amended, into domestic legislation. The initial Directive and its three amendments have been codified by Directive 2011/92/EU. The EIA Regulations set out the procedures for undertaking an EIA and the information which is required in an Environmental Statement (ES). An extract from the EIA Regulations, setting out the information required in an ES, is reproduced in **Appendix B**.

5.2 Screening

5.2.1 As stated in Chapter 1, St James Group Limited intends to undertake an EIA of the proposed development which will be documented in an ES in compliance with the requirements of the EIA Regulations

5.3 Scoping

5.3.1 The purpose of scoping is to identify the key issues relating to the proposed development – policy, economic and social as well as environmental - and to ensure that they are subject to the appropriate level of assessment, thereby providing a focus for the EIA.

5.3.2 It should be noted that this EIA Scoping Report encompasses the environmental effects of the construction and operation of the proposed development on the site and its locality as well as the potential effects and interactions with existing and committed development. The assessment process should be of sufficient depth to enable an adequate appreciation of how each of the issues listed may be affected by the development although some topics will be more important than others.

5.4 Consultation

5.4.1 The proposals are being developed as an iterative process of design, assessment and review. As a result, it is the intention that the proposals submitted for planning approval will incorporate measures designed to mitigate potentially adverse effects and enhance benefits wherever possible.

5.4.2 Consultation with relevant statutory and non-statutory bodies (including the Environment Agency, LBRuT, Transport for London and the local public) has informed this scoping stage and will be used through the course of the EIA and design process.

5.5 Assessment

5.5.1 In general terms the main stages in the EIA are as follows:

- Data Review – draw together and review available data;
- Scoping – identify significant issues, determine scope of EIA;
- Baseline Surveys – undertake baseline surveys and monitoring;
- Assessment and iteration – assess likely effects of development, evaluate alternatives, provide feedback to design team on adverse effects, incorporate mitigation, assess effects of mitigated development; and
- Preparation of the ES.

5.6 Mitigation

5.6.1 One of the most important roles of the EIA is to identify ways to mitigate negative environmental effects and opportunities that the scheme presents for environmental improvements.

5.6.2 A hierarchy of methods for mitigating negative effects will be followed; these are, in order of preference:

- Enhancement, e.g. incorporation of green roofs in the design;
- Avoidance, e.g. repositioning of sensitive receptors to remove potential significant effects;
- Reduction, e.g. employment of sustainable urban drainage; and
- Compensation, e.g. off-site ecological enhancement.

5.6.3 Environmental effects remaining after mitigation measures have been incorporated are termed residual effects and these will be fully described in the ES.

5.6.4 Where necessary, the ES will describe measures that will be taken to monitor the effectiveness of controls, compensation, mitigation, enhancement and remediation. Monitoring will enable any shortfall in expectations directly attributable to the development to be addressed.

5.7 Environmental Statement

5.7.1 The ES provides the documentation of the EIA process. The ES will describe the proposed development, EIA methodology, policy context, assessment of potentially significant environmental effects (including cumulative effects and impact interactions), as well as providing supporting graphics, technical appendices and a non-technical summary.

5.7.2 A draft contents list of the ES is provided at **Appendix C**. Comments on this are invited from consultees.

6 Proposed Scope of the EIA

6.1 Technical Scope

6.1.1 The technical scope describes the environmental topics that should be addressed by an EIA, in line with the requirements of Schedule 4 of the EIA Regulations. The aspects of the environment that could be significantly affected by the development are:

- Population;
- Fauna;
- Flora;
- Soil;
- Water;
- Air;
- Climatic factors;
- Material assets including architectural heritage and the historic environment;
- Landscape; and
- The inter-relationship between the above factors.

6.1.2 This requirement and the broad categories set out above have to be interpreted and applied in the context of the Former Royal Mail Sorting Office site. **Chapter 7** provides a detailed analysis of the resultant technical scope of the EIA. The following therefore sets out the principles that will be applied to the EIA process rather than site specific issues.

6.2 Temporal Scope

Environmental Baseline

6.2.1 As a general principle, potential environmental effects will be assessed by comparing the predicted state of the environment without the development with the state of the environment with the development for a particular year. This will necessitate predicting how current conditions at the site may change without the proposed development occurring.

6.2.2 The EIA will take into account of the proposed redevelopment of Twickenham Railway Station in identifying the future environmental baseline for the development, as well as the potential for significant cumulative effects to occur as a result of the two schemes.

Duration of Effects

6.2.3 Environmental effects will be classified as either permanent or temporary, where appropriate. Permanent changes are those which are irreversible (e.g. permanent land take) or will last for the foreseeable future (e.g. noise from generated road traffic).

6.2.4 The duration of temporary environmental effects is defined as follows:

- Short-term - Less than one year; or
- Medium-term - One to five years.

6.2.5 Such definitions are considered to be appropriate as the construction would be expected to take less than five years and hence construction effects would typically be either short or medium term effects, while effects that would result from the operation of the development would be considered to be permanent.

Frequency of Effects

6.2.6 Where environmental effects are episodic the frequency of the events will be predicted.

Phases of the Scheme

Construction

6.2.7 Certain environmental effects will only occur during construction of the project and will cease once construction activities have ceased. These will typically be the temporary effects of the scheme and will be described as “short-term” or “medium term”, as the case may be, using the definitions set out in section above. Examples include but are not limited to:

- Creation of dust;
- Risk of pollution during construction; and
- Noise from construction activities.

Operation

6.2.8 Environmental effects that occur during the operation will be described as permanent. Examples of effects which might occur during the operation of the scheme are:

- Changes to habitats;
- Altering the local flood risk; and
- Noise from generated road traffic.

Decommissioning

- 6.2.9** Decommissioning is not a foreseeable event and the environmental effects of decommissioning or abandonment of the development are not therefore part of the proposed EIA scope.

6.3 Spatial Scope

- 6.3.1** The spatial extent of each of the specialist studies will vary from one to another; in some instances the environmental effects will extend no further than the site boundary and in most cases their extent will not extend further than 400m beyond the proposed site boundary. Exceptions are likely to be:

- Transport and related effects (e.g. severance, air quality, noise) – scope will include effects on the local road network where significant changes are expected.
- Economic and Community – effects on local communities and facilities and the local labour market.
- Visual amenity – determined by the visual envelope.

- 6.3.2** The study area for each technical discipline will be outlined as appropriate in the Environmental Statement.

6.4 Types of Effects

- 6.4.1** In assessing the significance of potential effects identified during the EIA, account will be taken as appropriate as to whether effects are:

- Beneficial Effects - effects that have a positive influence on the environment;
- Adverse Effects - effects that have a negative influence on the environment;
- Direct Effects - effects that are caused by activities which are an integral part of the scheme;
- Indirect Effects - effects that are due to activities that are not part of the scheme, e.g. regeneration benefits attributable to the scheme;
- Primary Effects - the first effect of a scheme activity e.g. alteration to watercourse;
- Secondary Effects - effects that are a consequence of a primary effect, e.g. changes to aquatic fauna as a result of altering watercourse;
- Cumulative Effects - many effects that singly are not significant, but when assessed together may be significant; and
- Residual Effects - effects that remain after the positive influence of mitigation measures are taken into account.

- 6.4.2** For clarity within the assessment, 'impact' will be used in relation to the outcome of the project (e.g. the removal of trees or the generation of noise), while the 'effect' will be the consequent implication in environmental terms (continuing the above example, e.g. the loss of a potential bird breeding site or the reduction in residential amenity).

Consideration of Alternatives

- 6.4.3** It is necessary for the ES to document the consideration of alternatives within the EIA process. This will entail identifying alternative forms of development (e.g. different layouts, massing, land use and size) and considering the environmental implications of these alternatives, to demonstrate that the proposed scheme is environmentally preferable.

Residual Effects

- 6.4.4** The incorporation of mitigation measures, primarily as part of the scheme design and construction phase, will be reported where appropriate and potentially significant residual effects that remain after mitigation will be described and assessed according to the significance criteria set out below.

Cumulative Effects

- 6.4.5** As referred to in section 6.2, the redevelopment of Twickenham Railway Station recently received planning permission. Due to the proximity of this development to the proposed development at the Former Royal Mail Sorting Office the EIA will consider the potential for significant cumulative effects as a result of the two developments.

Assessing Significance

- 6.4.6** As noted above, the EIA Regulations require that the ES describes likely significant effects of the proposed development. However, there is no applicable definition of significance and interpretations differ. In accordance with the European Commission's Guidance on Scoping, the EIA will study those effects that will influence decision-making or those where there is uncertainty about their magnitude. This approach is consistent with best practice for EIA in the UK.
- 6.4.7** The significance of an effect is the product of two factors, the value of the environmental resource affected and the magnitude of the impact. A significant effect may arise as a result of a slight impact on a resource of national value or a severe impact on a resource of local value. In addition, the accumulation of many non-significant effects on similar local resources geographically spread throughout the scheme may give rise to an overall significant effect. An example of this is might be the loss of ecological habitat of low value at many locations.
- 6.4.8** This approach to assessing and assigning significance to an environmental effect will rely upon such factors as legislative requirements, guidelines, standards and codes of practice, consideration of the EIA Regulations, the advice and views of statutory consultees and other interested parties and expert judgement. The following questions are relevant in evaluating the significance of potential environmental effects:

- Which risk groups are affected and in what way?
- Is the effect reversible or irreversible?
- Does the effect occur over the short, medium or long term?
- Is the effect continuous or temporary? Does it increase or decrease with time? Is it of local, regional, national or international importance?
- Are health standards or environmental objectives threatened?
- Are mitigating measures available and is it reasonable to require these?

6.4.9 Specific significance criteria will be prepared for each specialist topic, based on the above and the generic criteria set out in **Table 6.1**.

Table 6.1: Significance Criteria

Significance Level	Criteria
Severe	Only adverse effects are assigned this level of importance as they represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites and features of national or regional importance. A change at a district scale site or feature may also enter this category.
Major	These effects are likely to be important considerations at a local or district scale but, if adverse, are potential concerns to the project and may become key factors in the decision-making process.
Moderate	These effects, if adverse, while important at a local scale, are not likely to be key decision-making issues. Nevertheless, the cumulative effect of such issues may lead to an increase in the overall effects on a particular area or on a particular resource.
Minor	These effects may be raised as local issues but are unlikely to be of importance in the decision-making process. Nevertheless they are of relevance in enhancing the subsequent design of the project and consideration of mitigation or compensation measures.
Not Significant	Either no effect or effect which is beneath the level of perception, within normal bounds of variation or within the margin of forecasting error. Such effects should not be considered by the decision-maker.

6.4.10 Within the framework above, the project team will set significance thresholds for each environmental topic. To ensure a balanced approach, the significance threshold for one topic will be equivalent to the significance threshold of any other topic, as far as is possible.

Uncertainty

6.4.11 The prediction of future effects inevitably involves a degree of uncertainty. Where necessary, the ES will describe the principal factors giving rise to uncertainty in the prediction of environmental effects and the degree of the uncertainty.

- 6.4.12** Confidence in predictions will be engendered by employing accepted assessment methodologies, e.g. Guidance for Ecological Impact Assessment by the Institute of Ecology and Environmental Management. Uncertainty inherent within the prediction will be described. As a general principle the ES will describe credible, reasonable worst case foreseeable events and their effects.
- 6.4.13** Uncertainty also applies to the success or otherwise of measures to mitigate negative environmental effects. Where the success of a mitigation measure is uncertain, the extent of the uncertainty will be identified in the ES.

7 Topics Included in EIA Scope

7.1 Introduction

7.1.1 The chapter identifies the environmental topics that it is proposed should be scoped into the EIA and the methodologies proposed to undertake the assessments. This is based on environmental information collected at the site over the last few years (including through ground investigations, ecology surveys, and archaeology assessment), consultation with key stakeholders and initial collection of baseline data as part of this EIA process.

7.2 Socio-Economics

7.2.1 The socio-economic assessment will set the national and local policy objectives in terms of economic development, it will then establish a baseline of the economic and demographic profile of the site area and the borough, and their economic performance over the last decade or so. This includes analysing the number and types of jobs available in the local economy, the local labour market activity, the skills and occupation profile of residents, and travel to work patterns. It will also audit the community infrastructure serving the resident population.

7.2.2 Finally, it will identify the type and level of impacts likely to affect the key receptor groups in socio-economic terms i.e. businesses and people.

Potential Effects & Assessment Methodology

7.2.3 The principles for economic development are set out in the recently published National Planning Policy Framework (NPPF), which emphasises the Government's commitment to economic growth. Locally, the policy context relevant to the economic development of the site is set out in the London Plan and related Supplementary Planning Guidance as well as LBRuT's development plan.

7.2.4 The assessment method which will be based on rigorous application of economic tools and techniques in line with guidance issued by HM Treasury, Business Innovation and Skills, and other relevant UK Government departments.

7.2.5 In order to quantify the true additional impacts of the development the assessment will set out the counterfactual case in the absence of this investment and will draw on the socio-economic baseline and the policy review to establish the expected trajectory of growth under current conditions.

7.2.6 The assessment of the socio-economic impacts of the development during the construction and operational may entail the following:

- Direct, indirect and induced employment generated by construction activity. This will be derived from the construction costs to be provided by the client and standard multipliers.

- Direct, indirect and induced employment generated by the new businesses locating on the redeveloped site. This will be largely derived from floorspace figures to be provided by the client and standard multipliers.
- Labour market effects i.e. the type of jobs created/lost in terms of skills, occupations, etc.
- The spend in Twickenham town centre by new residents based on their likely demographic and income profile.
- Impacts of the new development on local services i.e. schools and GPs. This will estimate the population of the development in terms of age and family profile based on the size and type of dwellings included in the masterplan.
- Community impacts of the development i.e. any new facilities included in the masterplan,
- Population and housing – whether the workforce impacts of the scheme will impact local housing provision.
- Community infrastructure – whether the workforce impacts will place pressures on local facilities such as schools and health provision.
- Amenity impacts – whether recreational facilities are impacted for certain groups of residents.

7.3 Hydrology and Flood Risk

7.3.1 The purpose of this chapter in the EIA will be to outline the impact of the proposed development in relation to hydrology and flood risk.

7.3.2 The site lies adjacent to the River Crane, which is designated by the Environment Agency (EA) as ‘main river’ and is a tributary to the River Thames. The online EA Flood Maps indicate that the site is located ‘outside the extent of extreme flood’. The extent of the extreme flood is generally accepted to be equivalent to the extent of the 0.1% annual probability (1 in 1,000 year) flood, and according to the technical guidance that supports the NPPF land located outside this flood extent is classified as Flood Zone 1 (Low Probability of Flooding).

7.3.3 The assessment will be undertaken in accordance with national, regional and local policy and guidance, including; NPPF technical guidance, the London Regional Flood Risk Appraisal (2009), Drain London (2009), Policy CP3 of the LBRuT Core Strategy (2009), Policies DM SD6 (Flood Risk), DM SD7 (Sustainable Drainage) and DM SD8 (Flood Defence) of the LBRuT Adopted Development Management Plan (2011), the LBRuT Level 1 Strategic Flood Risk Assessment (2011), the preliminary Flood Risk Assessment for London Borough of Richmond Upon Thames (2011), the LBRuT Crane Valley Planning Guidelines (2005), and; the adopted LBRuT Twickenham Station and Surroundings Design Standards Supplementary Planning Document (2010). Where relevant the assessment will also refer to

London Borough of Richmond-upon-Thames Planning Advice Note Guidance on producing a Flood Emergency Plan.

- 7.3.4** To confirm the baseline flood risk and hydrological conditions at the site, existing available information will be used from the EA, LBR and available site investigation information. The EA has a working hydraulic model for the River Crane which has been used to assess potential flood levels for the River Crane at this location and this will be used in conjunction with detailed site survey data to define the extent of flooding from the River Crane corridor at and adjacent to the site.

Potential Effects

- 7.3.5** The potential effects of the proposed development generally relate to altering the flood risk in the local area, creating new receptors to flood risk and the implications of the surface water drainage strategy. Therefore effects could be to human and environmental receptors.

Methodology

- 7.3.6** To establish the baseline fluvial flood risk to the site a site-specific Flood Risk Assessment (FRA) will be undertaken to identify the sources of flood risk to the site, the impacts of flooding at the site and the potential impacts of the development on flood risk elsewhere. Potential development impacts on flood risk and hydrology will be identified and appropriate mitigation measures recommended.
- 7.3.7** The FRA will include preparing a Surface Water Drainage Strategy to determine how surface water will be managed, such that flood risk is not increased and the potential for a pollution incident occurring is minimised.
- 7.3.8** The outline methodology for the assessment of hydrology and flood risk is presented below:
- Establish baseline conditions through liaison with key stakeholders and review of data;
 - Consideration of how hydrology and flood risk will alter without the proposed Development taking place (i.e. the 'do nothing' scenario);
 - Identify the potential effects of the proposed development;
 - Assess the potential for the development to impact on or change the local hydrological conditions of flood risk, and;
 - Propose measures to mitigate the impacts on flood risk and hydrology.
- 7.3.9** Any impacts of the proposed development on hydrology and flood risk, potential effects and mitigation measures will be discussed and agreed with relevant stakeholders, statutory consultees and regulatory bodies, including the EA and LBR Hydrology and Flood Risk

7.4 Land and Water Quality

7.4.1 This chapter of the EIA will describe the effect of the proposed development in relation to ground conditions, contamination and groundwater quality.

7.4.2 The framework for assessment will utilise both national and regional/local policies, including; Part 2A of the Environmental Protection Act (EPA) 1990, the London Plan and the Local Development Framework.

7.4.3 In order to inform the assessment effects and impacts, existing reports prepared for the site will be utilised. These reports include information relating to both preliminary risk assessments and intrusive investigation works, completed in accordance with Model Procedures for the Management of Land Contamination, Contaminated Land Report 11 (CLR11).

Potential Effects

7.4.4 Potential effects entail altering the potential for a significant pollutant linkage as a result of the proposed development upon identified receptors, including:

- Future site occupants/users;
- Surrounding site users;
- Construction/maintenance workers;
- Vegetation;
- Infrastructure, including; drinking water supply pipes and buried concrete;
- Groundwater (notably the Principal Aquifer of the Kempton Park Gravel); and
- Surface water (River Crane, located to the immediate north of the site).

7.4.5 Such effects could therefore include increasing exposure to existing contamination, creating a new source of contamination or putting new receptors at risk of contamination.

Methodology

7.4.6 In order to assess potential effects and any required mitigation measures a Refined Conceptual Site Model will be defined for the site and proposed development. Potential effects will be considered separately for each potentially complete pollutant linkage such that any potential impacts are identified and mitigated as required. This will draw upon desk study data and the findings of intrusive investigations undertaken at the site.

7.4.7 The methodology for assessment within the EIA can be summarised as follows:

- Establish baseline conditions;

- Consider the 'do-nothing' scenario (i.e. how baseline conditions may change without the proposed development occurring);
- Determine the potential effects of the development;
- Assess any potential for the development to alter or effect ground conditions; and
- Determine if any mitigation measures are required.

7.4.8 It is intended that the assessment of effects and impacts associated with Land and Water Quality will include consultation with regulatory bodies, including the Environment Agency and the Environmental Health Officer at LBRuT.

7.5 Transport and Access

7.5.1 A separate Transport Assessment (TA) will be prepared for submission with the planning application. The findings of which will be utilised in the Transport and Access chapter of the ES, drawing upon the EIA methodology outlined in chapter 6.

7.5.2 The scope of the TA will be agreed with both LBRuT and Transport for London (TfL).

Potential Effects

7.5.3 The impact of the proposed development will be considered in light of the infrastructure proposals, together with accompanying measures such as pedestrian, cyclist and vehicular provision.

7.5.4 The ES will include a description of the temporary transport effects anticipated during the construction phases as a result of construction vehicle movements on the local road system.

7.5.5 Operational effects will include a comparative prediction of local vehicle movements with and without the development, based upon the predicted number of trips generated and the likely modal share. Other potential effects considered will include effects on pedestrians, cyclists, other site users, car parking and servicing and safety.

Methodology

7.5.6 The assessment will identify the likely significant environmental impacts arising from the proposed development in respect of all modes of transport. The assessment of individual environmental elements will be carried out drawing upon with the 'Guidelines for the Environmental Assessment of Road Traffic' (1993) published by the Institute of Environmental Assessment (IEA) and, where appropriate, Volume 11 of the Design Manual for Roads and Bridges (DMRB) 'Environmental Assessment' (2008) published by the former Department of Environment, Transport and the Regions (DETR), now Department for Transport. These are recommended tools for the appraisal of environmental impact of road traffic and they identify appropriate standards for assessment. In addition, reference will be made to the Institution of Highways and Transportation publication, Guidelines for Traffic Impact Assessment (1994).

- 7.5.7** In accordance with the above guidance, the assessment within the Transport and Access chapter of the ES will consider the impact of the development in relation to severance, driver delay, pedestrian delay and amenity, fear and intimidation, accidents, safety and hazardous loads. The assessment will consider the potential effects of both the construction and operational stages.
- 7.5.8** The transport effects will be considered and assessed for the surrounding network where links will experience a change of traffic greater than 30%, or more than 10% where the links contain sensitive receptors. Mitigation will be provided where significant or adverse effects occur as a result of development.
- 7.5.9** The ES chapter will be based on the TA, which will be developed in line with current DfT/TfL TA guidance. This is set down in the DfT Guidance on Transport Assessments, March 2007 and the TfL Transport Assessment Best Practice Guidance Document, April 2010. The parameters of the TA will be set out in a Transport Assessment Scoping Report and will be agreed with LBRuT and with TfL.

7.6 Noise and Vibration

- 7.6.1** A chapter will be prepared to address the Noise and Vibration effect of the proposed development, both in terms of the effect of the proposed development on the local area and the suitability of the site for the development proposed.
- 7.6.2** A noise survey was undertaken at the site in 2011 which has identified that the dominant noise sources at the site are road traffic noise and railway noise, along with plane noise associated with Heathrow Airport. The noise survey will form the basis of the assessment to be undertaken as part of the EIA.

Potential Effects

- 7.6.3** It is anticipated that construction of the proposed development could potentially cause a noise and vibration disturbance to existing sensitive receptors close to the site. This includes from plant use at the site and traffic generated during the construction works.
- 7.6.4** For the operation, the generation of development traffic and plant used within the development could potentially cause a noise impact upon nearby sensitive receptors.
- 7.6.5** The suitability of the site will also be considered, including the effect of road traffic noise and noise and vibration from the adjacent railway line upon proposed residential receptors.

Methodology

- 7.6.6** Consultation will be undertaken with the Environmental Health Department with LBRuT to agree the assessment methodology, which will be based on the noise survey already undertaken at the site.
- 7.6.7** A qualitative construction Noise and Vibration assessment will be undertaken following guidance contained in British Standard 5228: 2009 Code of Practice for Noise and Vibration

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Control on Construction and Open Sites. Advice on construction noise will be provided using the 'ABC' method presented in Annex E (informative) of BS 5228.

- 7.6.8** A noise model will be prepared using SoundPLAN v7.1. The model will include the noise sources associated with the proposed development and surrounding road network. The noise survey undertaken in 2011 will be used to validate the preparation of a computer noise model.
- 7.6.9** The National Planning Policy Framework (NPPF) was published in March 2012. In respect of noise, the document states that:
- "The planning system should contribute to and enhance the natural and local environment by ...preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of ... noise pollution".
- 7.6.10** The NPPF revokes Planning Policy Guidance 24 which was previously used to assess noise impacts of planning applications. The NPPF indicates that the Noise Policy Statement for England (NPSE) should be used to define "significant adverse impacts". This document seeks to clarify the underlying principles and aims in existing policy documents, legislation and guidance that relate to noise.
- 7.6.11** It is understood that the UK government is currently undertaking research to quantify the significant observed adverse effect levels for noise. Therefore it is proposed to utilise the guidance presented in PPG24 in advance of such research being completed.
- 7.6.12** Should there be no 'significant adverse impacts' in relation to the methodology described in this section, it will be considered that the proposed development meets the requirements of NPPF.
- 7.6.13** The change in noise levels due to the generation of development traffic upon nearby noise sensitive receptors will be assessed. Predictions will be undertaken following guidance in the Calculation of Road Traffic Noise (CRTN). Similarly, the Calculation of Railway Noise (CRN) will be used to assess the effect of railway noise while the potential for significant vibration from the railway will also be considered.
- 7.6.14** Criteria will be developed to determine the magnitude and significance of the impacts of the development. This will draw upon advice in PPG24, regarding minimum perceptible noise change.
- 7.6.15** Where it is considered necessary, an outline mitigation strategy will be developed to minimise the impacts related to the construction and operational phases of the proposed development.

7.7 Air Quality

- 7.7.1** A chapter will be prepared setting out the findings of the Air Quality assessment. The assessment will cover two potential air quality issues:

- The impact of the development on the surrounding area, during both the construction and operational phases; and
- The impact of existing local pollution sources on the development site itself.

7.7.2 Existing local air quality, the likely future air quality in the absence of the new development, and the likely future air quality if the development goes ahead, will all be defined. The assessment of construction impacts will focus on the anticipated duration of works. The assessment of operational impacts will focus on the earliest year that the development is likely to be operational to provide a worst case assessment.

7.7.3 The LBRuT has declared an Air Quality Management Area (AQMA) for the entire borough (therefore including the site) with particular emphasis placed on the emission of nitrogen dioxide and fine particulates.

Potential Effects

7.7.4 The principal air pollutants of concern with respect to the development will be:

- Nitrogen dioxide;
- Fine airborne particles (PM₁₀ and PM_{2.5}); and
- Dust.

7.7.5 The main local sources of these pollutants are likely to be road vehicles (nitrogen dioxide, PM₁₀ and PM_{2.5}); and construction activities (dust and PM₁₀). Professional experience indicates that any impacts associated with other pollutants will be negligible.

Methodology

7.7.6 Existing local air quality will be defined within the study area drawing upon monitoring carried out by the LBRuT, and information provided within the Council's Air Quality Review and Assessment reports.

7.7.7 Air quality will be assessed at a range of worst-case receptors. For construction activities these will be existing properties and ecological receptors closest to the proposed development. For traffic-related impacts these will be the existing and proposed residential properties that are closest to busy roads, in particular those close to junctions, where traffic emissions are greatest.

7.7.8 The potential impacts of dust during construction will be assessed, making reference to the London Best Practice Guidance on the control of dust and emissions from construction and demolition. There are no statutory objectives for dust; it is therefore common practice to provide a qualitative assessment based on the size of the site, regional meteorological conditions and experience of the distances over which impacts may occur. Emissions from on-site plant during construction will be assessed if any potentially significant sources are identified.

- 7.7.9** The assessment of operational road traffic impacts will be undertaken using the ADMS Roads detailed dispersion model. Model outputs will be verified against local air quality monitoring data. This modelling will make use of mapped background concentration data provided by Defra and projected traffic flow. A sensitivity study will be undertaken to consider the impacts of uncertainties relating to future vehicle emissions and background concentration predictions. Air quality will be assessed in relation to the national air quality standards and objectives, established by the Government to protect human health.
- 7.7.10** All practical and reasonable measures which can be implemented to mitigate any detrimental impacts associated with construction and operation of the proposed scheme will be considered, and highlighted within the Air Quality chapter.

7.8 Ecology and Nature Conservation

- 7.8.1** The information below provides an overview of baseline conditions known to date, identifies likely sensitive receptors, provides a summary of potential effects of the proposed development, and provides further details of the proposed scope of the Ecology Impact Assessment (EclA).

Baseline Conditions

- 7.8.2** The site does not form part of any statutory designated sites of nature conversation importance.
- 7.8.3** The combination of the suburban location and limited extent and diversity of semi-natural vegetation restricts the opportunity for protected or notable habitats or species to be present at the site.
- 7.8.4** The site is located adjacent to linear natural features i.e. the River Crane to the north (although, along the northern boundary is canalised and heavily shaded in places), and railway corridor to the south. These provide habitat corridors to Crane Park Island Nature Reserve, Hounslow Heath, and Donkey Wood to the west, and the River Thames and Richmond Park to the northeast.
- 7.8.5** Protected species surveys were carried out on all or part of the site in 2010. These comprise reptile surveys; a badger *Meles meles* survey; breeding bird surveys; and bat surveys.
- 7.8.6** The canalised adjacent section of the River Crane was considered to have low potential to support water voles *Arvicola amphibius* or breeding kingfishers *Alcedo atthis*, although small areas of suitable habitat may be present.
- 7.8.7** Reptiles were absent from the suitable habitats within the centre and south of the site and it can be assumed they would be absent from the dense scrub in the west of the site.
- 7.8.8** No badger setts or badger field signs were recorded during the surveys of all accessible areas of the site.

7.8.9 Two breeding bird surveys were carried out across the eastern half of the site in May 2010; incidental records of a limited numbers of species were recorded including two Biodiversity Action Plan (BAP) species. However, the areas that could not be accessed for survey are considered likely to support a more diverse and less common species assemblage.

7.8.10 Buildings on site have the potential to support roosting bats given the close proximity to the River Crane and River Thames that provide suitable foraging habitat. However, previous bat surveys carried out in 2010 at the site did not record bats emerging from any of the buildings. Foraging and commuting bats, including brown long-eared bats *Plecotus auritus*, were recorded utilising the railway along the southern boundary of the site.

Potential Effects

7.8.11 The potential for significant ecological effects on receptors described above are considered likely to be limited to those listed below.

- Construction:
 - Disturbance to or loss of habitat of limited biodiversity value, including trees and scrub;
 - Disturbance to, or loss of habitats used by, breeding birds;
 - Disturbance to, or loss of habitat used by foraging and commuting bats;
 - Removal of habitat will result in fragmentation of the linear habitats to the north and south of the site;
 - Increased noise and light impacts on sensitive receptors from construction related activities; and
 - Pollution or sedimentation of the River Crane.
- Operational:
 - Disturbance to bats and breeding birds due to operational noise and lighting;
 - Increased shading of the River Crane, resulting in changes to the ecology of this water course; and
 - Positive impacts on biodiversity, birds, reptiles, aquatic ecology and water voles, through habitat enhancement and creation within the Metropolitan Open Space to the west of the site, and along the River Crane.

Methodology

7.8.12 The current baseline conditions, ecological value of the site, and identification of sensitive receptors, will be informed by review of both the available ecological records and previous reports. An updated extended Phase 1 survey will also be undertaken to map habitat types

and create dominant plant species lists, and to identify the potential for protected and notable species.

7.8.13 The results of this data review and survey will inform the requirement for, and scope of, further protected species surveys to corroborate and update previous survey work to provide a robust baseline for the assessment and inform opportunities for habitat enhancement.

7.8.14 The value of the receptors and the identification of likely effects will inform the assessment of the significance of impacts. The EclA will be carried out in accordance with the Guidelines for Ecological Impact Assessment in the UK, issued by the Institute of Ecology and Environmental Management, 2006. Particular emphasis will be given to impacts on designated sites, national and local BAP habitats and species, RSPB Birds of Conservation Concern, and rare, protected or notable species assemblages.

7.9 Townscape and Visual

Introduction

7.9.1 A Townscape & Visual Impact Assessment (TVIA) will be prepared to address potential impacts in relation to the proposed development on Townscape and Visual receptors.

7.9.2 Consultation with LBRuT will be required in order to establish principal townscape and visual receptors the impact assessment is to address.

Potential Effects

7.9.3 The TVIA will classify the existing townscape character and visual amenity and identify potential receptors and their related sensitivities to change of the nature arising from the proposed development both during construction and once complete.

7.9.4 Due to the scale of the proposed development it is anticipated that any effects would be limited to the taller elements of the proposed development close to London Road, and particular consideration will be given to the Grade II listed Heatham House.

Methodology

7.9.5 The format for the TVIA would be based upon the current guidelines produced by the Countryside Agency (Landscape Assessment Guidance 2002) and the Landscape Institute and Institute of Environmental Assessment and Management (Guidelines for Landscape and Visual Impact Assessment, 2002). Guidance will also be sought from 'Guidance for Tall Buildings' July 2007, compiled by CABE and English Heritage, with due consideration to LBRuT policy in relation to tall buildings.

7.9.6 A desk study and baseline site survey would be carried out for the site to establish both townscape and visual receptors in the study area, along with consideration of the visibility of the development in the local area. Representative views of the site will be identified and agreed with LBRuT, with relevant photos included in the Environmental Statement.

7.9.7 A detailed assessment of the proposed development will be carried out to identify the predicted magnitude of the effects and assess the residual impacts arising on townscape and visual receptors. The prediction of magnitude of change and assessment of significance of residual landscape/townscape and visual impacts would be based on pre-defined criteria.

7.10 Daylight and Sunlight

7.10.1 The taller elements within the proposed development may have an effect on the microclimate by changing daylight and sunlight availability at the site.

7.10.2 The EIA process will therefore consider potential daylight and sunlight issues at relevant local receptors as a result of the proposed development.

Potential Effects

7.10.3 The level of daylight and sunlight at existing relevant receptors may be impacted by the proposed taller buildings within the development resulting in the potential for daylight and sunlight issues, including in relation to Grade II listed Heatham House.

Methodology

7.10.4 There are no mandatory requirements or criteria for assessing microclimates around buildings.

7.10.5 BRE Digest 209: 1998 Site Layout Planning for Daylight and Sunlight, provides guidance on site layout planning to achieve good daylight and sunlight for buildings. The guidance covers light availability within new developments, gardens and open spaces, existing buildings and on adjoining development land.

7.10.6 The BRE report advises that daylight and sunlight levels should be assessed for the main habitable rooms of neighbouring residential properties. Habitable rooms in residential properties are defined as kitchens, living rooms and dining rooms. Bedrooms are less important as they are mainly occupied at night time. The report also makes reference to other property types, which may be regarded as 'sensitive receptors' such as schools, hospitals, hotels and hostels, small workshops and most offices.

7.10.7 In addition, BS 8206: 2008 Lighting for Buildings – Part 2 code of practice for day lighting, provides recommendations regarding design for daylight in buildings.

7.10.8 The daylight and sunlight conditions at relevant receptors across the surrounding area will be determined through a combination of a site visit, application of BRE 209 guidance and knowledge of shading from buildings.

7.10.9 The vertical sky component (VSC) and annual probable sunlight hours (APSH) will be calculated at a series of reference points on each main face of the relevant buildings following the methodology in the BRE 209 guidance.

7.11 Cultural Heritage

7.11.1 The cultural heritage chapter within the EIA will assess the below ground archaeological potential of the site and local built heritage resources and the likely impacts upon such resources. The assessment accords with national policy guidance (NPPF), strategic and local planning policy, together with relevant guidelines set out by the Institute for Archaeologists and English Heritage.

Potential Effects

7.11.2 The construction of the proposed development could potentially have adverse effects on archaeological remains through the demolition of the existing buildings, and the construction of the proposed new development, particularly the excavation of any beneath ground structures, together with the cutting of foundations and services.

7.11.3 The site is also located to the south of Heatham House, which is a Grade II listed building. While the proposed development should not affect Heatham House itself the development could alter the setting of the building.

Methodology

7.11.4 The site's archaeological potential has been quantified through the preparation of a detailed archaeological desk based assessment, which has reviewed the following:

- An examination of data held on the Greater London Historic Environment Record within a one kilometre radius of the site;
- A comprehensive map regression exercise charting the historical development of the site from the eighteenth century until the present day;
- A review of relevant historical information in the Richmond Local Studies Library; and
- A review of geotechnical information derived from the site in 2010.

7.11.5 The examination of the above datasets has enabled the archaeological potential of the site to be determined, together with the likely impact of past post-depositional impacts upon that resource. This information will be reviewed against the proposed development to identify the potential archaeological effects and the requirement for mitigation.

7.11.6 An appraisal will also be made on the setting of Heatham House drawing upon relevant guidance and the information gather as part of the remainder of the EIA.

7.12 Waste

7.12.1 This section sets out the scope, objectives and approach for developing a waste strategy for the construction and operational phases of the proposed development and outlines how the effects of waste will be assessed for the EIA.

- 7.12.2** The waste strategy will developed to ensure that the development meets current national, regional and local waste policy. Sustainable waste management will also contribute to the achievement of sustainable assessment benchmarks such as the Code for Sustainable Homes.
- 7.12.3** Given the relatively limited quantum of development proposed the waste volumes to be generated are unlikely to be significant in the context of existing local waste infrastructure. It is therefore proposed that the EIA will focus on setting a strategy for the management, minimisation, reuse, recycling, etc., of wastes during the construction and operation of the proposed development. Likely waste volumes will be calculated to inform the strategy.
- 7.12.4** Sustainable waste issues will be reviewed and the significance of impacts from waste collection, storage and transport arising from the proposed development will be considered within the EIA within relevant sections. For example, the transport movements associated with waste collection during demolition, construction and upon occupation will be considered within the transport and access chapter, whilst noise and dust from waste generating demolition and construction will be assessed as part of relevant chapters.

Potential Effects

- 7.12.5** The potential effects of the proposed development relate to the generation of waste during demolition, construction and operation of the proposed development. This will include the consideration of various waste streams, potentially including contaminated or hazardous materials that could be encountered in buildings and the ground at site.

Methodology

- 7.12.6** The methodology for the assessment of effects in relation to waste will entail a desktop assessment of potential waste arising during demolition, construction, and operation.
- 7.12.7** An assessment will be made of likely waste volumes and types during the project based on available information.
- 7.12.8** Where necessary, liaison will also be undertaken with the LBRuT waste management officers, or their waste contractors, to obtain additional information on waste collection relevant to the operational phase of the development.
- 7.12.9** Following completion of baseline data collection and liaison, options for sustainable waste management will be identified and appraised in the context of policy requirements.
- 7.12.10** In summary, waste strategy will address the following:
- Determine the requirements of national, regional and local planning policy;
 - Identify the potential waste streams;
 - Develop strategies for the differing waste streams;

- Assess the requirements of a site waste management plan for construction phase;
- Make recommendations for waste storage facilities if necessary;
- Maintain flexibility for future waste management activities;
- Assess the potential impacts on existing waste management facilities during construction and operation; and
- Assess the need for a waste facility or other waste infrastructure.

7.13 Cumulative Effects and Impact Interactions

7.13.1 The EIA Regulations require consideration of the potential impact inter-relationships and cumulative effects of the development.

This assessment will include the interactions of different environmental effects on the same receptor (e.g. a dwelling affected by noise and air emissions) as well as the aggregated impact of the proposed redevelopment of the Former Royal Mail Sorting Office and the redevelopment of Twickenham Railway Station. The assessment of cumulative effects will be considered within each of the technical chapters.

7.13.2 Potential impact interactions will be considered in a standalone chapter to draw together the assessment documented in the ES and identify the overall effect of the proposed development.

8 Topics Not Included in EIA Scope

8.1 Introduction

8.1.1 The ES should be a focused document considering the assessment of potentially significant environmental effects, both adverse and beneficial. Therefore those effects which are not likely to be significant should not be included in the ES, i.e. they should be scoped out of the EIA. The following sets out those topics that have been determined not to be significant and therefore not included in the EIA as well as those that will be addressed independently in separate assessments. The rationale for this determination is also provided.

8.2 Sustainability

8.2.1 Sustainability will be incorporated into the design process for the proposed development in line with national, regional and local policy requirements. A Sustainability and Energy Statement will be submitted as part of the planning application documents setting how the proposed development will meet these sustainability and energy requirements based on the opportunities provided by the site and the proposed development.

8.2.2 It is therefore considered that sustainability, as an environmental topic, will not require further assessment within the ES. Instead the Sustainability Strategy will set out the sustainability performance of the development and the measures that have been included to enhance the sustainability of the development. The EIA will then assess the environmental effects of the proposed development including these sustainability features.

8.3 Utilities

8.3.1 A detailed assessment of utilities will not be provided except in relation to flood risk and surface water drainage, as discussed in **Chapter 7**. This will include consideration of the proposed development's demand, both on and off-site, for:

- Water supply and network infrastructure; and,
- Surface water drainage requirements and flood risk.

8.3.2 However, the ES will consider the environmental effects of required utility (reinforcements, diversions and abandonments) should additional infrastructure, i.e. water, gas, electricity and telecommunications, be necessary (see **Appendix C** Probable ES Contents).

8.4 Microclimate

8.4.1 It is anticipated that the proposed development will include buildings up to six storeys close to London Road, but that the majority of the development will comprise houses. As a result the development does not include particularly tall buildings.

8.4.2 In PBA's experience of undertaking wind assessments of comparable and larger developments (utilising desk based assessment, wind tunnel testing and computational fluid

dynamics modelling), and drawing upon BRE's Digest DG520 Wind Microclimate Around Buildings, significant wind effects are more likely to be experienced when buildings are up to ten storeys or are of significant bulk and extent considerably above surrounding buildings.

8.4.3 Further the Environmental Statement (Maddox & Associates, 2011) submitted with the Twickenham Station redevelopment (which includes buildings up to seven stories) identified that wind effects should be negligible or beneficial.

8.4.4 It is therefore considered that due to the limited building height proposed, and that much of the development will comprise houses, the proposed development should not lead to unsafe wind conditions. Consideration will be given by the design team to wind flows and it is therefore proposed that assessment within the EIA is not required.

9 Summary

9.1 Summary

9.1.1 This document has been prepared to provide an overview of the potential environmental effects that have been considered in scoping the EIA for the Former Royal Mail Sorting Office.

9.1.2 This Scoping Report has provided information regarding the proposed development, set out the intended EIA scope and methodologies for the assessment of potentially significant environmental effects, and outlined the content of the ES.

9.1.3 The aim is to ensure that the proposed development has due regard for the environment, mitigates adverse environmental effects where possible and takes advantage of opportunities for environmental enhancement.

9.2 The Environmental Statement

9.2.1 The outcome of the EIA process is the production of an Environmental Statement to accompany the planning application. An ES will be prepared that:

- Describes the proposed development;
- Outline the main alternatives considered;
- Describes the baseline environment;
- Describes the likely significant effects;
- Describes the measures to mitigate adverse effects; and
- Includes a non-technical summary.

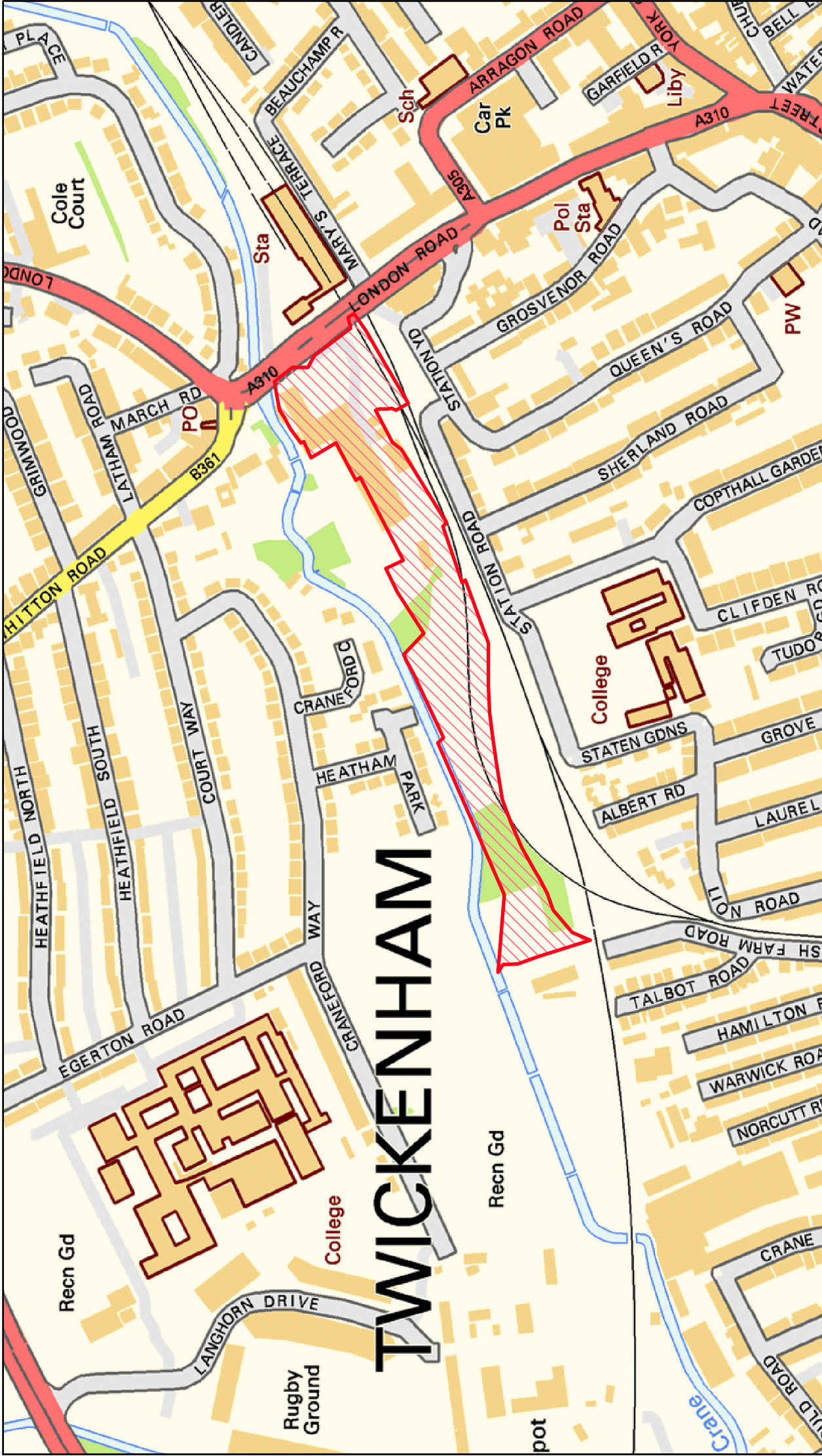
9.3 Next Steps

9.3.1 The next steps in the EIA process are as follows:

- Request Scoping Opinion from LBRuT (May 2011);
- Receipt of formal Scoping Opinion (June 2011); and
- Submission of ES with planning application (Est. Summer 2012).

Appendix A: Indicative Site Location Plan


Former Royal Mail Sorting Office, Twickenham
EIA Scoping Report



Date	15.02.2012
A4 Scale	N.T.S.
Drawn by	ZB
Checked by	SB
Figure Number	Appendix A

Former Royal Mail Sorting Office, Twickenham
 Indicative Site Location Plan

Client	St James Group Limited
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Appendix B: Extract from EIA Regulations

Former Royal Mail Sorting Office, Twickenham EIA Scoping Report

1. Description of the development, including in particular—

(a) a description of the physical characteristics of the whole development and the land-use requirements during the construction and operational phases;

(b) a description of the main characteristics of the production processes, for instance, nature and quantity of the materials used;

(c) an estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc) resulting from the operation of the proposed development.

2. An outline of the main alternatives studied by the applicant or appellant and an indication of the main reasons for the choice made, taking into account the environmental effects.

3. A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors.

4. A description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development, resulting from—

(a) the existence of the development;

(b) the use of natural resources;

(c) the emission of pollutants, the creation of nuisances and the elimination of waste,

and the description by the applicant or appellant of the forecasting methods used to assess the effects on the environment.

5. A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.

6. A non-technical summary of the information provided under paragraphs 1 to 5 of this Part.

7. An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant or appellant in compiling the required information.

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