Completed Development

Quantitative assessment will be undertaken by means of a wind tunnel testing exercise. Scale models (likely 1:300) will be built for the following scenarios:

- Scenario 1: Existing baseline (The buildings currently occupying the site and the existing surrounding buildings/area);
- Scenario 2: Existing baseline + proposed development (The completed proposed development within the context of the existing surrounding buildings/area); and
- Scenario 3: Existing baseline + proposed development + cumulative development (The completed proposed development in the presence of cumulative schemes/future surrounding buildings).

Wind tunnel testing would be undertaken without landscaping to represent a worst-case. Landscaping will only be modelled in the event that mitigation is required. Should uncomfortable or unsafe wind speeds be measured a mitigation workshop will be conducted which will mitigate these conditions through the addition of hard or soft landscaping.

Mean and peak wind speeds will be measured around the base of the buildings forming the proposed development, accessible elevated levels of the development including a select number of balconies, and other surrounding buildings, paths, roads, and areas of open spaces, for all wind directions. Consideration will be given to the sensitive uses associated with these areas, such as entrances, thoroughfares, amenity spaces, pedestrian crossings, pick-up/drop-off points, spill-out seating and so on. These results will be combined with long-term meteorological climate data for the London area (obtained from Heathrow, Gatwick & Stanstead airports combined).

The results of this analysis will be benchmarked against the Lawson Comfort Criteria to determine the suitability of the different pedestrian use areas both within and surrounding the site for sitting, standing, entering a building, strolling or walking, with an additional distress/strong winds criteria applied for areas likely to be unsafe for pedestrians. The following target conditions will be assessed:

- For thoroughfares, strolling or calmer conditions during the windiest season for a mixed-use development in an urban area, similar to the proposed development.
- For main entrances, standing use wind conditions or calmer throughout the year.
- For rarely used service entrances or fire escapes, strolling level wind conditions throughout the year.
- For amenity areas, sitting conditions during the summer season (e.g. cafes & benches).
- For private balcony and communal roof terraces, sitting to standing conditions during the summer season.

Should mitigation measures be required to ensure that wind conditions are suitable for their intended use, the areas requiring mitigation will be identified and mitigation measures will be proposed. The potential for strong winds to occur will also be quantified.

Through the determination of the suitability for use of the pedestrian areas surrounding the site, a direct comparison can then be made with the baseline/existing off-site conditions where applicable, and the effect to these surrounding areas assessed, with the significance of effects identified. However, it should be noted that the focus of discussions will be a comparison of the measured conditions to the desired use of the proposed development. The results of these assessments will be presented within the ES Chapter.

Up to 20 selected balcony locations will be tested within the wind tunnel to determine the suitability of these areas for future residents of the proposed development. Although the assessment of these spaces and other amenity spaces at ground and podium/terrace levels will be completed for all

seasons, the focus will be on the wind microclimate during the summer when these areas are more likely to be frequently used.

The focus of ground level locations such as thoroughfares, entrances and bus stops will be for the windiest season, as these locations are expected to be usable at all times throughout the year.

Where exceedances of the comfort criteria are marginal and can be readily addressed by means of standard mitigation measures such as landscaping and recessed building entrances, it is not proposed to wind tunnel test mitigation measures. Instead professional judgement will be applied in confirming the effectiveness of the mitigation measures. If required for significant or safety exceedances, additional testing will be conducted to develop and evaluate the effectiveness of the mitigation strategy.

Cumulative Effects

Consideration will be given to cumulative effects within Scenario 3, where quantitative information is available within the public domain.

6.5 Daylight, Sunlight, Overshadowing and Solar Glare

A daylight, sunlight, overshadowing and solar glare technical assessment will be undertaken and presented in ES Volume 1. The assessment will be undertaken by GIA and will consider the potential daylight, sunlight, overshadowing and solar glare impacts of the proposed development; particularly to the existing neighbouring residential buildings and emerging developments, as well as existing amenity space and road viewpoints surrounding the site.

Internal daylight and sunlight to the new residential units and overshadowing to new open space created by the proposed development will be assessed separately and the results presented in a stand-alone report accompanying the application. Accordingly, these assessments will not form part of the scope of the EIA and have not been considered further within this EIA Scoping Report.

6.5.1 Potential Likely Effects

Given the scale of the new buildings that would be introduced to the site, the potential for the following effects with respect to daylight, sunlight and overshadowing have been identified:

- Temporary changes to the daylight and sunlight amenity within surrounding receptors having a reasonable expectation to natural light, because of the demolition and construction works;
- Temporary changes to the overshadowing of surrounding outdoor amenity spaces, because of the demolition and construction works;
- Gradually increasing changes to solar reflections at surrounding road viewpoints, because of construction works;
- Changes to the daylight and sunlight amenity to surrounding receptors having a reasonable expectation to natural light because of the completed proposed development;
- Changes to overshadowing of surrounding outdoor amenity spaces because of the completed proposed development; and
- Changes to solar glare occurring at surrounding road viewpoints because of the Proposed Development.

6.5.2 Approach and Methodology

The assessment of daylight, sunlight, overshadowing and solar glare will be based upon the guidance and recommendations set out in the Building Research Establishment's (BRE) Site Layout Planning for Daylight and Sunlight; A Guide to Good Practice (2011)[75], relevant national and

[75] Building Research Establishment, 2011. Site Layout Planning for Daylight and Sunlight: A guide to Good Practice (BRE209)

development plan policies and other related guidance, as well as application of professional judgment.

The initial baseline to be considered as part of the daylight, sunlight and overshadowing assessments will be the existing site conditions at the time of the submission of the application. Due to the advanced construction stage of the WEG development, it will be considered as part of the existing baseline. However, Blocks B and H of the 14-17 Paddington Green scheme, which overlaps with the WEG development, will be considered as a cumulative scheme.

Daylight and sunlight amenity at any surrounding developments which have been granted planning consent, and are in close proximity to the proposed development are considered to be future residential receptors are therefore also assessed.

Therefore, the proposed development will be assessed against both the existing baseline (the baseline conditions at the site and immediate surrounding area at the time of the assessment) and against the future baseline to account for completed cumulative schemes that will introduce sensitive receptors with a reasonable expectation of daylight and sunlight.

Consultations

No additional consultation over and above this EIA scoping exercise is considered necessary to inform the assessment.

Study Area

Existing sensitive receptors, buildings under construction and cumulative schemes with planning permission with windows facing the proposed development, and within close proximity of the site boundary will be assessed. These will be determined using professional judgement based on scale, proximity and planning status.

Additionally, sensitive locations i.e. traffic junctions at surrounding roads from which the proposed development is visible comprise the study area in relation to solar glare.

Baseline Characterisation

Baseline conditions will be established by means of desk study, site visits and modelling.

Demolition and Construction

The level of effect on daylight and sunlight availability to existing and emerging neighbouring receptors would vary throughout the demolition and construction stage and would steadily increase in magnitude as the proposed development is built. Any temporary accommodation or construction equipment such as cranes would only have a temporary effect on the daylight and sunlight levels to the surrounding sensitive receptors.

Similarly, the overshadowing effect to surrounding public and private open areas of amenity would experience varying effects throughout the demolition and construction stage, gradually increasing as the proposed development is built out, with potential temporary overshadowing effects as a result of construction equipment.

In terms of solar glare during the demolition and construction stage, as the superstructure is clad, any reflective elements may give rise to solar reflections at surrounding sensitive road locations.

Those effects that would be perceptible during the demolition and construction stage would be no worse than those of the completed development. A qualitative assessment will be undertaken using professional judgement, with the worst-case scenario represented by the completed development.

Completed Development

Daylight and Sunlight to Surrounding Receptors

The likely significant effects of the completed development will be discussed within the ES chapter. Daylight, sunlight and overshadowing analysis is being undertaken throughout the design stages and as such mitigation measures are incorporated into the design of the proposed development.

The BRE Guidelines state that residential properties have a reasonable expectation of daylight and sunlight. Therefore, the daylight and sunlight assessment will consider impacts to surrounding existing and emerging residential properties identified by a site inspection and a desktop study. In addition, survey information will be used to identify residential properties most likely to experience effects from the proposed development.

Information on the receptors will be gathered using details available on the WCC's planning database, estate agent's property particulars and site inspections. Where analysis is to be undertaken of buildings under construction or emerging developments, information available on WCC's planning portal will be used to determine the position of windows. If information is available to determine the layout of the rooms, the interior layouts will also be applied to the analysis model and additional daylight and sunlight testing will be undertaken. Where information on existing receptors are not available, reasonable room layout assumptions will be made and presented in the assessment.

The studies to be undertaken will use a three-dimensional computer model of the site and the surrounding buildings in the study area for the following scenarios:

- Scenario 1: Baseline (representing the current site conditions);
- Scenario 2: Baseline + proposed development (representing the completed development); and
- Scenario 3: Baseline + proposed development + cumulative development (representing the future baseline).

The effect of the proposed development on the daylight and sunlight amenity received by the neighbouring buildings will be analysed using bespoke software.

The buildings considered in the baseline will be assessed using Vertical Sky Component (VSC), No Sky Line (NSL). Consented future residential properties will be assessed using Average Daylight Factor (ADF) assessments to determine the levels of daylight retained with the proposed development in place.

The sunlight amenity will be considered by reference to the Annual Probable Sunlight Hours (APSH) method for the existing and future baseline and proposed development scenarios for all receptors sensitive to sunlight impacts identified above. With shadows being cast in a northerly direction in the northern hemisphere, this assessment will consider those windows serving rooms which face the site and are located within 90 degrees of due south.

In analysing the resultant daylight and sunlight assessment data, consideration will be given to the criteria set out in the BRE Guidelines. However, since the BRE Guidelines do not specifically relate to metropolitan locations, and as stated in the BRE Guidelines, a degree of flexibility will be applied to the site, as it is located in an urban area. In order to quantify the level of effect as a result of the proposed development, a degree of significance will be assigned to the results for each receptor.

The initial numerical criteria for determining the scale of effect is based on percentage alterations, as follows:

- 0 – 19.9 % alteration = Negligible;
- 20 - 29.9 % alteration = Minor;
- 30 - 39.9 % alteration = Moderate; and

- Greater than 40 % alteration = Major.

The significance of effects, will be determined using professional judgement and by reference to Appendix I of the BRE Guidelines, which state;

"*the assessment of impact will depend on a number of factors, and there is no simple rule of thumb that can be applied*".

The guidelines provided by the BRE for determining the significance of effects on daylight and sunlight amenity are as follows:

"I6 Where the loss of skylight or sunlight does not meet the guidelines in this book, the impact is assessed as minor, moderate or major adverse. Factors tending towards a minor adverse impact include:

- *only a small number of windows or limited area of open space are affected*
- *the loss of light is only marginally outside the guidelines*
- *an affected room has other sources of skylight or sunlight*
- *the affected building or open space only has a low level requirement for skylight or sunlight*
- *there are particular reasons why an alternative, less stringent, guideline should be applied…"*

"I7 Factors tending towards a major adverse impact include:

a large number of windows or large area of open space are affected

- *the loss of light is substantially outside the guidelines*
- *all the windows in a particular property are affected*
- *the affected indoor or outdoor spaces have a particularly strong requirement for skylight or sunlight, e.g. a living room in a dwelling or a children's playground."*

"*I8 Beneficial impacts occur when there is a significant increase in the amount of skylight or sunlight reaching an existing building where it is required, or in the amount of sunlight reaching an open space. Beneficial impacts should be worked out using the same principles as adverse impacts*."

According to the BRE Guidelines, surrounding residential buildings have an expectation of natural light in habitable rooms. Therefore, surrounding buildings are considered receptors of high sensitivity to daylight and sunlight levels of equal weighting, and each individual receptor is not assigned a level of sensitivity as per the usual EIA methodology i.e. high, medium or low.

The overall degree to which each receptor is affected is also considered alongside the magnitude of change to each assessed room/window to assess the overall significance of effect.

Based on the above guidance, a set of numerical parameters will be devised for each of the respective BRE Report's recommended assessments methods, in order to determine the significance of effects if and where the target values in the BRE Guidelines are not achieved. This numerically based significance criteria will be detailed in full in the ES.

With regard to the potential significance of any effect, the results will first be considered against the BRE Guidelines criteria "P. Littlefair (2011) Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice (BR 209)". It is primarily on this basis that the significance of the effect will be determined. Where the BRE Guidelines criteria are not met, and before an overall significance is concluded for a particular dwelling, house or room, the retained levels of daylight and sunlight will be also considered against alternative target values set for this site. This approach has been accepted by other local authorities in London, where the need for new homes and consequently densification is acknowledged. Evidence for the alternative target values will be produced for discussion at Pre-Application meetings and to accompany the application, in line with that discussed with other local authorities for projects of similar size, nature and urban location.

Overshadowing

With regard to any overshadowing of surrounding areas of amenity space by the proposed development, this will be assessed initially by undertaking transient overshadowing assessments. For this assessment, the path of shadow will be mapped for each of the Scenarios on the following dates as suggested by the BRE Guidelines:

- 21st March (Spring Equinox);
- 21st June (Summer Solstice); and
- 21st December (Winter Solstice).

The nature (beneficial or adverse), scale (negligible, minor, moderate or major) and ultimately the significance of overshadowing effects will be determined using professional judgement.

Solar Glare

Solar reflections off a building are particularly important at road junctions including pedestrian crossings, and traffic signals as glare can cause temporary blinding of drivers. Typically, those elements of a Proposed Development considered reflective are either glazed elements or specular metal cladding.

Therefore, the ES will consider an assessment to determine the time of day, period of year, duration and positioning of potential solar glare in relation to the driver's line of sight.

Solar glare is not a comparative assessment; the fact that it may occur in the baseline does not necessarily justify occurrence as a result of the proposed development. Consequently, the assessments will consider the effect of the proposed development in absolute terms, using professional judgement

Cumulative Effects

Consideration will be given to cumulative effects, where quantitative information is available within the public domain. Additionally, the likely impacts of the proposed development upon the future sensitive receptors will be assessed within this section.

Solar glare is not considered in a cumulative scenario as the worst-case scenario is shown in the proposed development scenario.

6.6 Townscape, Visual and Built Heritage

A Townscape, Visual and Built Heritage Assessment (TVHA) will be presented in ES Volume 2. The assessment will be undertaken by Montagu Evans and will consider the potential impacts of the proposed development on townscape character, views and heritage significance, particularly the:

- effect on the character and appearance of Paddington Green Conservation Area (a small part of which is within the redline boundary) the settings of conservation areas, listed buildings and other heritage assets in the study area;
- effect on townscape character in the study area;
- effect on visual amenity as experienced by people in the study area; and
- cumulative effects in conjunction with other consented schemes.

6.6.1 Potential Impacts and Likely Effects

The assessment will consider the following potential impacts and associated likely effects during the demolition and construction of the proposed development:

- Temporary visibility of development works and associated machinery, cranes and other equipment used in the demolition and construction works; partially completed buildings; hoarding; and site lighting at street level within:
  - local views and effects on the quality of local views and the amenity of the viewer;
  - views of the local townscape character, together with the change in spatial character and built form; and
  - the setting of heritage assets and the degree to which the significance of the heritage asset's significance can be appreciated, experienced and understood.

The degree of effects will vary according to the proximity of the receptor to the site and will largely be adverse and short-term. No permanent effects would arise from the demolition and construction works except those relating to the completed development.

The assessment will consider the following potential impacts and associated likely effects of the completed proposed development:

- Visibility of the proposed development in local views and effects on the quality of local views, the amenity of the viewer and the character of the local townscape;
- Visibility of the proposed development and associated change in the townscape and spatial character and quality within the study area; and
- The effect of the proposed development on heritage assets (conservation areas, listed or locally listed buildings) and potential effects on their heritage significance, including consideration of visibility and other non-visual setting effects.

6.6.2 Approach and Methodology

The TVHIA will be reported in a single, separate volume.

Townscape and Visual Impact

The methodology for the townscape and visual impact assessment will be based on the principles set out in the third (2013) edition of 'Guidelines for Landscape and Visual Impact Assessment' (GLVIA)[76], produced by the Landscape Institute with the Institute of Environmental Management and Assessment. Reference will also be made to national, regional and local guidance and policies.

Consultation

In respect of the townscape character assessment, no consultation over and above the scoping process, is considered necessary.

In respect of the visual impact assessment, no consultation has yet been undertaken in relation to the scope of this assessment. The set of views selected for assessment will be separately agreed with the WCC and other relevant consultees. A list and plan of proposed views will be provided for consideration by the WCC. The viewpoint plan will be derived from modelling work and field inspection, including a zone of theoretical visibility, and the identified views combine both indicative local views, strategic views and those with a particular heritage interest or value.

Study Area

The proposed townscape character assessment study area would comprise an area of 750 m from the site boundary.

The townscape character areas to be covered will be identified in accordance with the approach set out in the 3rd edition of the Guidelines on Landscape and Visual Impact Assessment. The approach will be informed by published character area studies, including conservation area appraisals.

[76] Landscape Institute, 2013. Guidelines for Landscape and Visual Impact Assessment (GLVIA3).

The study area for the visual assessment will be centred on the site and will be limited to locations from which the site can be seen, or from which new buildings on the site have the potential to result in a significant visual impact at the height proposed.

Four principal types of viewing location have been identified:

- Views that have been identified as significant, by the WCC or others, e.g. in relevant planning policy and guidance documents (including the LVMF SPG) and conservation area appraisals;
- Other locations or views of particular sensitivity, including those viewpoints in which the proposed development may significantly affect the settings of World Heritage Sites, listed buildings and/or conservation areas;
- Representative townscape locations from which the proposed development will be visible; and
- Locations where there is extensive open space between the viewer and the proposed development so that it will be prominent rather than obscured by foreground buildings.

The set of viewpoints has been chosen so that it covers:

- Protected views;
- The range of points of the compass from which the proposed development will be visible;
- A range of distances from the site; and
- Different types of townscape area.

Possible locations in these categories within the study area have been identified based on an examination of maps and aerial photographs; maps of conservation areas; and maps and lists of listed buildings. The study area and the possible locations have been visited to establish candidate viewpoints.

Demolition and Construction

The assessment of demolition and construction works will be based on the typical impacts and effects associated with a development of the proposed nature and scale taken in conjunction with the particular site and its sensitivities. The visual character and effects of the process would alter at different times of day and throughout the different phases of demolition and construction work, and so it is not possible to accurately represent the process in the verified views. Additionally, none of the effects resulting from the process, apart from those associated with the completed proposed development, would continue beyond the construction process, and so it is considered appropriate for the townscape and visual assessments to consider the effects of the completed proposed development in greater detail than those of demolition and construction, because those effects will be permanent and long-term.

Accordingly, a qualitative assessment will be undertaken based on professional judgement and experience. In carrying out this appraisal, the assessment will have regard to the generally lesser weight that temporary construction effects have on townscape character areas and views.

Completed Development

The assessment of the effect of the proposed development on a receptor (an area of townscape or view) will be made on the basis of professional judgement which will take into account relevant planning policies and guidance.

The sensitivity of the receptor as existing will be assessed as high, medium or low, depending on the importance, value and quality of the receptor, and its susceptibility to change, taking into account the quality of the receptor, and the nature and expectation of the viewer for views. The assessment of sensitivity will take into account the presence of any designated heritage assets (listed buildings, conservation areas, registered parks and gardens of special historic interest, world heritage sites) and non-designated heritage assets (locally listed buildings), and the amenity value

of the viewing location and area in which it is located. The assessment of the sensitivity of the receptor under consideration will be moderated to take into account a judgement about its quality in the round.

The magnitude of the impact resulting from the proposed development will be assessed as high, medium, low or negligible according to the change to the receptor. These two measures will be combined to provide a measure of the significance – major, moderate, minor or negligible - of the effect on the receptor which will result from the proposed development. It is generally considered that moderate to major effects are considered 'significant' in the context of the EIA Regulations and this is the approach that is proposed to be adopted in this EIA.

Effects will be assessed as beneficial, adverse, or neutral. There may be both beneficial and adverse effects to each receptor. These effects are outlined within the qualitative assessment for each receptor. The assessment for each receptor as a whole is a 'net equation' of all effects, resulting in a single quantifiable entry into the scale of effect matrix.

The townscape character assessment will be made of the site and the surrounding townscape in its existing state based on a study of the historic development of the area with reference to relevant publications, and study of the present-day condition of the area based on site visits, study of maps and aerial photographs, and relevant publications.

This analysis will inform the division of the study area into townscape character areas i.e. geographical areas which have readily identifiable characteristics in common. The impact of the proposed development on these townscape areas will then be assessed, based on conclusions drawn from the view's analysis.

The visual impact assessment will be made of the proposed development's visibility within the selected views. Viewpoints will be assessed in winter to assess a worst-case scenario when vegetation is not screening the proposed development.

For each of the identified views, there will be images of the view 'as existing' and 'as proposed', based on recent photography Where there is a high degree of tree cover that would affect the visual effects, winter views will be produced.

Where other developments have been granted consent and implemented and would be visible in the view, the other development would be shown in wireline (diagrammatic representations showing the outline of the proposed development, 'AVR1') as the 'future baseline'.

'As proposed' images are to be provided as 'Accurate Visual Representations' ('AVRs'). AVRs are provided either as rendered (photorealistic) images ('AVR3') or as 'wirelines' ('AVR1'). Rendered and wireline images illustrate accurately the degree to which the proposed development will be visible, and its form in outline. Rendered images also show the detailed form and the proposed use of materials.

Where other developments in the wider area which are proposed or have been granted consent would be visible to a significant extent in the view, a further image showing these schemes together with the proposed development will be produced.

For each of the identified views, a description of the view as existing will be given, identifying its visual quality, sensitivity to change and reason for that sensitivity. A description of the view as proposed will then be given with an assessment, based on the method set out above, of the significance of the effect that the proposed development will have on the view.

Cumulative Effects

A further assessment will consider cumulative effects, if any, for each view ('as proposed with cumulative' images will also be provided as AVRs). The approach to cumulative assessment for

views and townscape will be to focus on the additional effects of the proposed development on top of the cumulative baseline (not in combination).

Built Heritage Assessment

The methodology for the built heritage assessment will be consistent with best practice guidance from Historic England, and specifically dealing with managing significance in decision-making significance (GPA2), assessing setting effects and the effect on significance (GPA3) and tall buildings guidance (HEAN4), as well as the updated tall buildings advice note currently out for consultation until 28 May 2020). The chapter will have regard to guidance contained in character area appraisals from the relevant LPAs, including conservation area appraisals.

Study Area

The assessment will consider the potential for the proposed development, as a whole, to affect the heritage significance of identified and relevant heritage assets, within the study area (within 1 km of the site). The study area is based, in part, on views testing, which will identify the likely zone of visual influence and range within which significant effects of development of this scale would be experienced within the existing townscape context. Where there is potential for a significant effect on designated heritage assets outside the 1km study area then these assets will be scoped into the assessment.

There are no listed buildings located on-site. The northern half of Newcastle Place, which is within the redline boundary, is located within Paddington Green Conservation Area, but otherwise the site is not within a CA.

There are a number of designated heritage assets within the study area. The number heritage assets which will be scoped in to the assessment will be refined using professional judgement in order to ensure that the assessment is focussed on those assets which may experience likely effects of the proposed development. For example, where there is no setting relationship between the heritage asset and the site – whether that is intervisibility, historical association or otherwise – then these assets have been scoped out.

The heritage assets which have been scoped in to the assessment comprise the following:

- The Children's Hospital, Paddington Green, grade II listed;
- 17 and 18 Paddington Green, grade II listed;
- Church of St Mary, grade II* listed;
- Westminster Arms public house, grade II listed;
- Marylebone Lower House North Westminster Community School, grade II listed;
- Paddington Green Conservation Area;
- Maida Vale Conservation Area;
- Lisson Grove Conservation Area;
- Bayswater Conservation Area;
- Regent's Park, both as a Registered Park and Conservation Area;
- St John's Wood Conservation Area;
- Molyneux Conservation Area; and
- Hyde Park, Royal Parks Conservation Area and Registered Park.

Non-designated heritage assets for the purposes of the assessment are locally listed buildings identified by the WCC and other structures which meet the terms of a non-designated heritage

asset as set out in the NPFF, that is, have a degree of architectural or historic significance meriting consideration in the planning process. These are to be identified by appropriately qualified staff undertaking the assessment and through the consultation process with the WCC. Non-designated heritage assets within 500 m of the site will be scoped into the assessment.

Demolition and Construction

The assessment of demolition and construction works will be based on the typical impacts and effects associated with a development of the proposed nature and scale taken in conjunction with the particular site and its sensitivities. The visual character and effects of the process would alter at different times of day and throughout the different phases of demolition and construction work, and so it is not possible to accurately represent the process in the verified views. Additionally, none of the effects resulting from the process, apart from those associated with the completed proposed development, would continue beyond the construction process, and so it is considered appropriate for the Built Heritage assessment to consider the effects of the completed proposed development in greater detail than those of demolition and construction, because those effects will be permanent and long-term. Accordingly, a qualitative assessment will be undertaken based on professional judgement and experience. In carrying out this appraisal, the assessment will have regard to the generally lesser weight that temporary construction effects have on heritage assets which by their nature are long standing.

Completed Development

An assessment will be made of the significance of the identified heritage assets in their existing states (cross-referencing the townscape and visual baseline, see above). This will be based on study of the historic development of the area with reference to relevant publications, and study of the present-day condition of the area based on site visits, study of maps and aerial photographs, and relevant publications. These assessments will be proportionate to the significance of the assets and the likely effect of the proposed development on them. In line with paragraph 189 of the NPPF they will demonstrate an understanding of the potential impact of the proposal on their significance.

The assessment of the effect of the proposed development on a receptor (a heritage asset, as identified above for the purposes of this assessment) will be made on the basis of professional judgement which takes into account relevant planning policies and guidance. The methodology set out below is consistent with the following legislation and guidance:

- The Planning (Listed Buildings and Conservation Areas) Act 1990;
- Sections 12 and 16 of the NPPF (2019);
- The accompanying parts of the PPG;
- Historic Environment Good Practice Advice in Planning Notes 2 and 3 on The Assessment of Heritage Significance and The Setting of Heritage Assets (2015 and 2017)[77]; and
- Tall Buildings Historic England Advice Note 4 (2015)[78].

The sensitivity to change of each heritage asset or groups of assets will be considered in relation to impacts (taking into account both direct and indirect effects). This is based on the designation and grade of the heritage asset and an assessment of its heritage significance (in light of NPPF policy), i.e. what elements of its fabric / constituent parts and setting contribute to its heritage significance (at the designated grade/level). It will be assessed as high, medium or low.

The likely significance of effects is derived through consideration of the magnitude of impact and the sensitivity to change of the heritage assets. This assessment takes into account the heritage significance of the particular heritage asset and how the proposed development will impact on this.

[77] Historic England, 2017. The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Notes 3.
[78] Historic England, 2015. Tall Buildings Historic England Advice Note 4.

The proposed development may have a nil of negligible effect to a receptor. Where effects are identified they will also be assessed qualitatively as beneficial, adverse, or neutral in respect of their effect on the heritage significance of the heritage asset. This is in recognition of the fact that an effect on a heritage asset or its setting can enhance its heritage significance (a beneficial effect), harm its heritage significance (an adverse effect) or be overall neutral (a neutral effect). This consideration is independent of whether it is a major, moderate or minor effect. This assessment takes into account the nature and condition of the heritage asset and its setting as found today and how these contribute to its heritage significance.

The viewpoint selection has been informed by the presence of heritage assets, and the assessment on the historic environment will take those views into account for setting purposes.

The general conclusions about the impact of the proposed development on heritage assets include consideration of the overall impact on the historic environment in the round.

Cumulative

An assessment will be given of cumulative effects, if any. The approach to cumulative assessment for built heritage will be to focus on the additional effects of the proposed development on top of the cumulative baseline.

7. POTENTIAL NON-SIGNIFICANT ENVIRONMENTAL IMPACTS AND EFFECTS

During the EIA scoping process, consideration has been given to ensuring that the EIA is proportionate and therefore only focuses on the likely significant effects of the proposed development. Accordingly, the scoping process has identified a number of environmental topics that are unlikely to generate significant environmental effects and therefore, are proposed to be scoped out of the ES. These issues are discussed in this section.

7.1 Transport and Accessibility

A Transport and Accessibility technical assessment chapter is proposed to be scoped out of the ES because the proposed development would not give rise to significant adverse effects in relation to Transport.

A Transport Assessment (TA) will be produced and submitted separately as part of the application, which will consider the implications of the proposed development on the local transport network, including walking and cycling environment, public transport and highway network.

7.1.1 Potential Impacts and Likely Effects

In the absence of mitigation, the following potential transport environmental impacts[79] may arise:

- Demolition and construction works and the temporary disruption in terms of effects on severance, pedestrian delay, pedestrian amenity, fear and intimidation, driver delay, and accidents and safety.
- Completed development and changes to traffic flows and pedestrian and cycle environment in terms of effects on severance, pedestrian delay, pedestrian amenity, fear and intimidation, driver delay, and accidents and safety.

7.1.2 Considerations

Demolition and construction works will be subject to mitigation in the form of implementing a Construction Logistics Plan, and contractors will be required to sign up to the Construction Logistics and Cyclist Safety (CLOCS) standards for managing work related road risk, and follow WCC's Code of Construction Practice (CoCP). A Construction Staff Travel Plan will also be implemented to manage construction workforce travel.

As part of the construction management measures, suitable signage will be required where appropriate for pedestrian and cyclists to minimise disruption and there are existing signal-controlled pedestrian crossings on Edgware Road and Harrow Road. Construction traffic routes to the site would use the strategic highway network, minimising any effects on local roads and sensitive receptors, and the increase in traffic would not be significant given the existing high traffic flows on the A40 and A5 Edgware Road. On this basis, the demolition and construction stage would not give rise to significant adverse effects on severance, pedestrian delay, pedestrian amenity, fear and intimidation, driver delay, and accidents and safety.

In terms of the completed development, the proposal will be car-free with only disabled car parking provided, subject to scoping with WCC. The site is located in central London with a PTAL rating of 6b (the highest possible score on the PTAL scale, which indicates an "excellent" connectivity to the surrounding network). It is therefore anticipated that journeys to the site would largely be via public transport. The car parking will be provided in the basement, accessed from Church Street and via the West End Gate basement. Together with servicing trips, the total vehicle trip generation

[79] Environmental effects in accordance with the IEMA document 'Guidelines for the Environmental Assessment of Road Traffic' (1993)

for the site would be minimal and not significant. On this basis, no significant adverse effects are expected on severance, pedestrian delay, fear and intimidation or driver delay.

There are public realm improvements proposed on Newcastle Place, which would improve pedestrian amenity. Any changes to junctions will be subject to a Stage 1 Road Safety Audit. Therefore, beneficial effects can be expected for pedestrian amenity and no significant adverse effects are expected for accident and safety.

Multi-modal movements resulting from the proposed development on pedestrians, cyclists, and public transport will be assessed in the TA. A separate assessment on accidents and safety will also be included in the TA.

Accordingly, no significant adverse environmental effects are likely to arise in relation to Transport. A Transport and Accessibility technical assessment chapter is therefore proposed to be scoped out as a discrete chapter within the ES; however, a separate Transport Assessment will be submitted as part of the planning application.

7.2 Ecology

An Ecology technical assessment chapter is proposed to be scoped out of the ES because the proposed development would not give rise to significant adverse effects in relation to Ecology.

7.2.1 Potential Impacts and Likely Effects

In the absence of mitigation, the following potential ecological impacts may arise:

- Direct and indirect demolition and construction impacts (dust, noise, lighting, contaminated surface water, etc.) to designated sites;
- Direct loss of limited on-site habitats;
- Direct harm to protected species, if on-site; and
- Potential for biodiversity enhancement through the introduction of new landscaping as part of the proposed development.

7.2.2 Considerations

The site has been in use as a police station since the 1970s. It comprises an existing building and hardstanding areas. In addition, the site is located in a dense urban environment predominantly characterised by buildings, roads and hardstanding areas.

An extended Phase 1 Habitat Survey of the site was carried out on 4 September 2020, which included external building inspections for bat potential, together with a desk-based data search using data obtained from Greenspace information for Greater London (GiGL), to identify, characterise and map the habitats within the site according to the Phase 1 habitat survey[80] methodology. The results of the survey will be documented in an ecological appraisal report for the site.

The desk study confirms that no designated sites are present within the site. St Mary's Churchyard and Paddington Green Site of Importance for Nature Conservation (SINC) is present to the west of the site.

The extended Phase 1 habitat survey confirms that the site comprises habitats that are of negligible to site level importance for wildlife. Limited vegetation is present, with street trees of site level importance and scattered ephemeral vegetation of negligible importance. The street trees are suitable for use by common bird species. No potential roost features were recorded on the buildings or trees, and the site is considered to be of negligible potential for use by bats.

[80] JNCC, 1990. Handbook for Phase 1 Habitat Survey: A technique for environmental audit. Nature Conservancy Council

The appraisal confirms that on-site ecological conditions are consistent with a typical London urban site. Whilst impacts are likely to occur, these can be mitigated by means of standard measures in advance of redevelopment. Proposed mitigation measures comprise the following:

- Appropriate timing of demolition works to avoid impacts on nesting birds;
- Appropriate demolition and construction management controls to be set out within a Construction Environmental Management Plan (CEMP) to minimise dust impacts to St. Mary's Churchyard and Paddington Green SINC;
- Landscape planting and bat and bird boxes within the proposed development to mitigate for the loss of habitats within the site; and
- Green/brown roofs and living walls to deliver biodiversity enhancement.

During the demolition and construction stage, any potential ecological impacts such as from construction pollutants, would be effectively controlled by employing best practice measures to be implemented through a CEMP as agreed with WCC.

The emerging design and landscape proposals for the proposed development would deliver considerable biodiversity and amenity enhancement.

The above mitigation measures would either be embedded into the proposed development or secured by means of appropriately worded planning conditions.

Accordingly, the proposed development is unlikely to give rise to significant adverse environmental effects in relation to Ecology. A formal Ecology technical assessment is therefore proposed to be scoped out as a discrete chapter within the ES; however, an Ecological Impact Assessment will be presented in ES Volume 3.

7.3 Contamination

A Contamination technical assessment chapter is proposed to be scoped out of the ES because the proposed development would not give rise to significant environmental effects in relation to Contamination.

7.3.1 Potential Impacts and Likely Effects

In the absence of mitigation, the following potential pollutant linkages could present a potentially unacceptable risk (as defined in Model Procedures for the Management of Contaminated Land, CLR 11[81]):

- Demolition and construction workers may come into direct contact with potentially contaminated shallow soils, Made Ground (which may include asbestos containing materials) and impacted shallow groundwater;
- Adjacent site users may inhale /ingest potentially contaminated dust from demolition and construction works;
- Accidental spills could lead to contamination of surface water runoff, ground and controlled waters;
- Direct contact of potentially contaminated soils with proposed structures on-site, including potable water supply pipes; and
- Future site users may be exposed to potential ground contamination in the soil, ground gas ingress and/or vapour ingress into new buildings.

[81] Environment Agency, 2004. Model Procedures for the Management of Land Contamination

7.3.2 Considerations

The site has been in use as a police station since the 1970s. It comprises an existing building and hardstanding areas. In addition, the site is located in a dense urban environment predominantly characterised by buildings, roads and hardstanding areas.

Geological maps for the area indicate that the geology beneath the site is underlain by Langley Silt Member (Clay and Silt), Lynch Hill Gravels and London Clay Formation, as explained in Section 4.3.

The adjacent WEG development has been the subject of site investigations and remediation. It is anticipated that similar ground conditions are present on the site given the close proximity and linked history. By way of background, contaminants identified on the WEG development included hotspots of hydrocarbon contamination in the soil and asbestos within the made ground. Contaminants were also detected in groundwater including hydrocarbons and sulphate. These contaminants are common to brownfield sites.

The remediation strategy prepared for the WEG development discussed the removal of underground fuel tanks and the basement excavation which will remove much of the soil. Watching briefs and material management plans were recommended. Clean soil was also recommended in landscaping. These are standard remediation techniques that are likely to be appropriate for the site.

Furthermore, the following standard mitigation measures would be adopted as part of the development works:

- A Preliminary Risk Assessment (PRA) will be prepared and will be presented in ES Volume 3. The PRA will identify the risks associated with soil and groundwater contamination and how remediation (if required) would reduce risks to allow the development proposal to proceed in a manner that minimises risks to human health, controlled waters and the small areas of landscaping and reduces the risks to acceptable level.
- Site investigations will be undertaken to confirm the most appropriate remediation strategy and health and safety precautions to be adopted for construction workers and surrounding residents during ground disturbance and excavation works.
- A Remediation Strategy will be prepared (if required) and agreed in consultation with WCC environmental health;
- A Piling Risk Assessment will be undertaken to determine most appropriate means of piling to avoid the creation of pollution pathways during substructure works before the removal of material during excavation of the basement area; and
- A CEMP will be used to effectively control and manage contamination risks at the site as agreed with WCC.

The above mitigation measures would be secured by means of appropriately worded planning conditions.

On this basis, it is considered that the proposed development is unlikely to give rise to significant adverse environmental effects in relation to Ground Conditions. A formal Ground Conditions technical assessment is therefore proposed to be scoped out as a discrete chapter within the ES, but the PRA will be presented in ES Volume 3.

7.4 Water Resources and Flood Risk

A Water Resources and Flood Risk technical assessment chapter is proposed to be scoped out of the EIA because the proposed development would not give rise to significant environmental effects in relation to Water Resources and Flood Risk.

7.4.1 Potential Impacts and Likely Effects

In the absence of mitigation, the following potential impacts and likely effects may arise in respect of water resources and flood risk:

- Demolition and construction workers may come into direct contact with potentially contaminated controlled waters (groundwater and surface water runoff);
- Accidental spills could lead to contamination of controlled waters (ground water and surface water runoff);
- The design of the proposed development could alter the surface water run-off speed and discharge from the site; and
- On-site occupants of the completed development could increase the demand for potable water and foul water.

7.4.2 Considerations

The site currently comprises a building and predominantly hardstanding.

A review of EA data indicates that the site is located in Flood Zone 1 (low probability) where the annual probability of flooding from rivers or the sea is less than 1 in 1,000 (0.1%). The site is also shown by the EA to be at Very low or Low risk of surface water (pluvial) flooding, associated with extreme rainfall and potential surcharging of sewer assets. There are areas of the A404 immediately south of the site which are shown to be at Medium or High risk of such flooding. However, any such flooding of the road is not predicted to impact on the site itself and would not prevent access to the site as Newcastle Place to the north and Edgware Road to the east are shown to be at Very Low or Low risk of such flooding.

The WCC Draft Strategic Flood Risk Assessment (SFRA), 2019, states that, as Westminster is a heavily urbanised area, it is at risk of surface water flooding, with several areas being designated as being Critical Drainage Areas (CDA's). No mapping associated with the 2019 Draft SFRA is available online. Mapping produced as part of the previous 2010 Strategic Flood Risk Assessment shows that the site was not considered to be within a CDA.

There are no surface water features on the site, and no main rivers located within a 1 km radius. The closest surface water features are the Grand Union Canal, located approximately 150 m to the south and the Boating Lake at Regent's Park approximately 1 km to the north-east. No additional surface water features have been identified within 1 km of the site.

The covers an area of 0.48 ha in area and therefore an FRA would be not be required in accordance with the NPPF. Nevertheless, a Flood Risk Note will be prepared to confirm the proposed development's drainage strategy and use of Sustainable Drainage Systems (SuDS) to demonstrate that the Proposed development will accommodate the 1 in 100 year plus climate change (40 % allowance) storm without exacerbating flood risk off-site.

The drainage and SuDS (Sustainable Drainage Systems) strategies would feed into the emerging design proposals to ensure substantial reduction of pre-development run-off rates, with an aspiration to achieve greenfield rates if feasible. As part of this process, Thames Water would be consulted with regard to the location of public sewer assets. An application for surface water or foul sewer connection into the Thames Water network will be undertaken post-consent as part of detailed drainage design.

In respect of controlled waters, the site is located within Flood Zone 1, with the nearest water feature (Grand Union Canal) approximately 150 m to the south. No hydraulic connectivity with the canal has been identified. Furthermore, contamination on-site will be addressed by means of standard mitigation measures, including the development of an appropriate Remediation Strategy

and the removal of sources of contamination as part of the basement excavation. As such the proposed development would not pose any risks to controlled waters.

In respect of water consumption, the proposed development would adopt standard water saving devices and features as part of its design.

Accordingly, no significant adverse environmental effects are likely to arise in relation to Water Resources and Flood Risk. A formal Water Resources Assessment is therefore proposed to be scoped out as a discrete chapter within the ES; however, a Flood Risk Memorandum will be presented in ES Volume 3.

7.5 Archaeology

An Archaeology technical assessment chapter is proposed to be scoped out of the ES because the proposed development would not give rise to significant environmental effects in relation to archaeology.

7.5.1 Potential Impacts and Likely Effects

In the absence of mitigation, the proposed development could give rise to the following impacts and effects:

- Demolition and construction works, in particular the proposed basement excavation, as well as any remediation works (if required) which would remove heritage assets (if present on-site) within its footprint e.g. possibly including any medieval remains associated with agriculture or quarrying, and 19th/early-20th century building foundations and basements;
- Demolition and construction works, in particular piled foundations, which would entirely remove heritage assets with each pile footprint, if present on-site. Where the basement is of sufficient depth to remove all archaeological remains within its footprint, piles would only have an impact if inserted prior to basement construction (or outside the proposed basement footprint). Pile caps and ground beams, depending on the depth of the basement, may have no further impact; and
- Construction works, in particular landscaping and any associated works, servicing etc., which could remove any heritage assets (if present on-site).

7.5.2 Considerations

The Site is located within the Tier 2 Watling Street Archaeological Priority Area (APA) and adjacent to Tier 2 Paddington APA. The former designation exists on the basis of the possibility for evidence associated with a Roman road, and the latter for potential evidence of medieval settlement.

The site was open land before being first developed with the Metropolitan Music Hall in the mid-19th-century, with the most recent Paddington Metropolitan Police Station building constructed in the 1970s. Construction of the existing development would have severely affected any archaeological remains on-site, including excavation of the existing basement.

In addition, excavation works undertaken as part of the adjacent WEG development confirmed the archaeological potential to be limited to property boundaries and horticultural cut features dating to the 18th-century or earlier and masonry foundations and domestic waste deposits dating to the 18th-20th-centuries. Finds comprised 10 medieval residual pottery sherds and Ceramic Building Material (CBM) recovered from features dated to the 18th and 19th-centuries and a single residual Roman imbrex sherd. Modern basements had severely truncated much of the archaeological potential of the site, and no *in-situ* evidence pre-dating the post-medieval period was recorded. A programme of archaeological investigation and recording was undertaken in consultation with the archaeological advisor to WCC, in order to offset the impacts of the development on archaeological remains and reduce adverse effects to an acceptable level.

On this basis that – if required – a comparable programme of work can be successfully carried out on the site, it is not considered that the proposed development would give rise to significant adverse residual effects in respect of archaeology.

In order to set the site into its full archaeological and historical context, an archaeological desk-based assessment (DBA) will be undertaken to present known historic environment features within a 500 m-radius study area from the boundary of the site. The DBA will put the proposed development into its full archaeological and historical context and provide an assessment of the significance of known and potential buried heritage assets within and beyond the site, which may be affected by the proposed development. They will include assessments of factors which will have compromised the survival of archaeological remains.

The assessment of demolition and construction effects within the DBA will focus on physical impacts on buried heritage assets within the site. These will include any activity which would entail ground disturbance, for example site set up works, the construction of new foundations and basements, remediation, landscaping, new drainage and services.

A broad range of standard data sources will be consulted, including the Greater London Historic Environment Record (GLHER), Historic England's National Heritage List (NHL), and local authority data sources along with published works and cartographic sources specific to the area, and geotechnical and geoarchaeological data. The assessment will also consider the adjacent WEG development archaeological investigations. The MOLA in-house Geographical Information System (GIS) will be consulted which holds information on statutory designations' GIS data, projected Roman roads, georeferenced published historic maps and Defence of Britain survey data.

The DBA will use these sources to assess the likely presence and significance of any heritage assets which may be affected by development. This would include known assets and the potential for previously unrecorded remains, the likely depth of remains and a review of factors which may have compromised asset survival.

An appropriate mitigation strategy will be set out in the DBA with the aim of reducing or off-setting any adverse effect. The mitigation strategy would be secured by means of an appropriately worded planning condition.

Accordingly, no significant adverse environmental effects are likely to arise in relation to Archaeology. A formal Archaeology Assessment is therefore proposed to be scoped out as a discrete chapter within the ES; however, an Archaeological Desk Based Assessment will be presented in ES Volume 3.

7.6 Telecommunication Interference

A Telecommunication Interference technical assessment chapter is proposed to be scoped out of the ES because the proposed development would not give rise to significant environmental effects in relation to Telecommunication or Electronic Interference.

7.6.1 Potential Impacts and Likely Effects

New, tall buildings and structures have the potential to impact on radio, television and other broadcast services as a result of shadowing and reflection effects caused. Table 7.1 provides an appraisal of the services that could potentially be affected by the proposed development.

Table 7.1: Telecommunication and Broadcast Services Appraisal

Service	Key Outcomes
Analogue Terrestrial Television	Due to the completed Digital Television Switchover, it is now not possible for the proposed development to impact analogue terrestrial television

Table 7.1: Telecommunication and Broadcast Services Appraisal

Service	Key Outcomes
	reception, as analogue television transmissions were switched off throughout the London region during 2012.
Digital Terrestrial Television (DTT)	DTT is more commonly known as 'Freeview'. The area is served by DTT services from the Crystal Palace transmitter (NGR TQ 33940 71220) to the south-west of the site. In relation to transmissions coming from the Crystal Palace transmitter, the signal shadows from the proposed development would be created to the north-east. When considering the existing tall buildings surrounding the site, it is considered that the additional massing associated with the proposed development would not significantly affect transmissions in the locality. Therefore, a pre-planning assessment is not deemed necessary. If transmissions are affected, the Applicant would investigate the complaints, and if deemed authentic and attributable to the proposed development, mitigation measures in the form of the provision of upgraded receiving equipment or a satellite or cabled TV service would be provided.
Digital Satellite Television	Digital satellite television services (such as Freesat or Sky) are provided by geo-stationary earth orbiting satellites positioned above the equator. For the optimum reception of all satellite services, all receiving dishes must be positioned on the highest part of the rooftop as possible to ensure views to the sky's south-east horizon are free from other local skyline building clutter. Should there be any roof mounted satellite signal receiver dishes on the adjacent locations where line-of-sight views to the serving satellites may be obscured by the proposed development (in areas northwest of the site), relocating dishes to new areas on roof tops where views to those satellites remain unobscured, would ensure optimal reception of satellite television signals.
Broadband and Cable Television	A number of 'TV over cable' operators exist in London. TV services are provided to a property via cables and decoded using a set top box or an integrated television set. Virgin Media, Sky and BT all provide such services. The availability of cable TV depends on provider's cable infrastructure. London has comprehensive coverage from most providers. As cabled TV services operate via wired broadband such as fibre and ADSL, interference effects cannot occur due to the nature of content delivery (through a cable, underground) and there is no possibility of effects from the proposed development on these services.
VHF (FM) Radio	The reception of VHF (FM) broadcast radio services are unlikely to be affected by the proposed development due to the nature of the radio broadcast network, the methods used for the encoding and decoding of signals and the likely current good coverage provided by the local VHF (FM) radio transmitters.
Digital Audio Broadcasting (DAB) Radio	The reception of DAB radio would not be affected by the proposed development as coverage is currently excellent throughout London and the radio network is designed to operate well in densely cluttered urban environments.
Mobile Phone Communications	The area will be served well by 2G, 3G and 4G mobile phone networks. Recently introduced 5G networks will also be available in the area. The proposed development would not have any impact upon the operation of mobile telephones. The cellular nature of a mobile telephone network enables each handset to 'pick' the best cell site to ensure the correct operation of the handset. At this location, mobile telephone coverage would

Table 7.1: Telecommunication and Broadcast Services Appraisal

Service	Key Outcomes
	be optimal and robust due to the nature of the commercial requirements in buildings within the wider area.
Fixed Microwave Links and other point-to-point Radio Communications Channels	Radio and microwave links can be adversely affected by obstructions on and near to their transmission path such as construction cranes, buildings and trees. In general, the directional nature of radio links means that interference can be avoided by defining clearance zones beyond which any degradation will be insignificant, or by moving the link to avoid the obstruction. Should any existing links be impacted upon because of the proposed development, standard mitigation options would be likely to comprise the: • use of other radio infrastructure sites; • use of a radio relay site; • construction of a new base station site; • use of private circuits or satellite services; and • redefining of the exclusion zones by the use of aerial engineering. The identification of the appropriate measures would be determined by a detailed review of the existing radio communications infrastructure at each base station, confirmation of the data for the services operated by the link's owner from the identified radio sites; and review of the theoretical analysis of the proposed development layout on the existing radio communication systems, to identify the exclusion zone for any affected radio infrastructure. It is noted that such standard mitigation measures can be readily implemented to ensure the continuing operation of links such that the proposed development is not considered likely to generate any significant residual effects on these services.
Tetra and Emergency Services	The Airwave radio network is based on the specialist TETRA specification. TETRA is a set of standards developed by the European Telecommunications Standardisation Institute (ETSI) that describes a common mobile radio communications infrastructure throughout Europe. This infrastructure is targeted primarily at the mobile radio needs of public safety groups (such as police, ambulance and fire departments), utility companies, and other enterprises that provide voice and data communications services. The UK's TETRA network is owned and operated by Airwave Solutions Limited and is often referred to as the 'Airwave' network. The Airwave / TETRA network is used by all the UK's emergency services. It is likely that this network will remain in use until at least 2024, when its 4G successor network becomes operational. Consequently, by the time of demolition and construction works on the site, the network will be entering a period of transition to 4G services and interference effects will not be a concern.
New Telecommunication Services within the proposed development	All new telecommunications services into the proposed development would consider the expected growth in internet traffic and would provide bandwidth for heavy simultaneous use. The 'e-infrastructure' would be designed well and easily upgradeable for a modern building. Any signal distribution systems would be designed to be future proof and the nature of such networks would ensure that no unwanted or uncontrolled electromagnetic emissions would occur. Any radio transmitters used within the proposed development (for example, Wi-Fi or maintenance needs) would be CE certified, meaning that the products have undergone stringent radio emission testing for use within the UK.

As set out in Table 7.1, potential effects on telecommunication services may be limited to DTT, fixed microwave links and other point-to-point radio communications channels only (should such

links be present near the site); however, these can be readily mitigated by means of standard measures as listed in Table 7.1.

In respect of emergency services, it is noted that the relocation of the Paddington Green Metropolitan Police Station, removes the key sensitive receptor of concern.

In addition, the Applicant would be prepared to undertake pre-and post-construction signal surveys, to be secured by means of an appropriately worded planning condition if necessary.

Accordingly, the proposed development would not give rise to significant environmental effects in relation to telecommunication interference. A formal telecommunication interference impact assessment is therefore proposed to be scoped out as a discrete chapter within the ES.

7.7 Light Spill

A Light Spill technical assessment chapter is proposed to be scoped out of the ES because the proposed development would not give rise to significant environmental effects in relation to light spill.

7.7.1 Potential Impacts and Likely Effects

Light spill is defined as any light emitted from artificial sources into spaces where this light would be unwanted. An example of this would include egressing light from highly glazed commercial buildings or a car parking's flood lights into residential accommodation, where this would cause inconvenience to their occupants, or light spill to sensitive ecological receptors.

7.7.2 Considerations

Although initial lighting concepts would be explored by the Applicant, definitive proposals will not accompany the Application. At the appropriate time, and in response to a suitably worded planning condition, quantitative criteria for acceptable levels of light as detailed within the Institution of Light Engineers (ILE) document entitled 'Guidance Notes for the Reduction of Light Pollution'[82], would be used to proactively inform a detailed Lighting Strategy for the Site and submitted to WCC for approval (to be secured by means of an appropriately worded planning condition).

The ILE Guidance defines light pollution as three different impacts, these being light spillage into residential windows; light spillage into areas of natural significance; and upward light spillage into the night sky.

Light spill (specifically light trespass) typically occur when commercial properties are located within close proximity to residential dwellings such that point source lighting can intrude into bedrooms windows and cause disturbance to amenity.

The proposed development is a residential led scheme with a component of non-residential uses (i.e. office and retail). Given the typically solid residential façade treatment, and the absence of exterior façade lighting, as well as the location of commercial and retail space at lower levels than residential uses, significant light spill is unlikely to arise from the proposed development.

Furthermore, the predominant residential use of the proposed development will further reduce the potential for light spillage to occur as:

- illumination levels would be more benign when compared with a commercial scheme;
- the occupants of the proposed residential blocks are expected to have curtains, blinds or screens drawn at night; and
- occupancy of the buildings would vary.

[82] Institute of Lighting Professionals (previously Institution of Lighting Engineers), 2005. Guidance Notes for the Reduction of Obtrusive Light. ILP.

The site is located within an area already characterised by high levels of illumination, especially due to the close proximity to the A40 Westway and A5 Edgware Road. It is not anticipated that the proposed development would exceed the ambient sky glow for this locality and therefore, it is not considered that light spill into areas of ecological sensitivity would be an issue in this locality.

Notwithstanding this, when preparing the scheme's Lighting Strategy, consideration would be given to the use of shading devices; the appropriate specification of street and amenity lighting with downward and directional lighting being specified to avoid light spillage onto nearby residential properties; and the integration of lighting control attachments (such as cowels and louvers) to maximise the effectiveness of lighting on-site whilst avoiding adverse impacts.

Accordingly, it is considered that the proposed development would not give rise to significant environmental effects in relation to Light Spill. A formal Light Spill Assessment is therefore proposed to be scoped out as a discrete chapter in the ES.

7.8 Waste

A Waste technical assessment chapter is proposed to be scoped out of the ES because the proposed development would not give rise to significant environmental effects in relation to Waste.

7.8.1 Potential Impacts and Likely Effects

There site is currently vacant and there are no or limited existing waste streams.

The WCC is a unitary waste authority responsible for the collection, recycling and disposal of residential and commercial waste for the site. WCC has a Waste Management Strategy[83] covering the period 2016 – 2031, as well as a Local Plan including policies for guiding developers in waste management and a Recycling and Waste Storage Requirements Guidance Document[84].

Waste streams arising from the demolition and construction stage of the proposed development would mainly be comprised on inert waste such as crushed concrete and brick, as well as waste materials from stripping out of the demolished structure. Excavation works would also generate soil and rubble and construction works would produce a mix of typical construction waste.

Operational waste would be a mixture of residential, commercial and municipal waste streams from public areas due to the residential-led, mixed-use nature of the proposed development.

7.8.2 Considerations

During demolition and construction works, the greatest potential for waste arisings would be from the demolition of existing buildings. Suitable mitigation measures will be employed in order to maximise on-site re-use and recycling and thereby reduce landfill waste from the demolition works. The anticipated waste streams during construction have a high potential to be diverted from landfill.

Following the IEMA 2020 guidance Materials and Waste in Environmental Impact Assessment, primary mitigation measures will be identified by the design team to minimise material use and waste arisings. This will include the use of prefabricated elements, achieving a high floorplate efficiency and a structurally efficient design to reduce material usage and the re-use of demolition and excavation arisings in the construction process where possible.

The volume of waste produced from demolition and construction works from the proposed development and other developments in the surrounding area is not anticipated to exceed the regional landfill void capacity and thus the cumulative effect from the development arising from demolition and construction waste is not considered to be significant.

[83] WCC 2014, Municipal Waste Management Strategy 2016 – 2031. Available online: https://www.westminster.gov.uk/waste-strategy
[84] WCC 2019, Recycling and Waste Storage Requirements. Available online: https://www.westminster.gov.uk/waste-storage-planning-advice

Waste management at the site would be undertaken in accordance with a detailed Construction Site Waste Management Plan (SWMP) to ensure the sustainable management of construction waste, minimisation of waste arisings and maximisation of waste re-use and recycling.

The Applicant's contractors would be encouraged to maximise opportunities for waste recycling and re-use both on and off-site where practically possible. In the event that residual materials require off-site disposal, the Applicant's contractors would ensure the appropriate categorisation of waste in accordance with current regulatory requirements.

ES Chapter 5: Demolition and Construction Description will outline likely waste quantities arising from demolition and construction works, and present the Applicant's commitments to waste minimisation and management during these works.

Operational waste arisings would be managed in accordance WCC guidance and sufficient space provided for the storage of waste. Measures would be put in place to support segregation of recyclable waste streams. Management and collection arrangements would also be developed in line with WCC requirements.

ES Chapter 4: Proposed Development Description will summarise the operational waste management measures which would be included within the proposed development (and outlined within the Waste Strategy). For example, the new on-site floorspace would be provided with appropriate waste facilities to promote sustainable waste practices and recycling.

Sufficient information relevant to the waste management practices during all stages of the proposed development will be provided to fulfil requirements in line with the key UK waste related legislation and overarching EU Directives.

Based on the proposed development's land uses and waste streams, plus the proactive commitment to waste reduction, it is considered that waste generation would not be a significant issue requiring separate assessment within the EIA. It is not anticipated that there would be any environmental effects from the future waste generation streams by the proposed land uses, save for the environmental effects of the collection of waste and secondary effects of emissions and traffic noise associated with waste vehicles. The movements of waste vehicles will be factored into the proposed development's trip generation figures and outlined within the TA.

Accordingly, the proposed development would not give rise to significant environmental effects in relation to waste. A waste assessment is therefore proposed to be scoped out as a discrete chapter within the ES.

7.9 Climate

A Climate technical assessment chapter is proposed to be scoped out of the ES because the proposed development would not significantly contribute to climate change and would be designed to be resilient to the effects of climate change.

7.9.1 Potential Impacts and Likely Effects

In accordance with IEMA guidance it is acknowledged that all greenhouse gases (GHG) contribute to climate change but that this should be considered in context of regional and national emissions. The potential for the proposed development to contribute to climate change would be through embodied carbon, transport and on-site emissions during the demolition and construction works, as well as the operational use of new buildings once the development is completed.

The proposed development could also be impacted by the effects of climate change, for example due to changes in average temperature and increased frequency of heavy rainfall events. Climate change could also worsen the effects identified in other environmental topics.

7.9.2 Considerations

To minimise GHG emissions the Applicant will seek to achieve a number of sustainable design initiatives in line with policy requirements and in particular, the Mayor of London's 'Energy Hierarchy' and sustainability targets, as well as any relevant requirements set out by the WCC.

The proposed development's energy and sustainability strategy will therefore aim to:

- minimise overall energy demand and consumption through practicable energy efficient design;
- minimise GHG emissions arising from the operation of the proposed development as far as practicably possible through the use of efficient plant, fittings and fixtures; and
- reduce GHG emissions arising from the operation of the proposed development as a result of on-site low carbon technology.

A BREEAM pre-assessment will also be submitted with the application.

The Applicant will also seek to ensure that construction materials are selected following the Building Research Establishment (BRE) 'Green Guide to Specification' to:

- minimise embodied energy content (the energy used in manufacture);
- use recyclable materials where they have high embodied energy; and
- maximise the recycled content of the material, ease of maintenance, appropriate sourcing of materials and totally excluding deleterious and hazardous materials.

The proposed development would also seek to reduce the need to travel by private car through the provision of a mixed-used development which provides employment opportunities on-site or within good proximity to sustainable transport options. The proposed development would only provide parking spaces for disabled users to further encourage the use of low carbon travel choices. The proposed development would likely deliver a reduction in on-site car parking spaces. In addition, the proposed development would provide secure cycle parking and other initiatives to improve accessibility and sustainable transport links with the adjacent community.

Furthermore, the Applicant will commit to best practice measures during the demolition and construction stage to minimise potential climate impacts. These measures will be set out within a CEMP to be prepared in advance of demolition and construction and would be secured by means of a suitably worded planning condition.

The Applicant will also seek to ensure that the proposed development's design is resilient in respect to the potential effects of climate change. This will include taking account of climate change when assessing flood risk and minimise overheating within the residential units through appropriate design measures. The following assessments will consider the proposed development's indirect or secondary impacts on climate:

- FRA Memorandum; and
- Energy and Sustainability Assessment (including BREEAM Assessment).

Accordingly, the GHG emissions arisings from the proposed development are not considered likely to be considered significant in the context of regional or national emissions and the proposed development would be designed to be resilient to climate change. Therefore, there are no significant climate effects likely to arise from a development of this nature. Climate will be comprehensively considered within the proposed development's design and as appropriate within the ES. Accordingly, a discrete Climate technical assessment chapter is proposed to be scoped out of the ES.

7.10 Major Accidents and Disasters

A Major Accidents and Disasters technical assessment chapter is proposed to be scoped out of the EIA because the proposed development would not give rise to significant environmental effects in relation to Major Accidents and Disasters.

7.10.1 Potential Impacts and Likely Effects

The site is not located within 1 km of any Control of Major Accident Hazards (COMAH) regulated establishments.

The site is not located within a geographical region that has historically been subject to natural disasters. Whilst the site lies in an area where the potential effects, for example, of failure of the TTD could be considered a disastrous event, resulting in flooding of large areas of Greater London, the proposed embedded mitigation measures will include amongst others, ensuring finished floor levels are set above the Climate Change predicted flood level, ensuring a safe means of escape for vulnerable users and preparing an emergency flood evacuation plan.

There is no recognised guidance on the assessment of major accidents and disasters. The EIA Regulations state that "*a description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned*" should be provided within the ES.

Many examples of major natural disasters, such as epidemics, earthquakes, volcanic eruptions and droughts are not of relevance to the site or the proposed development; however, vulnerability to flood risk and storm events are relevant.

Flood risk will be considered within the FRA, where best-practice mitigation measures will be outlined. Strong winds associated with storm events will be factored into the design of the proposed development in respect of structural integrity and appropriateness of landscaping features. No further assessment in respect of natural disasters is necessary.

In respect of major accidents:

- Utility failure (such as electricity, gas, water supply or sewerage) will be avoided through appropriate design and sufficient consultation with utility providers, ensuring that necessary repairs can be undertaken, and continuation of supply ensured;
- Urban fires will be mitigated through appropriate design in accordance with Building Regulations and relevant safety guidance, in addition to the established 999 emergency response procedures in place in London; and
- Terrorist incident risk is not heightened or noteworthy due to the site's location and intended uses of the proposed development.

7.11 Human Health

A Human Health technical assessment is proposed to be scoped out as a discrete chapter within the ES because the proposed development would not give rise to significant environmental effects in relation to human health. Nevertheless, several technical assessments within the ES will give consideration to human health.

7.11.1 Potential Impacts and Likely Effects

The potential impacts and likely effects of a new development on the health of new and existing residents and workers would be largely determined by the way the proposed development's buildings and spaces are used, as well as lifestyle factors which cannot be accurately quantified or controlled at the planning stage. These wider factors sit outside of the scope of planning and EIA.

Development and planning can play a certain role within the wider determinants of health and well-being, including provision of good quality workspace, employment, access to health services, access to open space and access to healthy forms of transport. This role of planning, development, health and wellbeing is limited to the location, design and nature of uses proposed and the methods in which they are constructed. The scope of this assessment needs to be applied proportionately to the type of development being considered.

Residential, commercial, office, leisure, community, retail and industrial uses are located within the surrounding area. The proposed development itself would also comprise residential, commercial and industrial spaces.

Mitigation measures will be incorporated into the design of the proposed development to maximise health and wellbeing such as the provisioning of well-designed residential units and pedestrian areas; the provision of on-site employment opportunities and public realm; as well as access to schools and healthcare facilities.

A number of assessments within the EIA will consider the proposed development's indirect or secondary impacts which can have an effect on human health (such as those relating to industrial land uses and the safeguarded wharf), namely, the:

- Ground Conditions Preliminary Risk Assessment (technical appendix);
- Air Quality Assessment;
- Noise and Vibration Assessment;
- Daylight, Sunlight and Overshadowing Assessment; and
- Wind Assessment.

Accordingly, a discrete health and wellbeing technical assessment chapter is proposed to be scoped out of the ES.

8. SUMMARY

The ES will address the requirements of Schedule 4 of the EIA Regulations. The preliminary structure and content of the ES is as follows:

- Non-Technical Summary;
- Volume 1: Main Environmental Statement:
    1. Introduction;
    2. EIA Process and Methodology;
    3. Alternatives and Design Evolution;
    4. Proposed Development Description;
    5. Construction Environmental Management;
    6. Socio-Economics;
    7. Air Quality;
    8. Noise and Vibration;
    9. Wind Microclimate;
    10. Daylight, Sunlight, Overshadowing and Solar Glare;
    11. Intra Cumulative Effects;
    12. Summary of Residual Effects; and
    13. Glossary of Terms and Abbreviations
- Volume 2: Townscape, Visual and Built Heritage Assessment
- Volume 3: Technical Appendices.

Following review of the emerging proposed development it is not deemed necessary to undertake a full EIA and produce ES chapters for ecology; ground contamination; water resources and flood risk; archaeology; telecommunication interference; light spill, solar glare; waste climate change; major accidents and disasters; human health; however, ES Volume 3 will include the following ES technical appendices to inform the planning application:

- Ecological Impact Assessment;
- Preliminary Risk Assessment;
- Flood Risk Assessment Memorandum; and
- Archaeological Desk Based Assessment.