

STATION HILL NORTH READING

ENVIRONMENTAL STATEMENT NON TECHNICAL SUMMARY

DECEMBER 2019

1. INTRODUCTION

SH Reading Master LLP has prepared a suite of planning applications for the redevelopment of land to the south of Station Hill, Reading. The redevelopment comprises the demolition of all existing buildings and structures on the site and the construction of a commercial and residential led scheme with ancillary retail and leisure uses. The area of land is shown in Figure 1 and is hereafter referred to as the Site. The redevelopment proposals are hereafter called the Proposed Development.

The planning applications are an evolution of a scheme that already has planning consent known as the 2016 Consented Scheme. The main differences between the 2016 Consented Scheme and the Proposed Development are that:

- the NCP car park would now be demolished and replaced with a new office building;
- the buildings are generally higher than previously proposed;
- there would be level access through from Reading Mainline Station and Friar Street; and
- a greater area of public realm would be created.

The layout of the Site as existing is shown below.

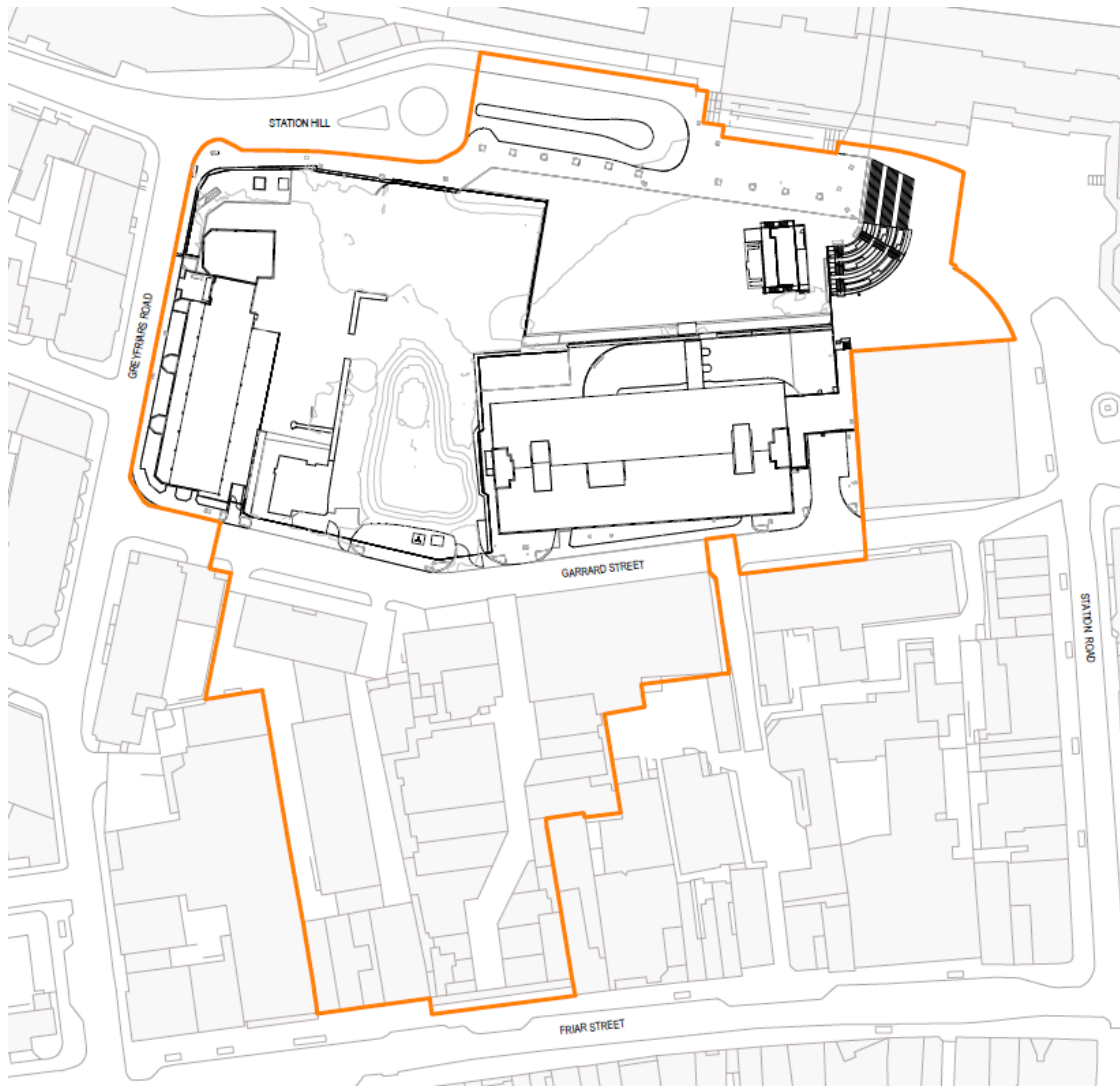


Figure 1: Site Layout

The suite of planning applications for the redevelopment of the Site comprise the following:

- Section 73 Minor Material Amendment Applications relating to Plots E and F of the 2016 Consented Scheme. These applications related to minor changes to the height and layout of these two Plots, which are collectively referred to as the South Site or Phase 1. The applications were submitted in March 2019 together with reserved matters details of the proposals for these Plots and Reading Borough Council resolved to grant planning permission for these applications in July 2019;
- A detailed planning application for Phase 2 of the Proposed Development (also known as Plot G) which comprises a new office building, two levels of podium car parking and new areas of public realm;
- An outline planning application for Phase 3 of the Proposed Development which comprises four building plots (known as Plots A, B, C and D) for office and possibly residential units and / or a hotel;
- A non material amendment application to resolve co-ordination details between the planning applications for Phase 1 and Phase 2. This includes removal of the steps from the south side of Garrard Street as they will now be included within the application for Phase 2.

Phase 2 and Phase 3 are collectively referred to as the North Site with the phases shown in Figure 2.

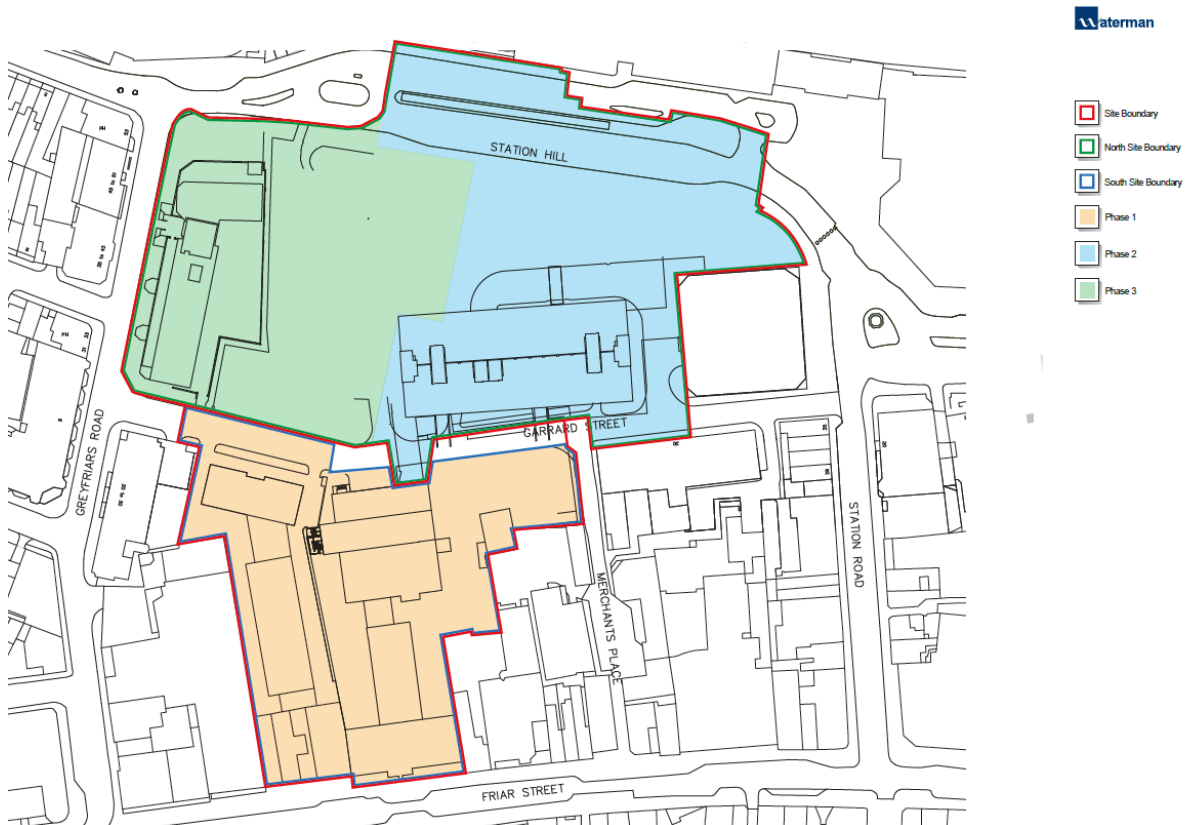


Figure 2: Site Boundaries and Phases

Environmental Impact Assessment

Environmental Impact Assessment (EIA) is a formal process of identifying, predicting, evaluating and mitigating the likely significant environmental effects arising from a project. It is a requirement of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017, as amended (the 'EIA Regulations') for developments of a certain size and scale. The EIA process ensures that decision makers consider the likely environmental effects of new development when determining a planning application. Where an EIA is required, all relevant assessment information must be provided by the Applicant in a document referred to as an Environmental Statement (ES). The ES must accompany the submission of the subject planning application.

Due to the scale and nature of the Proposed Development, an EIA has been undertaken and an ES prepared to accompany the planning submission. A number of ESs have been submitted previously in relation to past schemes proposed at the Site including the 2016 Consented Scheme. In addition, as the Section 73 Applications for Plots E and F were submitted in March, an update to the ES of the 2016 Consented Scheme was prepared to accompany these applications. However, even though the planning applications now being submitted relate to the North Site only, as the South Site is still considered to form part of the overall Proposed Development, the EIA considered the effects of the entire Proposed Development. The ES therefore supersedes all previous ESs.

This document provides a summary of the 2019 ES in non-technical language.

2. ENVIRONMENTAL IMPACT ASSESSMENT METHODOLOGY

As described above, Phases 1 and 2 of the Proposed Development have been designed in detail. This means that information on the height, layout, landscaping and appearance of these phases is known. However, Phase 3 is being submitted as an outline application with matters of appearance, landscaping, layout, scale and access reserved for future agreement with Reading Borough Council (through reserved matters applications). Therefore, in order to ensure that the likely environmental effects of the application can be assessed, a series of Parameters have been defined which set out maximum and minimum allowances within which a future reserved matters application would come forward. In addition, because wind conditions are sensitive to building layout, a series of Development Options have been developed which show ways in which the Proposed Development could come forward. These have been tested by the wind assessors to demonstrate that suitable wind conditions could be achieved for a future development within this Phase.

In addition to the above, because there may be a pause in the Proposed Development following construction of Phase 1 and Phase 2 and prior to completion of Phase 3, the EIA included, where appropriate, an assessment of an 'Interim Development Scenario' as well as a 'Completed Development Scenario'. The Interim Development Scenario considers the environmental effects of Phases 1 and 2 in isolation but includes for the fact that Xafinity House would also have been demolished by this stage. The Completed Development Scenario considers the environmental effects of all phases of the Proposed Development.

An EIA Scoping Report was submitted to Reading Borough Council in May 2019 outlining the Proposed Development, setting out the proposed approach as summarised above, and identifying what technical topics were considered to require further assessment or analysis. The technical topics where further information or assessment was considered to be required comprised:

- Socio-Economics and Health;
- Townscape and Visual;
- Historic Environment;
- Air Quality;
- Noise and Vibration;
- Ground Conditions and Contamination;
- Wind;
- Daylight, Sunlight and Overshadowing; and
- Cumulative Effects.

Reading Borough Council agreed with this assessment in their Scoping Opinion of 24th July 2019 and a summary of the assessments undertaken is provided in the sections below.

In addition, it was also agreed that in order to provide RBC, other statutory consultees and interested parties with an understanding of the differences between the effects of the 2016 Consented Scheme

and those of the Proposed Development, each technical chapter of the ES includes a summary where appropriate, of the differences between the effects of the 2016 Consented Scheme and those of the Proposed Development.

3. LAND USES AND ACTIVITIES

The South Site is currently occupied by Telecom House and Friars Walk Shopping Centre, both of which are vacant and are currently being demolished. The North Site is occupied by Xfinity House, a vacant office building which is currently being used as a construction compound for the contractors undertaking the demolition works on the South Site, the NCP car park which is still in use, and a Temporary Events Space used for market stalls, temporary ice rinks and other similar temporary events. The 'Biscuit Tin' café is a semi-permanent structure within the Temporary Events Space. The central part of the North Site is currently open land behind construction hoardings following the demolition of the Mecca Bingo Hall, Bus Station, Western Tower and the associated retail arcade in 2016. Photographs of the Site are shown below.



View of the Temporary Events Space



View towards the South of the Site from Friar Street



View of the Site from Greyfriars Road



View Looking South from Garrard Street

Land uses surrounding the Site are varied and include:

- Reading Mainline Station and transport interchanges;
- Temporary taxi rank;
- Occupied and vacant offices;
- Shops, cafes, restaurants and bars;
- Residential properties;
- Hotels; and
- Public open space.

4. ALTERNATIVES

In line with the EIA Regulations, the ES provides a description of the main alternatives considered by the Applicant.

As the Site is allocated in Reading Borough Council's Local Plan for high density development suitable for a mix of uses, no alternative sites were considered by the Applicant. However, a number of alternative designs, scales and technologies were considered during the design process of the Proposed Development. The ES also provides a summary of the likely environmental effects of the 'Do Nothing' Alternative, that is, leaving the Site in its current state.

The assessment of the Do Nothing Alternative found that overall, there were more positive effects associated with developing the Site than negative effects. This is supported by the findings of the Sustainability Appraisal of the emerging Local Plan which states that leaving *'such an accessible and prominent site sitting vacant would have significant negative effects on the preservation of undeveloped land, townscape character, the nearby historic environment and on the overall economic growth prospects. Finally, this option would fail to provide housing.'*

The following alternative designs, scales and technologies, were considered during the design of the Proposed Development:

- Alternative heights;
- Alternative layouts and areas of public realm;
- Alternative amounts of land uses;
- Alternative means of managing the foul water sewer;
- Provision for cyclists; and
- Alternative building structures and energy strategies considering greenhouse gas emissions and climate change.

The alternatives were reviewed by the technical teams and the Proposed Development has evolved from careful consideration of policy objectives for the wider Reading area and the Site, the Applicant's commercial objectives, environmental effects having regard to the studies undertaken as part of the EIA process, and following consultation with RBC, key stakeholders and the public.

5. DEVELOPMENT DESCRIPTION

As described in the Introduction, The Proposed Development comprises the demolition of all buildings and structures within the Site and the construction of a mixed use residential and commercial led scheme. The proposals for the South Site and the North Site are described further below.

South Site

The proposals for the South Site comprise demolition of all buildings and structures within the South Site and construction of two buildings (Plots E and F) above a basement level. Up to 550 residential units would be provided together with some ground floor retail / leisure uses and 165 car parking spaces. The buildings range in height from a minimum of 50m above ordnance datum (AOD) to a maximum of 85.6m AOD.

North Site

The planning application for the North Site includes for the demolition of all buildings and structures within the North Site and construction of buildings within five building Plots. The buildings range in height from a minimum of 62m AOD to a maximum of 163m AOD and would rise up from a 'Plaza level'. The Plaza level is the principal area of public realm across the North Site providing level access from Reading Mainline Station through to Friar Street. The Plaza level would sit on top of underlying podium levels, which would predominantly be used for car parking. The buildings within the North Site would provide ground floor and Plaza Level retail and leisure uses with offices, and potentially residential uses,

a hotel and / or senior care accommodation at upper levels. Car parking would be provided within up to three podium levels with a maximum of 835 spaces provided.

Public realm would be provided in the form of a series of linked public squares. Enhancements to the public realm outside Reading Mainline Station and along Station Hill are also proposed and would include a pocket park and redesign of the existing steps on Station Hill.

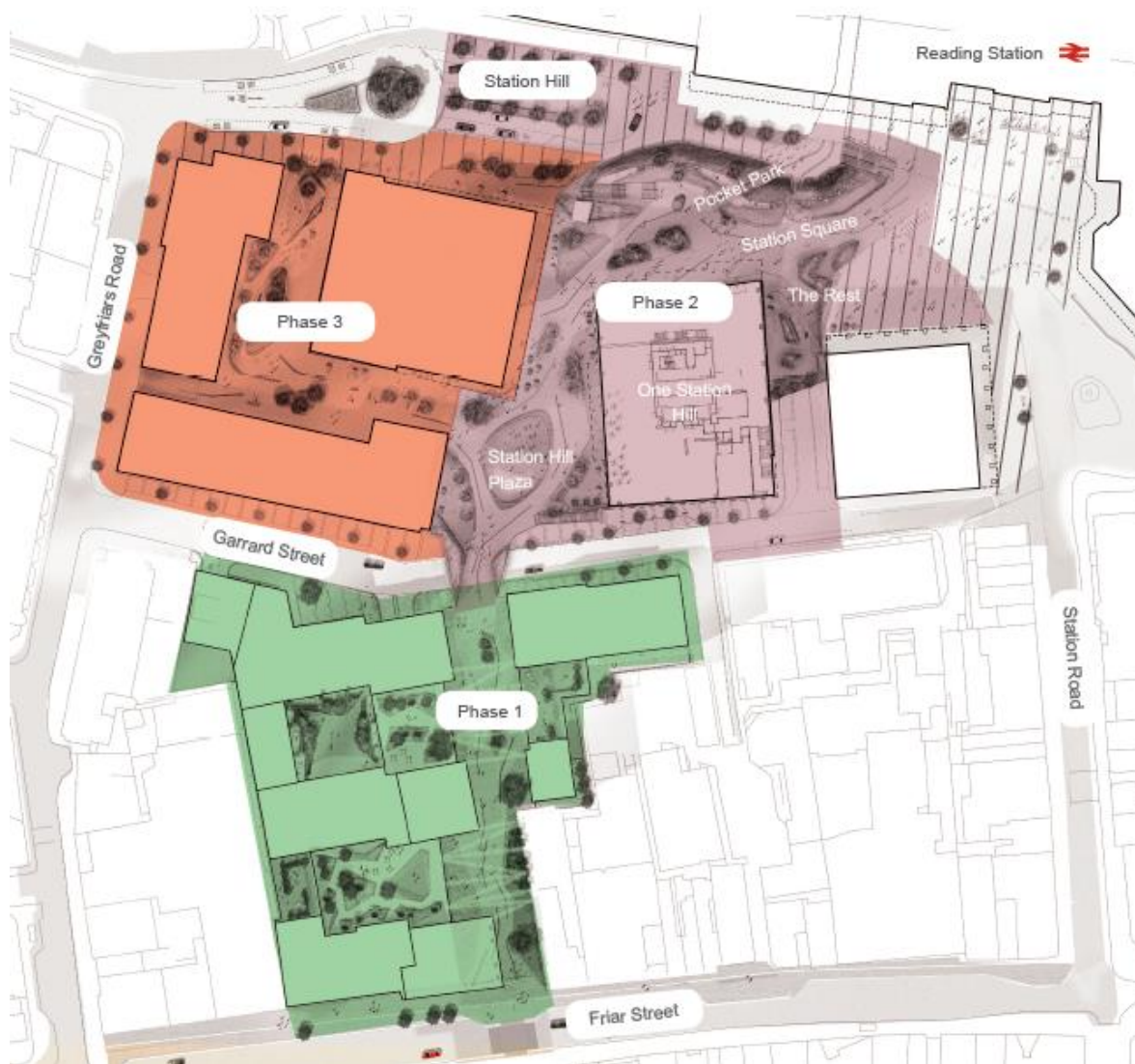


Figure 3: Proposed Development (note: the proposals for Phase 3 are illustrative)

6. DEMOLITION AND CONSTRUCTION

As described above, the Proposed Development is being delivered in Phases with Plots E and F forming Phase 1, Plot G which incorporates the office building and surrounding public realm forming Phase 2 and Plots A to D forming Phase 3.

Demolition of the buildings within Phase 1 is currently underway with construction of these Plots anticipated to be completed by December 2022. Demolition of the NCP Car Park in Phase 2 is programmed to commence in late 2019 / early 2020 with construction of Plot G programmed to follow thereafter and be complete in late 2022. The programme delivery of Phase 3 is currently uncertain although it is anticipated to commence in 2023 following the completion of Phases 1 and 2. Completion of Phase 3 is programmed for 2026.

The demolition and construction works within each Phase would follow a similar sequence comprising:

- Site set up and enabling works such as cutting off services;
- Demolition and site preparation;
- Excavation for the basements, new electricity, gas and water mains;
- Installation of foundations;
- Construction of the basement and podium levels;
- Construction of the new buildings and fitting them out; and
- Landscaping.

Demolition and construction works can cause significant environmental impacts and disruption to neighbours if they are not properly managed. The Applicant is committed to minimising the impacts of the works and, would require the appointed contractor(s) to implement a Construction Environmental Management Plan (CEMP) for the demolition and construction works. The CEMP would set out procedures that the contractors would be required to adopt to manage the environmental impacts of the works and would be agreed with Reading Borough Council. The requirement to comply with the CEMP would be included as part of the contract conditions for each element of the work.

7. SOCIO-ECONOMICS

The socio-economic chapter of the Environmental Statement focuses upon the economic and social effects which may arise as a result of the Proposed Development. It sets out the potential effects of the Interim Development Scenario and Completed Development Scenario, when compared with the existing baseline. The assessment considers both temporary effects which would arise as a result of the construction phase, and the permanent effects which would be brought about by new households and commercial floorspace. These effects include the employment that would be created by the Proposed Development, the impact on the area's population and housing supply, and the impacts on demand for social and community infrastructure including health and educational facilities.

The construction works will create jobs for construction workers. However, because construction workers are relatively mobile, the overall effect is assessed as **negligible**.

The Proposed Development is assessed to have positive effects on population, housing supply, employment, additional spending and open space. Under the Interim Development Scenario, 538 new residential dwellings are proposed and under the Completed Development Scenario up to an additional 750 dwellings are proposed. Provision of new residential dwellings will have a moderate to major beneficial effect on the housing supply in the local area and the District. The additional dwellings are expected to be occupied by around 1,070 people under the Interim Development Scenario and between 1,070 and 2,590 people in the Completed Development Scenario; a **minor to moderate beneficial** effect respectively. The increased local population will increase household spending in local shops; a **minor beneficial** effect under the Interim Development Scenario and a **minor to moderate beneficial** effect under the Completed Development Scenario.

Employment will be generated from the proposed commercial floorspace (offices and shops) of up to 2,553 full time equivalent jobs under the Interim Development Scenario and between 4,399 and 9,085 full time equivalent jobs under the Completed Development Scenario. This is considered to be a **minor to moderate beneficial** effect.

New open space will be provided by the Proposed Development incorporating a pocket park and informal children's play spaces. This is assessed as a **minor beneficial** effect.

The Proposed Development is assessed to have a potentially negative effect on community facilities (such as nurseries, schools and healthcare facilities). However, financial contributions will be provided to mitigate the impact of additional demand for early years, school places and doctors. These mitigation measures mean that the residual effect of the Proposed Development will be **negligible**.

8. TOWNSCAPE AND VISUAL

A Townscape and Visual Impact Assessment has been carried out to assess the likely significant effects of the Proposed Development on townscape character and views. Nine townscape character areas have been identified within or surrounding the Site. The views to be assessed were agreed with Reading Borough Council and wirelines (an outline of the proposals based on a 3D model of the scheme) of the Development from these viewpoints were prepared. The townscape and visual effects were qualitatively determined based on professional judgement and review of the wirelines of the Proposed Development.



Wireline view from Chatham Street

Wireline view from Market Place

During the demolition and construction works, there would inevitably be a visual intrusion to the local townscape and views as a result of large construction plant and machinery, including tower cranes, the presence of buildings being demolished and the partially completed built form of the Proposed Development. Whilst this is assessed to be a **negligible to major adverse** effect, it is unavoidable for the redevelopment of the Site and would only be temporary in nature.

Consideration of the visual effect of the Proposed Development, once completed, has been an integral part of the Applicant's design approach. The design of the Proposed Development has been developed to take account of the likely townscape and visual impact. The intention of the Applicant is for the Proposed Development to result in buildings of the highest architectural and urban design quality, which would contribute positively to the local townscape and provide a focal point within this important area of central Reading.

The Proposed Development would result in a beneficial effect on the townscape of the Site and the areas immediately surrounding the Site given that it is currently under-developed with vacant buildings. The effect on townscape character areas ranges from **negligible to major beneficial**.

The majority of views would also experience negligible or beneficial effects once the Proposed Development is completed with adverse effects only occurring where the viewpoints are particularly sensitive and currently have a particularly rural outlook currently devoid of tall buildings. These views include from St Peter's Church and Church Yard, a viewpoint approximately 4km to the north east of the Site off Dunstone Way, Caversham Bridge and a viewpoint within Christchurch Meadows. If the Proposed Development is built to maximum parameters the effect on these viewpoints is considered to be **major adverse** due to the change in skyline from these viewpoints. The effects would reduce to moderate adverse if the Proposed Development is built to minimum parameters. However, the visual effects for people on Garrard Street, Greyfriars Road, Station Hill and other surrounding viewpoints is considered to be **moderate beneficial** and for users of Balmore Park is considered to be **major beneficial** if the scheme is built to maximum parameters. These effects reduce to generally **minor to moderate** at minimum parameters but remain **beneficial**.

9. HISTORIC ENVIRONMENT

There are no designated heritage assets, such as listed buildings or scheduled monuments within the Site although evidence of early medieval to medieval town defences and buildings, medieval Franciscan activity and post-medieval Civil War defences may be encountered during excavation works at the Site. The Site also has the potential to contain as yet unknown buried archaeological remains, especially those of medieval to post-medieval date which may be related to the medieval town development or associated with post-medieval Civil War defences.

Within the study area surrounding the Site there is a Scheduled Monument, Listed Buildings, Conservation Areas and several non-designated heritage assets of potential low to high value.

Excavation of basements and foundation will result in the removal of archaeological remains, where present. However, it is proposed that a programme of archaeological investigation and recording is undertaken during the ground excavation works. The scope of such works would be agreed with Berkshire Archaeology prior to implementing. However, the overall effect on below ground heritage assets (archaeology) is considered to be **minor to moderate adverse**. The Completed Development would have no additional impact.

The Proposed Development would not have a direct physical effect on designated or non-designated heritage assets within the study area although it would change the setting of these assets during construction works and on completion of the Proposed Development. This effect is considered to be **minor adverse**.

10. AIR QUALITY

The main potential effects on local air quality during the demolition and construction works of the Proposed Development relate to dust. Nuisance caused from dust is only likely to be experienced by those living, working or visiting within 200m of the Site. A range of measures to minimise or prevent dust would be put in place during the demolition and construction works as part of the Construction Environmental Management Plan so that no significant dust effects would result.

Emissions from equipment and machinery operating on the Site during the demolition and construction works would be small in comparison to the emissions from the volume of vehicles travelling on roads surrounding the Site. Such emissions would not significantly affect air quality.

Construction traffic routes would be agreed with Reading Borough Council in advance of work starting on Site. The routes and timings of vehicle movements would be designed to minimise effects where possible. With the implementation of appropriate mitigation measures, it is anticipated that the effect of construction vehicles entering and egressing the Site would not be significant.

Computer modelling has been carried out to predict the likely effect of future traffic related emissions arising from the Proposed Development and the likely resultant changes that this would bring about to local air quality. The likely effect of the Proposed Development on local air quality has been predicted at existing sensitive locations surrounding the Site and at future sensitive locations within the Site.

The results of the computer modelling demonstrate that the completed and operational Proposed Development would have a **negligible** effect upon local air quality. Similarly, it has been demonstrated that Site would be suitable for residential use.

11. NOISE AND VIBRATION

The noise and vibration effects of the Proposed Development have been established in accordance with published guidelines. The assessment included a comprehensive baseline noise monitoring survey of the Site and surrounds. Local receptors which would be sensitive to noise and vibration were also identified. These include future Site occupants and occupants/users of the surrounding residential and commercial properties.

During the demolition and construction works, a number of measures would be put in place to minimise the amount of noise and vibration arising from the Site. These measures would be included in a site-specific CEMP and would include but not be limited to: the careful selection of modern and quiet plant and machinery; the erection of suitable hoardings around the Proposed Development to screen noise generated by equipment on-site and undertaking work within pre-agreed working hours; all of which would be agreed with Reading Borough Council. Although the demolition and construction process would result in increases in prevailing noise and vibration levels, with implementation of the CEMP, the Demolition Management Statement and Construction Management Statement, these would be controlled and would result in **negligible to moderate adverse local and temporary** effects.

A review of the traffic flows associated with the demolition and construction, and an assessment of flows associated with the Completed Development, concludes that, whilst noise from traffic flows on Garrard Street and Greyfriars Road would increase resulting in a **minor adverse** effect, the change is unlikely to be perceptible to surrounding sensitive receptors.

All proposed buildings would be designed to stringent acoustic design aims which would minimise the potential for adverse noise effects resulting from the operation of building plant and services, servicing and delivery, non-residential uses and noise from car park usage, the latter being located internally within the lower ground, mezzanine and podium levels and therefore screened. As a result, the effects of the Completed and Operational Proposed Development on noise would be **negligible**.

12. GROUND CONDITIONS AND CONTAMINATION

An assessment of the potential for ground contamination to exist at the Site has been undertaken based on information obtained from historical maps, geological maps and previous investigations. A further intrusive Site Investigation has also been recently undertaken on the North and South Site to provide further detailed ground conditions information.

Chemical analysis of environmental samples (soils and groundwater) collected as part of the intrusive Site Investigations did not identify widespread contamination of soils and groundwater. However, hotspots of hydrocarbon contamination in the soils and groundwater, were recorded. Additional investigation would be undertaken to further investigate the extent of the hotspots when the buildings are demolished. If necessary, the hot spots would be cleaned up (remediated) to ensure that they do not cause harm to humans or the environment. Remediation or removal of potentially contaminated soil and /or groundwater would be a **minor beneficial** effect.

All demolition and construction works would be undertaken in accordance with legal requirements and a Construction Environmental Management Plan (CEMP). This would minimise the risk of spillages, creation of dust, uncontrolled run off or other activities which could cause or mobilise existing contamination. The resulting effect would be **negligible to at worst, minor adverse**.

On completion of the Proposed Development, the risk posed by any remaining residual contamination to future Site occupants, soil, groundwater, and flora and fauna would be very low. This is because, contamination would be remediated (where necessary), and also because the Proposed Development would be covered in hard surfacing, which would act as a physical barrier between the residual contamination source and potential receptors. Clean soils would be used in landscaped areas to reduce risks of exposure to soil contaminants and fuel storage tanks for backup generators, where required, would be stored on hardstanding. The residual effect of the completed Proposed Development is therefore assessed to be **negligible**.

13. WIND

Physical models of the existing Site and surrounds and seven different configurations of the Proposed Development were tested in a wind tunnel. Wind was blown across the physical models to see if the wind conditions at various locations within and around the Proposed Development would be suitable for the intended use of these areas, for example areas identified for sitting or entrances to buildings.

Locations where strong winds would also occur, that have the potential to be a safety concern for pedestrians and / or cyclists were also identified. Where the conditions were identified as not being suitable for their intended use and / or where strong winds may occur, measures to reduce the wind speeds in these areas (mitigation measures) were identified and these were also tested in the wind tunnel to ensure that they would be effective in reducing the wind speeds.

Wind conditions at the existing Site are suitable for the intended use during the summer and the windiest seasons. There would be instances of strong winds with the potential to be a safety concern for cyclists and pedestrians at the south-eastern corner of Thames Tower and on Garrard Street to the south of Thames Tower at the existing Site.

Installation of the proposed landscape scheme would mitigate the occurrence of strong winds except those that are already present to the south east of Thames Tower.

As construction of Phase 3 nears completion, conditions would become too windy on the thoroughfares and entrances at the north-western corner of the Site as well as on Garrard Street and at off-Site entrances on Greyfriars Road (moderate and minor adverse effects respectively). Strong winds would also occur on Station Hill, Garrard Street and Greyfriars Road until landscaping and mitigation measures are installed.

In the Interim Development Scenario (Phase 1 and Phase 2) with the existing surrounding buildings, wind conditions during the windiest season would be too windy for the intended uses north and north-west of Plot G and on the Plot E and Plot G terrace levels. This therefore represents a minor adverse (significant) effect. Wind conditions elsewhere would be suitable or better than those required for the intended uses of these areas representing a negligible (not significant) to minor beneficial (not significant) effect. Winds with the potential to be a safety concern would occur at the south-eastern corner of Thames Tower and the north-western corner of Plot G.

Wind mitigation measures have been developed through a wind mitigation workshop to improve wind conditions in those locations where they are not suitable for their intended use and to reduce the occurrence of winds which would be a safety concern. With the landscaping scheme and these measures in place, wind conditions would mainly be calmer, and the effects would be negligible to moderate beneficial. Instances of strong winds in the baseline scenario would persist at the south-eastern corner of Thames Tower until the development of Phase 3.

The Maximum Parameter Development in the context of the existing surrounding buildings would have wind conditions that are too windy for the intended uses at the north-western corner of the Site, to the south of Plot B and to the west of Plot G as well as at entrances on Tudor Road, Greyfriars Road and Station Hill. The effects in these locations are moderate adverse and minor adverse. During the summer season, wind conditions in the Plot G undercut and on the Plot E and Plot G terrace levels would be too windy for sitting in these areas representing a minor adverse effect. Wind conditions elsewhere would be suitable for their intended uses representing a negligible to minor beneficial effect throughout the year. Wind conditions at the Maximum Parameter Development in the context of the cumulative schemes would have a similar range of effects to those in the context of the existing surrounding buildings. Winds that would be a safety concern for pedestrians and cyclists would occur at the north-western corner of the Site and to the west and south of the North Site. Wind conditions that would be a safety concern to occupants would also occur at the Plot G roof space, although this area would be inaccessible except to maintenance workers.

Because Phase 3 is being submitted as an outline application, meaning that the details of the development are not currently known, three different Development Options were tested in the wind tunnel. These Development Options demonstrate ways in which Phase 3 could be built out within the maximum parameters and meant that ways of improving (mitigating) the wind conditions identified as being unsuitable for the proposed future use of certain areas and / or having potential safety concerns, within the maximum parameter scheme could be identified. Wind mitigation measures were developed

through a wind mitigation workshop to improve wind conditions and reduce the occurrence of winds which would be a safety concern. Whilst these mitigation measures would need to be re-tested when the design has been fixed in future, the testing aimed to demonstrate that there are ways in which the Proposed Development could come forward that would have acceptable wind conditions. The Development Options were tested with Phases 1 and 2 and cumulative surrounding buildings being present.

Wind conditions in Development Option 1 and Development Option 3 in the context of cumulative surrounding buildings and with mitigation measures implemented would be similar, with conditions being minor adverse at an off-Site entrance on Station Hill and at the podium entrance to Plot A as well as at the Plot E terrace level. At other locations around Development Options 1 and 3, wind conditions would represent a negligible to moderate beneficial effect. There would be no instances of strong winds except at the Plot G roof space (in Development Option 1) and the Station Hill carriageway (in Development Option 3). The Plot G roof space would be inaccessible except to maintenance workers, so no further mitigation is required for this area. Further mitigation options would be considered at the reserved matters stage to address strong winds on Station Hill if Development Option 3 (or similar) is taken forward.

Development Option 2 in the context of the cumulative surrounding buildings and with mitigation measures implemented would have wind conditions that would represent a minor adverse effect at an existing entrance on Station Hill and at the podium entrance to Plot A. Effects on the Plot B roof terrace levels and on Plot A balconies would be too windy for their intended use, representing a minor adverse effect. Elsewhere, wind conditions would represent a negligible to moderate beneficial effect. Winds with the potential to be a safety concern for cyclists and more vulnerable pedestrians would occur to the north-west Site and at Plot A balcony levels.

It would be expected that further improvements to wind conditions and a further reduction to the occurrence of winds with the potential to be a safety concern to cyclists and pedestrians could be achieved during the Phase 3 detailed design.

14. DAYLIGHT, SUNLIGHT AND OVERSHADOWING

As set out in Chapter 14 of the ES, an assessment has been undertaken of the likely effect of the Proposed Development on the daylight, sunlight, overshadowing, and light pollution experienced by neighbouring properties and amenity spaces. A solar glare assessment has also been undertaken to determine if the Proposed Development has the potential to cause effects to train drivers approaching Reading Mainline Station.

The technical analysis has been undertaken quantitatively via the creation of a digital three-dimensional model of the Site and surroundings.

The daylight effects of the Proposed Development were assessed for a total of 1,212 windows serving 869 rooms within 63 existing residential buildings surrounding the Site. The sunlight effects of the Proposed Development were assessed for a total of 368 rooms within 26 existing surrounding buildings. Two future receptors were also assessed in terms of daylight. The receptors were identified using professional judgement, based on due diligence in terms of the existing uses, proximity to the Site, whether any windows face the Proposed Development and consideration of the scale of the Proposed Development.

In respect of overshadowing, one public open space, one communal terrace and 30 private gardens were assessed. One existing residential building and three future receptors were assessed for light pollution effects. Two rail tracks (east and west bound) were assessed for the solar glare assessment.

During the demolition works there would be some temporary improvements to the level of daylight, sunlight and overshadowing to properties and areas surrounding the Site because the remaining existing buildings on Site would be demolished. There would be no change to the solar glare effects

during the demolition works. As construction of the Proposed Development progresses, the daylight, sunlight, overshadowing and solar glare effects to properties and areas surrounding the Site would progress to the conditions predicted for the completed Proposed Development. In terms of light pollution, lighting installed during the demolition and construction works would be installed in accordance with best practice guidance to minimise the potential effects to surrounding properties. As the buildings are constructed, light pollution effects would gradually change to those expected once the Proposed Development is complete and operational. To minimise light pollution to neighbouring residential buildings during the later construction stages through to completion, the office lighting along the southern perimeter, once installed, will be switched off after 11pm until morning as a requirement in the CEMP.

In relation to daylight, 27 of the 63 buildings identified would not experience a noticeable alteration in the levels of daylight that they receive with the completed Proposed Development in place; a **negligible effect**. The remaining 36 properties would experience noticeable effects with reductions in daylight levels in excess of the industry standard guidelines with respect to daylight availability with effects up to **major adverse**. The most significantly affected properties are located at:

- 1-29 Projection East;
- 1-41 Icon House;
- 1-45 Projection West;
- 30 Garrard Street;
- 33 Friar Street;
- 34 Friar Street;
- 49-51 Greyfriars Road;
- 53 Greyfriars Road;
- Alexia Court - 3 Tudor Road;
- Bridewell & Samuel House - Student Housing;
- The Gateway Public House - 31 Greyfriars Road.

In relation to sunlight, 16 of the 26 buildings identified would not experience a noticeable alteration in the levels of sunlight that they receive with the Completed Development in place; a **negligible effect**. The remaining 10 properties would experience noticeable effects with reductions in sunlight levels in excess of the industry standard guidelines with respect to sunlight availability with effects up to **major adverse**. The most significantly affected properties are located at:

- 1-29 Projection East;
- 1-41 Icon House;
- 1-45 Projection West;
- 30 Garrard Street;
- 49-51 Greyfriars Road;
- 53 Greyfriars Road;
- 9-11 Stanshawe Road;
- The Gateway Public House - 31 Greyfriars Road.

Despite the above, it is widely accepted that the industry standard guidelines for daylight and sunlight should be applied with flexibility, particularly given that their original application was intended for developments within the suburban environment. In addition, the Proposed Development represents a revision of an existing scheme that already has planning consent. When comparing the effects of the

Proposed Development with the scheme that already has planning consent, many properties do not experience any change in daylight and sunlight effects with small material changes experienced for the remainder.

The Proposed Development would have **negligible** overshadowing effects on the surrounding communal amenity area and private gardens. Whilst, Station Hill Square would experience an increase in overshadowing compared with existing conditions, with a **moderate adverse** effect assessed, this is a result of the tall building strategy intended for this Site.

By implementing mitigation such as an automated dimming system and occupancy sensors after hours, or automatic blinds, the Development would have **negligible** light pollution effects on the existing and future residential receptors assessed.

In terms of solar glare, the assessment considered the worst-case potential occurrence of solar reflections from the Proposed Development and proximity to a driver's line of sight. Short term effects were identified from solar glare for train drivers on tracks approaching Reading Mainline Station in both directions, resulting in an overall **minor adverse** effect. However, without the Proposed Development in place the tracks are exposed to the direct line of sight of the sun.

15. CUMULATIVE EFFECTS

Two types of cumulative effects have been assessed in relation to the Proposed Development:

- The interaction of individual effects from the Proposed Development upon a set of defined sensitive receptors; and
- The combined effects of the Proposed Development and other reasonably foreseeable schemes.

There is the potential for some interactions to take place during the demolition and construction works. These would generally reduce during fit out and landscaping. Effect interactions would primarily relate to the combination of temporary noise, vibration and visual effects to adjacent occupants/future Site residents with fewer effects to pedestrians and road users in the surrounding area.

When the Proposed Development is completed effects would primarily relate to the interactions between visual effects, daylight, sunlight and wind. Only a small number of receptors very close to the Site would experience Type 1 Cumulative Effects during the Interim and Completed Development Scenarios; these would generally be interactions between beneficial visual effects and adverse wind, daylight and sunlight effects.

The likely cumulative effects of the Development with other consented and reasonably foreseeable schemes were generally similar to those of the Proposed Development on its own although cumulatively, there would be:

- Additional job creation and local expenditure;
- A greater number of new homes;
- Visual interactions between the Proposed Development and cumulative schemes with tall buildings;
- A further reduction in available daylight to a number of local receptors including 1-29 Projection East, 1-41 Icon House and 1-45 Projection West.

The cumulative schemes would also result in additional residents which can be reasonably expected to bring more people to the area. This could increase demand for community facilities such as education and healthcare facilities. However, it is assumed that, as with the Proposed Development, financial contributions towards additional provision would be required as part of the planning consents for the cumulative schemes meaning that the overall effect would be **negligible**.

16. MITIGATION, MONITORING AND ENHANCEMENT MEASURES

This EIA was undertaken in parallel with the design process. As a consequence, many measures to mitigate likely significant adverse environmental effects and enhance beneficial effects have been

incorporated into the scheme design. However, where adverse potential effects were identified in the technical chapters, methods to mitigate or monitor these effects have been described. Similarly, details of measures to enhance beneficial effects have also been identified. It is anticipated that implementation of such mitigation, monitoring and enhancement measures would be required by condition, or through legal agreements applied to any planning consent. Such measures would be agreed with Reading Borough Council.

If you would like to receive further copies of this Non-Technical Summary, or would like to purchase a copy of the Environmental Statement, accompanying Figures or Technical Appendices, please contact:

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Additional copies are also available for viewing by the public during normal office hours in the planning department of RBC. Comments on the application, should be forwarded to RBC at the address below:

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