

FIVE KINGDOM STREET

ENVIRONMENTAL STATEMENT
ADDENDUM VOLUME I:
NON-TECHNICAL SUMMARY &
VOLUME II: MAIN TEXT

JULY 2020

ENVIRONMENTAL STATEMENT ADDENDUM

Addendum to Environmental Statement (CBRE,
April 2019)

Volume I: Non-Technical Summary & Volume II
Main Text

Five Kingdom Street

British Land

July 2020

NON-TECHNICAL SUMMARY

INTRODUCTION

A full planning application made by British Land (‘the Applicant’) for a proposed mixed-use development at 5 Kingdom Street, Paddington Central, London, was submitted to Westminster City Council (WCC) in May 2019 (application reference: 19/03673/FULL). The application was supported by an Environmental Statement (the ‘original ES’).

The planning application was considered at Westminster City Council (WCC) Planning Committee on 7 January 2020. The Committee resolved to refuse planning permission (in line with the planning case officer’s recommendation) on the following grounds:

“Subject to referral to the Mayor of London, resolved to refuse permission on design, townscape and heritage grounds and that insufficient information has been submitted to demonstrate that the proposed building would not result in a cumulative material loss of light to the detriment of the amenities of the occupiers of the properties on Westbourne Terrace Road and Warwick Crescent.”

The planning application has since been “called in” by the Mayor of London for determination (Greater London Authority (GLA) reference: 4925). Following consultations with the GLA, a number of amendments have been made to the original proposals set out in the planning application and assessed in the original ES (herein ‘the original 2019 scheme’).

This Environmental Statement Addendum (‘ES Addendum’) has been prepared on behalf of the Applicant in order to update the environmental effects of the 5 Kingdom Street development reported in the original ES, in the context of the proposed scheme amendments and the passage of time.

As an ES Addendum, this document should be read in conjunction with the original ES. Together the original ES and this ES Addendum constitute the ‘updated ES’.

PROPOSED SCHEME AMENDMENTS

A summary of the proposed amendments to the original 2019 scheme (as defined) is set out below:

- Increase in the total quantum of office floorspace, including office ancillary space, proposed on Ground Floor Level and above from 47,694 sq. metres (GIA) to 48,264 sq. metres (GIA). Some reconfiguration of the office floorspace on these levels is also proposed;
- Changes to the office entrance arrangements from Kingdom Street. The Mezzanine level office entrance and escalators have been removed and a new entrance has been included at Ground Floor Level;
- The 633 sq. metre rooftop office outdoor amenity terrace at Level 18 has been omitted. The 972 sq. metre rooftop outdoor amenity terrace

at Level 19 has also been replaced with a smaller outdoor amenity terrace, including a covered space. The outdoor amenity terrace at Mezzanine level included within the original 2019 proposals has also been reduced in size from 219 sq. metres to 129 sq. metres. Finally, a new outdoor amenity terrace of 78 sq. metres has been incorporated into the proposals at Level 01 above the eastern entrance to the building on Kingdom Street. All outdoor amenity terraces will be for use by the office staff;

- Reconfiguration of the rooftop plant and Building Maintenance Units (BMU) at Level 19. The change in quantity of heat pumps and the change from cooling towers to hybrid dry coolers are the main equipment specification changes;
- Increase in height of the lift over-runs and selected rooftop plant by 4.32 m;
- Amendment to the energy strategy to remove the gas fired boilers. The amended strategy consists of air and water source heat pumps in combination with hybrid air cooled chillers;
- The 318 sq. metres (GIA) of flexible retail floorspace (comprising A1 (shops and retail outlets) and A3 (food and drink) uses) that was previously proposed at Ground Floor Level has been moved to Lower Ground Floor Level and its area has been reduced to 265 sq. metres (GIA);
- The area of 575 sq. metres (GIA) previously proposed across Lower Ground Floor Level, Ground Floor Level and Mezzanine Level for flexible retail and office uses (comprising A1 (shops and retail outlets), A3 (food and drink) and B1(a) (office)) has increased to 723 sq. metres (GIA);
- Increase in the total floorspace for ‘The Garden’ from 1,506 sq. metres (GIA) to 1,635 sq. metres (GIA);
- The minimum of 700 sq. metres (NIA) of office floorspace to be provided as affordable workspace under the original 2019 scheme to be replaced by a new fixed area of affordable workspace across Lower Box and Upper Box Levels, totalling 3,900 sq. metres (GIA) of floorspace. This area replaces the proposed office use within the 7,971 sq. metres (GIA) of floorspace for flexible commercial, community, cultural and/or leisure uses within ‘the Box’ within the original 2019 scheme. Effectively, this space has been ‘fixed’ under the scheme amendments;
- The proposed dedicated education and community space within ‘the Box’ (across Upper Box and Lower Box Levels) has been removed under the amendments, as the intended function of this space to run outreach programmes with local schools and groups will now be an ancillary function of the new affordable workspace area introduced to the scheme;

- The auditorium (sui generis) within ‘the Box’ (across Upper Box and Lower Box Levels) has increased in size by 8 sq. metres (GIA) from 730 sq. metres (GIA) to 738 sq. metres (GIA). The number of seats (250), opening hours and the proposed use of this space remain unchanged;
- The total of 7,971 sq. metres (GIA) of floorspace for flexible commercial, community, cultural and/or leisure uses proposed within ‘the Box’ (across Upper Box and Lower Box Levels) has been reduced to 3,490 sq. metres (GIA) and the range of uses has also been amended to remove the office (B1(a)) and research and development (B1(b)) uses. The office (B1(a)) floorspace is now proposed as a fixed area of 3,900 sq. metres (GIA) of affordable workspace, as noted in the text above. The maximum proportion of the total floorspace that could be provided by each use under the amended scheme has also doubled for each potential use to reflect the fact that roughly half the flexible space has been lost to affordable workspace and some minor changes in maximum capacities have also occurred;
- The total of 5,580 sq. metres (GIA) of mixed-use ancillary floorspace proposed within ‘the Box’ (across Upper Box and Lower Box Levels) has increased to 6,913 sq. metres (GIA) and now also includes areas at Lower Ground Floor Level;
- Amendments to the number of short-stay and long-stay cycle parking spaces from 258 to 226 and 700 to 730 spaces respectively;
- Increase in the total number of pick-up / set down spaces for visitors accessing the development by taxi or private car from two to three spaces;
- Increase in the application site area at Kingdom Street level at the north/north-eastern point of the building by circa 4.7 sq. metres. The overall site area at this level remains at 0.43 ha;
- The application site area has increased by 861sqm to 1.35ha at the track level with a new leg under Kingdom Street for more cycle parking on a gantry in the service road area;
- Amendments to the proposed wind microclimate design interventions, including changes in louver dimensions and planting on the outdoor amenity terraces; and
- No changes to the construction methodology or the length of the construction period are proposed. However, due to the time that has passed since the original planning application was submitted in May 2019, the entire construction programme has been delayed by 14 months. As a result, the opening year of the scheme has been amended from 2024 to 2025.

ENVIRONMENTAL EFFECTS OF THE PROPOSED DEVELOPMENT

The proposed development variations have been considered across all technical topics that were scoped in to the original ES, namely:

- Socio-economics;
- Daylight, Sunlight, Overshadowing, and Solar Glare;
- Wind Microclimate; and
- Townscape, Heritage & Visual.

Any new legislation, policy or technical guidance that has been introduced between the previous ES being undertaken and this 2020 ES Addendum has also been identified and considered.

Consideration has also been given to the additional technical topics scoped out/down from the original ES in chapter 3 of this ES Addendum. The original technical reports related to these topics have been updated where necessary and are provided in the appendices in ES Addendum Volume IV.

ASSESSMENT FINDINGS SUMMARY

Socio-Economics

The potential socio-economic effects of the amended scheme have been assessed using the same methodology as applied to the original assessment reported in the ES.

The proposed amendments in floorspace quantum in the various fixed and flexible uses proposed throughout the building, including the uplift in the fixed affordable workspace floorspace in ‘the Box’, will affect the number of jobs generated by the operational scheme.

All residual impacts remain valid from the original ES chapter except for the contributions towards the delivery of affordable housing and social and community infrastructure which has increased from Moderate Beneficial to Major Beneficial. In addition, during the operational phase there is expected to be the additional residual effect of economic regeneration benefits to the wider area, which is expected to be Major Beneficial.

The construction phase will generate 382 gross direct construction jobs which, when taking into account leakage, displacement and induced/indirect jobs, would be equivalent to 60 net construction jobs which would specifically benefit WCC residents over the 48-month construction duration, which in the context of the size and mobility of the construction workforce would have a temporary Moderate Beneficial residual effect.

Within the operational phase, the proposed development would:

- deliver a range of commercial spaces, all of which would create employment. Based on standard employment densities, this space would create approximately 3,890 – 5,086 gross direct operational jobs which, when taking into account leakage, displacement and induced/indirect jobs, would be equivalent to 639 – 837 net operational jobs that would specifically benefit WCC residents. In the context of the local economy, this would have a Major Beneficial residual effect;

- deliver economic regeneration benefits to the wider area due to the significant employment opportunities that the proposed development would generate resulting in a Major Beneficial residual effect;
- deliver a safe and secure development implementing appropriate secured by design principles. In regard to reductions of crime and fear of crime, this is considered to result in a permanent Moderate Beneficial residual effect; and
- deliver contributions towards affordable housing and social and community infrastructure to result in a permanent Major Beneficial residual effect.

As such it is considered that the proposed development would deliver on the regeneration aspirations of the local authority.

Daylight, Sunlight, Overshadowing & Solar Glare

The potential daylight, sunlight, overshadowing and solar glare effects of the amended scheme on surrounding sensitive receptors has been assessed using the same methodology as applied to the original assessment reported in the ES.

The amendments to the scheme of relevance to this assessment are the minor changes in the building massing at the base of the building and at roof level. While an increase in height of 4.32m at roof level is proposed due to the increase in height of the lift over-runs and roof plant, the massing at this location is now stepped back to a greater degree from the edge of the main body of the building.

The relevant design amendments are minor in the context of the wider building and the assessment results show that the significance of effect results reported in the original ES chapter will remain valid, with the exception of one effect on a single receptor. This is the effect of overshadowing on the rear garden of 25 Westbourne Terrace Road. As a result of the amendments, the significance of this effect has increased from Minor Adverse to Moderate Adverse.

The residual daylight, sunlight, overshadowing and solar glare effects of the scheme range from Negligible to Moderate Adverse.

Wind Microclimate

The proposed amendments to the building massing and height have the potential to alter the wind microclimate conditions within and around the proposed development. The changes to the proposed outdoor office amenity terraces, including the removal of the Level 18 terrace and the addition of the new Level 1 terrace, also result in the introduction of new sensitive receptor locations at the site and the removal of previous locations assessed within the original ES chapter.

Given that the scheme amendments are generally minor in the context of the scheme as a whole, this assessment has been undertaken using a

qualitative, desk-based approach, based on Arup’s professional experience of assessing the interaction of the wind with the urban environment.

All mitigation measures identified in the original ES chapter remain valid. Three additional mitigation measures have also been recommended within the Wind ES Addendum chapter, which are shown in the table below.

POSSIBLE EFFECT BEING MITIGATED/ENHANCED	MITIGATION MEASURE	HOW SECURED / TRIGGER
Windiness levels in excess of acceptable limits for outdoor seating on the eastern roof pavilion Level 1 terrace (receptor no. 201).	Denser landscaping or a roof pergola is recommended to extend usability of the terrace for outdoor seating in good weather days if found desirable.	Development of mitigation via wind tunnel testing to be secured by planning condition
Windiness levels in excess of acceptable limits for outdoor seating and entrance use on the western mezzanine terrace (receptor no. 200).	Denser landscaping or a roof pergola is recommended to extend usability of the terrace for outdoor seating in good weather days if found desirable. Careful choice of door system to manage operational issues	Development of mitigation via wind tunnel testing to be secured by planning condition
Windiness levels in excess of acceptable limits for outdoor seating on the upper terrace at level 19.	Denser landscaping or a roof pergola is recommended to extend usability of the terrace for outdoor seating in good weather days, if found desirable.	Development of mitigation via wind tunnel testing to be secured by planning condition

The assessment results indicate that the residual significance of effect results reported in the original ES chapter are expected to remain valid in the context of the scheme amendments for all receptors that remain within the scheme.

The receptors that have been removed from the scheme under the amendments comprise the following previous office outdoor amenity terrace locations at Level 18 and 19: Receptors 106-111, 112-122, and 150-151. These effects were reported to be Negligible in the original ES chapter and have now been removed from the assessment.

The results indicate that, with the inclusion of the mitigation measures set out in the ES Addendum chapter, the residual effects on the new receptors introduced to the scheme under the amendments are expected to be negligible. These receptors are as follows:

- Receptor 200: Mezzanine terrace;
- Receptor 201: Level 1 terrace; and
- Receptors 202-204: Level 19 terrace.

Townscape, Heritage & Visual

The potential effects of the amended scheme on townscape, built heritage and visual receptors has been assessed using the same methodology as applied to the original assessment reported in the ES.

While the proposed amendments to the top of the building would be visible in some views, the amendments would not affect the extent of the building's visibility or the overall character of the architecture. The amendments to the lower levels of the building are barely discernible in the verified views and would only be noticed when in close proximity of the building. Overall, due to the minor nature of the proposed scheme amendments, the potential significant effects are considered to be the same as those reported within the original ES.

Potential significant effects are anticipated on the parts of the townscape from which the proposed development would be most visible, which are closest to the application site, including TCA 1: Paddington Basin, in which the application site is situated, and TCA2, which includes the rail and roadways bordering the north and south sides of the application site. It also includes TCA3: Maida Vale, which is close to the application site to the north and includes a high proportion of small-scale buildings and an open area – the Little Venice lagoon – which provide clear views to the proposed development. Townscape effects are expected to range from negligible to Minor Beneficial.

Potential significance impacts on the views of viewers are anticipated in the close vicinity of the application site and only at limited points in the wider area (from parks and elevated prospects, where there are longer outward views, and along streets directed towards the application site). The most significant impacts on views are likely to be from the north side of the Little Venice lagoon, in the streets close to the site beside the Westway and on nearby rail bridges, and from open areas within Hyde Park and Kensington Gardens to the south. Effect on views are reported to range from negligible and neutral to Moderate Beneficial.

It is anticipated that there would be no direct impacts on heritage assets. Indirect impacts would occur through changes to the settings of heritage assets. It is anticipated that the proposed development would have very limited visibility in relation to designated heritage assets in the wider area but would be clearly visible in relation to a number of listed buildings to the north of the application site in the Little Venice area and would be clearly visible from parts of the Maida Vale Conservation Area.

These potential significant impacts have been considered throughout the design process and all significant impacts are anticipated to be either neutral or beneficial in quality. Whilst the settings of a number of heritage assets may be substantially altered, the heritage significance of all heritage assets would be preserved.


CONCLUSIONS

The only residual effects reported in the original ES, the significance of which is expected to change as a result of the scheme amendments, are the following effects during the operational phase:

- Contributions towards the delivery of affordable housing and social and community infrastructure – effect significance has increased from **Moderate Beneficial** to **Major Beneficial**;
- The inter-cumulative effect of economic regeneration benefits to the wider area has been added to take account of the transboundary effects and would result in a **Major Beneficial** effect.
- Overshadowing effects on the rear garden of 25 Westbourne Terrace Road – effect significance has increased from **Minor Adverse** to **Moderate Adverse**;
- New office outdoor amenity terrace locations introduced under the amended scheme (Receptor 200 (Mezzanine terrace), Receptor 201 (Level 1 terrace), Receptors 202-204 (Level 19 terrace) – effect significance **Negligible**; and
- Office outdoor amenity terrace locations included under original 2019 proposals, which have been removed under the amended scheme (Receptors 106-111, 112-122, and 150-151 (previous Level 18 & 19 terrace) – effect significance previously reported as Negligible. **Now removed from assessment results.**

The significance of all other residual effects of the original 2019 scheme reported in the original ES remains unchanged.

QA

Approved By: 	Patrick Little, Associate Director Environmental Planning & Assessment Building Consultancy – Environmental Consultancy For and on behalf of CBRE Limited
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1 INTRODUCTION

1.1 OVERVIEW

A full planning application for a proposed mixed-use development at 5 Kingdom Street, Paddington Central, was submitted by British Land ('The Applicant') to Westminster City Council ('WCC') in May 2019 (received and validated by WCC on 14 May 2019 (WCC Planning Reference 19/03673/FULL)). The application was supported by an Environmental Statement (the 'original ES') (CBRE, April 2019).

The planning application was considered at WCC Planning Committee on 7 January 2020. The Committee resolved to refuse planning permission (in line with the planning case officer's recommendation) on the following grounds:

"Subject to referral to the Mayor of London, resolved to refuse permission on design, townscape and heritage grounds and that insufficient information has been submitted to demonstrate that the proposed building would not result in a cumulative material loss of light to the detriment of the amenities of the occupiers of the properties on Westbourne Terrace Road and Warwick Crescent."

The planning application has since been "called in" by the Mayor of London (herein, 'the Mayor') for determination (under article 7 of the Mayor of London Order and the powers conferred by Section 2A of the 1990 Town and Country Planning Act) (Greater London Authority (GLA) reference: 4925).

Following consultations with the GLA, a number of amendments have been made to the original proposals set out in the planning application and assessed in the original ES (herein 'the original 2019 scheme').

This Environmental Statement (ES) Addendum has been prepared on behalf of the Applicant to update the environmental effects of the 5 Kingdom Street development reported in the original ES, in the context of the proposed scheme amendments (herein 'the amended scheme').

1.2 ENVIRONMENTAL IMPACT ASSESSMENT

The Purpose of Environmental Impact Assessment

Environmental Impact Assessment (EIA) is a process for ensuring that the likely significant effects of a new development on its surrounding environment are fully identified and taken into account before that development is allowed to proceed.

The Ministry of Housing, Communities & Local Government's (MHCLG) Planning Practice Guidance¹ states that the purpose of EIA is:

"to protect the environment by ensuring that a local planning authority when deciding whether to grant planning permission for a project, which is likely to have significant effects on the environment, does so in the full knowledge

of the likely significant effects, and takes this into account in the decision making process"

The Development in the Context of the EIA Regulations 2017

The original ES was prepared in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended 2018) - herein the 'EIA Regulations 2017'.

As set out in the original ES, the proposed development is not Schedule 1 development, for which EIA would be mandatory. It is however of a type listed within the descriptions of development contained within Schedule 2, falling under category 10(b) urban development projects (including the construction of shopping centres and car parks, sports stadiums, leisure centres and multiplex cinemas).

A development is considered to be Schedule 2 development if any part of it lies within a 'sensitive area' or if it meets or exceeds the relevant thresholds and criteria for that category of development, as detailed in the EIA Regulations 2017. For category 10(b) projects, these are as follows:

- i. The development includes more than 1 hectare of urban development which is not dwelling-house development; or
- ii. The development includes more than 150 dwellings; or
- iii. The overall area of the development exceeds 5 hectares.

The proposed development does not lie within a sensitive area, as defined in the EIA Regulations; however, on the basis that it exceeds the 1 ha site area threshold for non-dwelling house development, it is considered to be Schedule 2 development and would therefore fall within the scope of the regulations.

In the interests of undertaking a robust assessment of the likely environmental effects of the proposals, the Applicant chose to voluntarily submit an ES to accompany the planning application. No request for a screening opinion was submitted to WCC.

The ES

The product of the EIA process is an ES. Regulation 2(1) of the EIA Regulations 2017 states that an ES has the meaning given by Regulation 18(3) which defines it as a statement that at least includes:

- a. a description of the proposed development comprising information on the site, design, size and other relevant features of the development;
- b. a description of the likely significant effects of the proposed development on the environment;
- c. a description of any features of the proposed development, or measures envisaged in order to avoid, prevent or reduce and, if

possible, offset likely significant adverse effects on the environment;

- d. a description of the reasonable alternatives studied by the developer, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment;
- e. a non-technical summary of the information referred to in sub-paragraphs (a) to (d); and
- f. any additional information specified in Schedule 4 of the EIA Regulations 2017 relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected.

Structure of the Updated ES

This document is an Addendum to the original ES that was prepared in relation to the original 2019 scheme. The ES Addendum has also been prepared in accordance with the EIA Regulations 2017, which have subsequently been amended by the Town and Country Planning (Development Management Procedure, Listed Buildings and Environmental Impact Assessment) (England) (Coronavirus) (Amendment) Regulations 2020, since the original ES was submitted.

As an ES Addendum, this document should be read in conjunction with the original ES. Together the original ES and this ES Addendum constitute the 'updated ES'.

The structure of the original ES is presented in Chapter 1 in Volume I of the original ES. The structure of this ES Addendum is as follows:

■ ES Addendum Volume I & II:

- **Non-Technical Summary (NTS)**, which is set out as the Executive Summary at the beginning of this document and which provides a concise, accessible overview of the proposed scheme amendments and the findings of the ES Addendum in the context of the original assessment for a wide and non-technical audience.
- **Chapters 1-8 (Main Text)** of the ES Addendum, which describes the scheme amendments, the planning approach, the alternative options considered, the baseline environmental conditions, the likely significant effects of the amended scheme, the proposed mitigation measures and the residual environmental effects.

- **ES Addendum Volume III: THVIA Addendum** which, in line with the original ES, has been included as a separate volume rather than as a technical chapter within the Main Text volume.

¹ DCLG. (2015). *Planning Practice Guidance: Environmental Impact Assessment*. Available:

<http://planningguidance.planningportal.gov.uk/blog/guidance/environmental-impact-assessment/the-purpose-of-environmental-impact-assessment/>

- **ES Addendum Volume IV: Technical Appendices** containing technical reports that have informed the assessments contained in the Main Text and additional topics scoped out of the ES.

The specified information in Schedule 4 of the EIA Regulation 2017 is replicated in Table 1.1, which also indicates where this information has been provided within the updated ES.Table 1.1

Table 1.1
Specified Information within Schedule 4

SPECIFIED INFORMATION	WHERE PROVIDED
1. Description of development, including in particular: <ul style="list-style-type: none">a. a description of the location of the development;b. a description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases;c. a description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used;d. an estimate, by type and quantity, of expected residues and emissions such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases.	ES Vol II, Ch 3 ES Addendum Vol I & Vol II, Ch 2 ES Vol II, Ch 3 & 5 ES Addendum Vol I & Vol II, Ch 2 ES Vol II, Ch 6 – 8 ES Vol III ES Addendum Vol I & Vol II, Ch 4-6 ES Addendum Vol III ES Vol II, Ch 6 – 9 ES Vol III ES Addendum Vol I & Vol II, Ch 4-7 ES Addendum Vol III
2. A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.	ES Vol II, Ch 4 ES Addendum Vol I & Vol II, Ch 3
3. A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.	ES Vol II, Ch 6 – 9 ES Vol III ES Addendum Vol I & Vol II, Ch 4-7 ES Addendum Vol III

SPECIFIED INFORMATION	WHERE PROVIDED
4. A description of the factors specified in Regulation 4(2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.	ES Vol II, Ch 6 – 9 ES Vol III ES Addendum Vol I & Vol II, Ch 4-7 ES Addendum Vol III
5. A description of the likely significant effects of the development on the environment resulting from, inter alia: <ul style="list-style-type: none">a. the construction and existence of the development, including, where relevant, demolition works;b. the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;c. the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;d. the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);e. the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;f. the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;	ES Vol II, Ch 6 – 9 ES Vol III ES Addendum Vol I & Vol II, Ch 4-7 ES Addendum Vol III ES Vol II, Ch 6 – 9 ES Vol III ES Addendum Vol I & Vol II, Ch 4-7 ES Addendum Vol III ES Vol II, Ch 6 – 9 ES Vol III ES Addendum Vol I & Vol II, Ch 4-7 ES Addendum Vol III ES Vol II, Ch 6 – 9 ES Vol III ES Addendum Vol I & Vol II, Ch 4-7 ES Addendum Vol III ES Vol II, Ch 6 – 9 ES Vol III ES Addendum Vol I & Vol II, Ch 4-7 ES Addendum Vol III

SPECIFIED INFORMATION	WHERE PROVIDED
g. the technologies and the substances used.	ES Vol II, Ch 6 – 9 ES Vol III ES Addendum Vol I & Vol II, Ch 4-7 ES Addendum Vol III
The description of the likely significant effects on the factors specified in Regulation 4(2) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development. This description should take into account the relevant environmental protection objectives established at the national level.	ES Vol II, Ch 6 – 9 ES Vol III ES Addendum Vol I & Vol II, Ch 4-7 ES Addendum Vol III
6. A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.	ES Vol II, Ch 6 – 9 ES Vol III ES Addendum Vol I & Vol II, Ch 4-7 ES Addendum Vol III
7. A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.	ES Vol II, Ch 6 – 10 ES Vol III ES Addendum Vol I & Vol II, Ch 4-7 ES Addendum Vol III
8. A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.	ES Vol II, Ch 6 – 9 ES Vol III ES Addendum Vol I & Vol II, Ch 4-7 ES Addendum Vol III
9. A non-technical summary of the information provided under paragraphs 1 to 8.	ES Vol I ES Addendum Vol I
10. A reference list detailing the sources used for the descriptions and assessments included in the environmental statement.	ES Vol II, Ch 1 – 10; ES Addendum Vol I & Vol II, Ch 1-7

Source: EIA Regulations 2017.

INTRODUCTION

The Consultant Team

This ES Addendum has been written predominantly by CBRE Ltd.'s Environmental Planning and Assessment team ('CBRE EP&A') with specific inputs from sub-consultants as relevant. It has been prepared based on information provided by the Applicant, the project architect, the technical consultants, and the planning consultant.

In accordance with Regulation 18(5)(A) of the EIA Regulations 2017, this ES has been prepared by competent experts. CVs are provided to illustrate the relevant expertise and qualifications of the team in Appendix 1.1, ES Addendum Volume IV, in accordance with Regulation 18(5)(B) of the EIA Regulations 2017. Patrick Little is a Practitioner Member of Institute of Environmental Management (IEMA).

1.3 DETERMINATION OF THE PLANNING APPLICATION

The Applicant has prepared and submitted to the Mayor an electronic copy of the four volumes of this ES Addendum and the four volumes of the original ES, which together constitute an ES under the EIA Regulations 2017. In line with the provisions under the Town and Country Planning (Development Management Procedure, Listed Buildings and Environmental Impact Assessment) (England) (Coronavirus) (Amendment) Regulations 2020, a hard copy of the ES has not been submitted.

The Mayor will publicise the planning application by letter, display of a site notice, social media post on outlets including Facebook and Twitter, and by display on the Mayor of London website:

<https://www.london.gov.uk/what-we-do/planning/planning-applications-and-decisions/public-hearings/5-kingdom-street-public-hearing>

In accordance with Regulation 19(3), once it has received the updated ES, the Mayor shall:

- send to the Secretary of State within 14 days of receipt of the statement, one copy of the statement, a copy of the application and of any documents submitted with the application;
- forward to any consultation body, which has not received a copy directly from the Applicant, a copy of the ES and inform any such consultation body that they may make representations; and
- send a notice to any person who is likely to be affected by, or has interest in, the application, who is unlikely to become aware of it by way of a site notice or by local advertisement.

Determination Period

As per Regulation 19(6), the Mayor shall not determine the EIA application until the expiry of 37 days from the last date on which a copy of the statement was served to any of the consultees. The determination must also be made after the expiry of 30 days from the display of the site notice,

from the date of publication in the local newspaper and from the date of advertisement on the Mayor's website (whichever is later).

Copies of and Comments on the Updated ES

The updated ES (comprising the original ES and the ES Addendum) and the planning application will be available to be viewed and downloaded at the Mayor of London's website:

<https://www.london.gov.uk/what-we-do/planning/planning-applications-and-decisions/public-hearings/5-kingdom-street-public-hearing>

Comments on the planning application and updated ES can be made via email to the address below:

KingdomStreet@london.gov.uk

Paper copies of this ES Addendum can be obtained for £100.00 (to reflect printing and distribution costs) by contacting:

CBRE Ltd - Environmental Planning & Assessment
St Martin's Court
10 Paternoster Row
London
EC4M 7HP

Alternatively, an electronic copy of the ES Addendum can be obtained for £10.00 by contacting CBRE at the above address.

Charges for paper and electronic copies of the ES Addendum are made in accordance with Regulation 24 of the EIA Regulations 2017.

Alternative Formats

The text size used in this document has been chosen to cut down on the quantity of paper required in its production. A large text version of this document is available upon request. Please note that printing costs may vary from those stated above.

1.4 STRUCTURE OF THIS REPORT

The remainder of this Volume of the ES Addendum is structured as follows:

- Chapter 2: Site Description & Amended Scheme;
- Chapter 3: The proposed approach to the EIA Methodology;
- Chapters 4-6: Technical Assessment of Amendments;
- Chapter 7: Summary and Conclusions; and
- Chapter 8: Citations

2 SITE DESCRIPTION & AMENDED SCHEME

2.1 SITE CONTEXT & PLANNING HISTORY

Paddington Central

WCC designated Paddington as a Special Policy Area in 1988 in recognition of the important strategic role it could play in Westminster and London. The comprehensive approach adopted by the Council pre-dated the London Plan's identification of 'Opportunity Areas' by nearly a decade. It also lies within the North Westminster Economic Development Area (NWEDA).

The Paddington Central campus was granted outline planning permission in 2000 in the form of a masterplan for 'Redevelopment to provide a mix of uses; namely offices, 210 residential units, local shopping and studio/light industrial units in buildings between 7 and 13 storeys in height. Creation of new access off Bishops Bridge Road and new egress ramp, provision of basement car parking and ancillary office accommodation. New footpaths and pedestrian links including a new footbridge across the canal' (Ref: 97/06935/OUT).

This masterplan forms the basis of what has been developed on the majority of the wider Paddington Central campus to date. The application site ('5 Kingdom Street') lies within the Paddington Central campus.

2.2 ORIGINAL 2019 ES SCHEME

The Application Site Context

The 5 Kingdom Street application site is centred on National Grid Reference (NGR) TQ 26140 81602.

The application site is bounded by Harrow Road to the north, Harrow Road and Westbourne Bridge to the west, the railway lines running into and out of Paddington station to the south and other plots within the Paddington Central campus to the east. The application site comprises three levels: ground level ('track level'), with Harrow Road level above and Kingdom Street level further above this. The extent of the red line boundary varies between the three levels and, as such, three red line boundary plans have been submitted alongside the planning application. These are shown in Figures 3.1-3.3 in Chapter 3 of Volume II of the original ES. The application site area at each level is shown in Table 2.1.

Table 2.1
Application Site Area at Each Level

LEVEL	SITE AREA (HECTARES)
Kingdom Street Level	0.43
Harrow Road Level	0.90
Track Level	1.35

The application site's immediate urban context comprises a mix of uses. At track level, the site boundary extends to include a space under the existing 4 Kingdom Street, Hotel Novotel London Paddington (3 Kingdom

Street) and 1 Kingdom Street buildings; although, these buildings are not themselves included within the application site, as illustrated on the red line boundary plan at Kingdom Street level (Figure 3.3, Chapter 3, original ES Volume II). 4 Kingdom Street provides office and bar/restaurant uses, 3 Kingdom Street is a Hotel and 1 Kingdom Street also comprises offices, with restaurants & cafés at Kingdom Street level. Further to the east, a range of commercial and residential uses are provided in the other parts of the Paddington Central campus. To the north of Harrow Road, Paddington Fire Station and a series of residential streets are present, while to the south of the railway lines, there is a mix of residential and commercial properties. Green space and a pedestrian route are located to the west of Westbourne Bridge.

Application Site Description

The surface at track level within the main body of the application site is hard standing. A series of columns are present, supporting a podium structure above. This area beneath the podium has been utilised, primarily for storage, in the Crossrail construction process and is referred to as the 'Crossrail Box'. The Crossrail Box extends eastwards under the existing 4 Kingdom Street, Hotel Novotel London Paddington (3 Kingdom Street) and 1 Kingdom Street buildings above.

A temporary, two storey building, providing 353 sq. m. (GIA) of restaurant/bar floorspace (Uses A3 and A4) ('Pergola'), related to the temporary planning consent described in Section 3.4 (Ref 16/12331/FULL, 18/00244/AD, FULL, 18/07862/FULL, 19/07081/FULL, and 20/02491/FULL), is located on the podium structure above. The podium and first storey of the Pergola building lie at Harrow Road level, while the second storey of the building lies at Kingdom Street level. The main entrance to the building lies at this second storey level and it allows access to and from Kingdom Street to the east. At this level, the red line boundary does not extend as far eastwards as the levels below.

To the north of the main body of the application site, an access ramp that links a roundabout at track level to Harrow Road and the Paddington Central Campus above, as well as a portion of the pavement around the junction between Harrow Road and Westbourne Terrace Road, fall within the application site boundary. An existing car park for both 4 and 5 Kingdom Street, lying at Harrow Road level, also falls within the application site.

The Westway (A40) crosses the site from east to west. At this location, the road comprises a dual carriageway elevated above Kingdom Street level.

The application site supports a limited amount of vegetation, comprising a small street tree in the pavement adjacent to the junction between Harrow Road and Westbourne Terrace Road, some ornamental shrubs and plants on the decked terrace area of the Pergola building and adjacent to the building entrance on Kingdom Street, and occasional ruderal plants at track level.

Further information on the application site is provided in Chapter 3: *Site Description & Development Proposals* in Volume II of the original ES.

Proposed Development Description

The original development proposals that were subject to the planning application submitted to WCC in May 2019, and which were assessed in the original ES, comprised demolition of part of the existing podium structure and removal of the temporary building that sits atop the structure to allow construction of a new building of ground (Kingdom Street) + mezzanine + 17 storeys + roof terrace/single height office floorspace/double height plant space, with three levels below Kingdom Street level.

The naming of the levels of the proposed building and how these accord with the existing levels at the site is shown in Table 2.2.

Table 2.2
Relationship between Existing and Proposed Levels

EXISTING LEVELS	PROPOSED BUILDING LEVELS
-	Level 01-19
-	Mezzanine
Kingdom Street level	Ground Floor Level
Harrow Road level	Lower Ground Floor Level
-	Upper Box Level
Track level	Lower Box Level

The building footprint is relatively consistent between Lower Ground Floor Level and the levels above. However, at the levels below (Upper Box Level and Lower Box Level), the development footprint extends eastwards under the 4 Kingdom Street, Hotel Novotel London Paddington (3 Kingdom Street) and 1 Kingdom Street buildings. This part of the site is referred to as 'the Box'.

A total of 33,382 square metres (sq. metres) Gross Internal Area (GIA) of high quality office use floorspace (B1(a)) was proposed on Ground Floor Level and Levels 01 to 18. An additional 14,312 sq. metres (GIA) of internal office ancillary space was also proposed on all floors between Lower Ground Floor Level and Level 19, including an office reception on the Mezzanine Level and rooftop plant on Levels 18 and 19. A total of 47,694 sq. metres (GIA) of office floorspace, including ancillary space, was therefore proposed on Ground Floor Level to Level 19.

An outdoor amenity space, comprising 219 sq. metres of floorspace, was proposed at Mezzanine Level. Rooftop outdoor office amenity space was proposed on Level 18 (633 sq. metres) and on Level 19 (972 sq. metres).

A total of 318 sq. metres (GIA) of flexible retail floorspace was proposed on Ground Floor Level. The mix of uses proposed comprised A1 (shops and retail outlets) and A3 (food and drink). An area of 575 sq. metres (GIA) was proposed across Lower Ground Floor Level, Ground Floor Level and Mezzanine level for flexible retail and office uses. The mix of uses proposed comprised A1 (shops and retail outlets), A3 (food and drink) and B1(a) (office). These areas of flexible floorspace could either be taken up by a single unit/use or multiple units/uses.

SITE DESCRIPTION & AMENDED SCHEME

A publicly accessible internal public garden space ('the Garden'), which includes café / bars (sui generis), was proposed on Lower Ground Floor Level and Upper Box Level, creating a public pedestrian route from Kingdom Street to Harrow Road, sheltered from the elements.

Space was proposed within 'the Box' (across Upper Box and Lower Box Levels) for an auditorium and an education and community space. The auditorium (sui generis) comprises 730 sq. metres (GIA) of floorspace and would have 250 seats. Daytime weekday and weekend use of this space would be generally focussed on the business community (within Paddington Central and beyond) as a venue for talks and conferences, while it could also be used for community meetings and other such activities. Uses of this space during weekday and weekend evenings could include theatre, concerts and other similar uses.

The education and community space (D1) was proposed as 100 sq. metres of floorspace (subsequently increased to 150 sq. metres in area following consultations with WCC during the determination period) for use as a meeting hub for the local community, as well as for the delivery of skills workshops, talks and seminars. It would be free to access for local schools and community groups. Skills workshops could include digital skills for older residents and be delivered in partnership with our occupiers. The maximum capacity of the space was 50 people.

A total of 7,971 sq. metres (GIA) of floorspace for flexible commercial, community, cultural and/or leisure uses was proposed within 'the Box' (across Upper Box and Lower Box Levels). The mix of uses proposed comprised:

- Restaurant (A3);
- Market hall (sui generis);
- Office (B1(a));
- Research and development (B1(b));
- Conference / exhibition space (D1);
- Cinema (D2); and
- Gym / sports (D2).

The maximum proportion of the total floorspace that could be provided by each of these uses is described in Chapter 3, in the original ES Volume II.

A total of 5,580 sq. metres (GIA) of mixed-use ancillary floorspace was also proposed within 'the Box' (across Upper Box and Lower Box Levels). This space included loading bays, plant, a management office, a post room and changing rooms. This floorspace would support all of the proposed uses in the building.

A minimum of 700 sq. metres (NIA) (subsequently increased to 1,500 sq. metres following consultations with WCC during the determination period) of the office floorspace delivered within the building would be provided as affordable workspace. Furthermore, a minimum of 1,000 sq. metres (NIA) of the office floorspace delivered within the building would be provided

for growing SMEs ('Small or Medium-sized Enterprises') via British Land's flexible workspace brand, Storey.

Two parking spaces for disabled drivers would be provided at Lower Ground Floor Level in the eastern part of the application site. External public realm improvements were proposed both at Ground Floor Level to the east of the building and at Lower Ground Floor Level to the west of the building.

It was anticipated that the demolition, construction and fit-out works would take approximately 48 months to complete. Works were expected to commence in the third quarter of 2020 and finish in 2024. The technical assessments were based on an 'opening year' of 2024.

Further information on the original 2019 scheme, which was assessed in the original ES is provided in Chapter 3: Site Description & Development Proposals in Volume II of the original ES.

2.3 PROPOSED SCHEME AMENDMENTS

A summary of the proposed amendments to the original 2019 development proposals is set out below.

Fixed Office Floorspace (Ground Floor Level and Above)

The amendments include an increase in the total quantum of office floorspace, including office ancillary space, proposed on Ground Floor Level and above from 47,694 sq. metres (GIA) to 48,264 sq. metres (GIA). Some reconfiguration of the office floorspace on these levels is proposed, including expansion of the office floorspace on Level 18 to form a complete office floor, and a change in use of the internal area at Mezzanine level from office reception to office floorspace.

Other, more minor changes to the office use in this part of the building include the addition of new lifts separate from the main office core, the moving of the office showers from Mezzanine Level to Lower Box Level and small amendments to the structural layout of the core to support circulation from the office entrance to the lifts.

Changes to the office entrance arrangements from Kingdom Street are also proposed. The mezzanine level office entrance and escalators included within the original 2019 scheme have been removed and a new entrance has been included at Ground Floor Level. The building façade lines at Ground Floor Level have been subject to minor amendments to accommodate the change.

Outdoor Amenity Terraces

The 633 sq. metre rooftop office outdoor amenity terrace at Level 18 included within the original 2019 scheme has now been omitted under the amended scheme. The 972 sq. metre rooftop outdoor amenity terrace at Level 19 has also been replaced with a smaller outdoor amenity terrace, including a covered space, under the amendments. The outdoor amenity terrace at Mezzanine level included within the original 2019 proposals has also been reduced in size from 219 sq. metres to 129 sq. metres. Finally,

a new outdoor amenity terrace of 78 sq. metres has been incorporated into the proposals at Level 01 above the eastern entrance to the building on Kingdom Street. All outdoor amenity terraces will be for use by the office staff.

Rooftop Changes

The proposed amendments include a reconfiguration of the rooftop plant and Building Maintenance Units (BMU) at Level 19. The change in quantity of heat pumps and the change from cooling towers to hybrid dry coolers are the main equipment specification changes. Further information on the amended energy strategy is provided in the section below.

An increase in height of the lift over-runs and selected rooftop plant by 4.32 m is also proposed on comparison with the original 2019 scheme.

Energy Strategy

Under the original 2019 scheme, an air source heat pump (HP) system was proposed in combination with highly efficient gas-fired boilers to provide heating and domestic hot water for the proposed development.

Under the amended scheme, the proposed energy strategy comprises a heating/cooling system consisting of air and water source heat pumps in combination with hybrid air cooled chillers. Gas fired boilers, which were part of the original 2019 scheme, have been omitted.

Flexible Retail/Office Floorspace

318 sq. metres (GIA) of flexible retail floorspace was proposed at Ground Floor Level under the original 2019 scheme. The mix of uses proposed comprised A1 (shops and retail outlets) and A3 (food and drink). Under the amended scheme, this space has been moved to Lower Ground Floor Level and its area has been reduced to 265 sq. metres (GIA).

An area of 575 sq. metres (GIA) was proposed across Lower Ground Floor Level, Ground Floor Level and Mezzanine Level for flexible retail and office uses under the original 2019 scheme. The mix of uses proposed comprised A1 (shops and retail outlets), A3 (food and drink) and B1(a) (office). Under the amended scheme, the area of this space has increased to 723 sq. metres (GIA).

As was the case for the original 2019 scheme, these areas of flexible floorspace could either be taken up by a single unit/use or multiple units/uses under the amended scheme.

The Garden

The amendments include an increase in the total floorspace for 'The Garden' from 1,506 sq. metres (GIA) to 1,635 sq. metres (GIA). The amendments to this area include a reduction in the width of The Garden to accommodate the office reception (moved from Mezzanine Level to Ground Floor Level), reconfiguration of the public stairs from Kingdom Street into The Garden, relocation of the public lift and reduction from a

SITE DESCRIPTION & AMENDED SCHEME

pair of lifts to a single lift, and reconfiguration of the internal planting and open spaces.

Fixed Affordable Workspace

Under the original 2019 scheme, it was proposed that a minimum of 700 sq. metres (NIA) of the office floorspace delivered within the building would be provided as affordable workspace.

Under the amended scheme, in its place, a new fixed area of affordable workspace is proposed across Lower Box and Upper Box Levels, totalling 3,900 sq. metres (GIA) of floorspace. To ensure that the workspace is affordable, it will be let on specific terms, which will be agreed with the GLA in due course, as part of the s.106 negotiations. This area replaces the proposed office use within the 7,971 sq. metres (GIA) of floorspace for flexible commercial, community, cultural and/or leisure uses within ‘the Box’ within the original 2019 scheme. Effectively, this space has been ‘fixed’ under the scheme amendments.

Auditorium, and Education & Community Space

Space was proposed within ‘the Box’ (across Upper Box and Lower Box Levels) for an auditorium and a dedicated education and community space in the original 2019 scheme.

The proposed dedicated education and community space has been removed under the amendments, as the intended function of this space to run outreach programmes with local schools and groups will now be an ancillary function of the new affordable workspace area introduced to the scheme under the current amendments.

The auditorium (sui generis) has remained consistent with the original proposals, increasing in size by 8 sq. metres (GIA) from 730 sq. metres (GIA) to 738 sq. metres (GIA). The number of seats (250), opening hours and the proposed use of this space remain consistent with the details set out in Chapter 3: Site Description & Development Proposals in Volume II of the original ES.

Flexible Commercial/Community/Leisure/Cultural Floorspace

A total of 7,971 sq. metres (GIA) of floorspace for flexible commercial, community, cultural and/or leisure uses was proposed within ‘the Box’ (across Upper Box and Lower Box Levels) under the original 2019 scheme. The mix of uses proposed comprised:

- Restaurant (A3);
- Market hall (sui generis);
- Office (B1(a));
- Research and development (B1(b));
- Conference / exhibition space (D1);
- Cinema (D2); and

- Gym / sports (D2).

Under the amended proposals, this area of flexible uses has been reduced to 3,490 sq. metres (GIA) and the range of uses has also been amended to remove the office (B1(a)) and research and development (B1(b)) uses. The office (B1(a)) floorspace is now proposed as a fixed area of 3,900 sq. metres (GIA) of affordable workspace, as noted in the text above.

The maximum proportion of the total floorspace that could be provided by each use under the amended scheme is as follows:

- Restaurant / Market hall: combined, these uses will make up to a maximum of 100% of the total area;
- Conference / exhibition space: this use will make up to a maximum of 100% of the total area;
- Cinema: this use will make up no more than 50% of the total area; and
- Gym / sports: this use will make up no more than 50% of the total area.

The operational hours for each of the potential uses and the maximum capacity of the cinema use remain as set out in Chapter 3: Site Description & Development Proposals in Volume II of the original ES. However, the maximum capacity of the other uses has reduced from those set out in the original ES chapter. The updated information is set out in Table 2.3 below.

Table 2.3
Amended Floorspace Summary Schedule

PROPOSED USE	MAX AREA (SQ.M.)*	MAX CAPACITY**	OPERATIONAL HOURS
Restaurant / Market Hall	3,490	1,745 people	Restaurant: 08:00 – 23:00 (daily) Market Hall: 12:00 – 23:00 (daily)
Cinema	1,745	800 seats	10:00 – 23:00 (daily)
Gym / Sports	1,745	249 people	07:00 – 23:00 (daily)
Conference / exhibition space	3,490	698 people	10:00 – 20:00 (daily)

**based on the maximum proportion of the total floorspace figures provided above the table (e.g. restaurant/market hall will make up 100% of total area, cinema will make up 50% of total area etc.)*

***assumes maximum proportion of total floorspace is taken up by each use*

Mixed Use Ancillary Floorspace

A total of 5,580 sq. metres (GIA) of mixed-use ancillary floorspace was proposed within ‘the Box’ (across Upper Box and Lower Box Levels) in the original 2019 scheme. This space included loading bays, plant, a management office, a post room and changing rooms. This floorspace would support all of the proposed uses in the building.

Under the amended scheme, the mixed-use ancillary floorspace has increased to 6,913 sq. metres (GIA) and now also includes areas at Lower Ground Floor Level. Amendments to this space include optimisation and re-configuration of the plant rooms at Lower Box and Upper Box Levels and the moving of the lift for the adjacent Novotel building (3 Kingdom Street) from the north to the south side of the site and implementation of a loading bay for the Novotel.

Use/Floorspace Summary

A summary of the proposed uses and their locations and total areas within the building under the amended scheme is set out in Table 2.4 below.

Table 2.4
Amended Floorspace Summary Schedule

USE	LOCATION	TOTAL FLOORSPACE (SQ.M. GIA)
Outdoor office amenity terrace	Level 19	795
Outdoor office amenity terrace	Level 01	78
Outdoor office amenity terrace	Mezzanine	129
Office use (B1(a)) (including internal ancillary space)	Ground Floor Level, Mezzanine & Level 1 – 19	48,264
Flexible retail uses (A1, A3)	Lower Ground Floor Level	265 Maximum floorspace per use: 100% of total floorspace
Flexible retail/office uses (A1, A3, B1(a))	Lower Ground Floor Level, Ground Floor Level & Mezzanine	723 Maximum floorspace per use: 100% of total floorspace
‘The Garden’ (internal space) inc. café/bar (sui generis)	Upper Box Level, Lower Ground Floor Level, Ground Floor Level	1,635
Flexible commercial/leisure/cultural uses:	Lower Box and Upper Box Levels	3,490 The maximum proportion of the total floorspace that could be provided by each use is as follows: <ul style="list-style-type: none">■ Restaurant (A3);■ Market hall (sui generis)■ Conference / exhibition space (D1/sui generis);■ Cinema (D2); and■ Gym / sports (D2). <ul style="list-style-type: none">■ Restaurant (A3) / Market hall (sui generis): combined, will make up up to a maximum of 100% of total area;■ Conference / exhibition space (D1/ sui generis): will make up up to a

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USE	LOCATION	TOTAL FLOORSPACE (SQ.M. GIA)
		maximum of 100% of total area; <ul style="list-style-type: none">▪ Cinema (D2): will make up no more than 50% of total area; and▪ Gym / sports (D2): will make up no more than 50% of total area.
Affordable Workspace (B1(a))	Lower Box and Upper Box Levels	3,900
Auditorium (sui generis):	Lower Box and Upper Box Levels	738
Mixed use ancillary	Lower Box, Upper Box Levels and Lower Ground Floor Level	6,913

Site Access & Parking

Up to 258 Short-stay cycle parking spaces (for visitors) and up to 700 long-stay cycle parking spaces (for staff) were proposed under the original 2019 scheme. Under the amended scheme, the number of short-stay and long-stay cycle parking spaces has been amended to 226 and 730 spaces respectively. Five percent of cycle spaces will be provided as sheffield stands at a wider spacing, in order to be suitable for larger/adapted bikes. It has been agreed with Transport for London (TfL) that 5% of the long-stay cycle spaces will be provided as folding bike lockers. The proposed cycle parking locations remain consistent with those in the original 2019 scheme, as set out in Chapter 3: Site Description & Development Proposals in Volume II of the original ES.

A total of two pick-up / set down spaces were included at Lower Box Level in the original 2019 scheme, which would accommodate any visitors accessing the proposed development by taxi, or private car. The number of pick up / set down spaces at this location has been increased to three under the amended scheme.

Application Site Boundary

Under the amended scheme, the application site boundary at Kingdom Street level has increased slightly at the north/north-eastern and eastern points of the building, adjacent to the Westway. This change was required to accommodate the small increase in the plan depth caused by the redesign of the main entrance fronting on to Kingdom Street. The application site area has increased by 861sqm to 1.35ha at the track level with a new leg under Kingdom Street for more cycle parking on a gantry in the service road area. It should be noted that the increase in site area

at Kingdom Street level still falls within the extent of the larger application site area at Track Level.

Wind Microclimate Design Interventions

A series of design interventions were integrated into the original 2019 scheme to resolve any potential adverse wind microclimate effects. Some of these measures have been subject to amendment. Under the amended scheme, these measures comprise:

- The inclusion of louvers on the mezzanine roof terrace on the western side of the building. The individual louvers are 0.75m in width and 3.5m in height and are spaced at 2.25m intervals from centre to centre. The louvers will be oriented perpendicular to the prevailing south-westerly wind direction;
- Provision of four 3m tall trees, planted in 1.5m tall pots at the middle and eastern entrance locations to the 4 Kingdom Street building (two trees per entrance);
- Provision of hedges/equivalent landscaping along the western perimeter of 5 Kingdom Street on the West Link;
- Provision of a solid parapet of a minimum height of 2.5m along the cycling route on the northern perimeter of 5 Kingdom Street;
- Inclusion of Landscaping features on the mezzanine outdoor amenity terrace on the western side of the building;
- Inclusion of landscaping features within the Level 1 outdoor amenity terrace and a louvered parapet on the perimeter of the terrace. The individual louvers are 0.75m wide and 3.5m high and are spaced at 2.25m intervals from centre to centre; and
- Provision of landscaping within the outdoor amenity terrace at Level 19 and a glazed balustrade, of a minimum of 2m in height, along the perimeter of the terrace.

Associated Development

Under the amended scheme, it is envisaged that off-site enabling works will comprise:

- Wind microclimate mitigation measures, comprising ‘trees in pots’ in the public realm on Kingdom Street;
- Improvements to a small area of public realm to the west of the application site, adjacent to Harrow Road. These works will be limited to the installation of new paving slabs;
- High voltage electrical connections and gas, water and telecomms services works outside of the site boundary as required by respective utilities providers;
- Provision of TfL cycle docking station within the wider Paddington Central estate; and

- Provision of highways improvement works at the junction with the Harrow Road and Westbourne Bridge.

These relatively minor works have been considered within the EIA, as appropriate.

Construction Phase & Opening Year

The proposed scheme amendments have not resulted in any changes to the construction methodology or the length of the construction period, as set out in Chapter 5: Construction Strategy, in Volume II of the original ES. However, due to the time that has passed since the original planning application was submitted in May 2019, the entire construction programme has been delayed by 14 months. The updated construction programme is provided in Table 2.5 below. As a result of this change, the opening year of the scheme has been amended from 2024 to 2025.

Table 2.5
Amended Programme of Construction Works

PHASE	START DATE	FINISH DATE	DURATION
Site Establishment	06/09/2021	14/11/2021	10 weeks
Demolition	20/09/2021	18/02/2022	21 weeks, 4 days
Substructure and Lower Floors	04/03/2022	19/01/2023	45 weeks
Steelwork	04/12/2022	01/11/2023	44 weeks, 4 days
Planks and Topping	17/03/2023	17/04/2024	54 weeks
Unitised Curtain Wall	28/04/2024	25/06/2024	57 weeks
Cladding and Roof Finishes	22/01/2022	03/05/2024	62 weeks
Core Installations and Finishes	22/01/2022	17/01/2024	98 weeks
Tenant Fit-out	06/05/2024	12/08/2025	62 weeks, 4 days
Total			48 months

All works on site will be undertaken in accordance with Best Practice and will be governed by a CEMP. This document will provide the management framework required for the planning and implementation of construction activities in accordance with the environmental commitments identified within the updated ES. It will also address the requirements of any subsequent planning conditions imposed. Its purpose is to avoid or minimise the risks of adverse impacts on environmental resources and local residents and businesses.

SITE DESCRIPTION & AMENDED SCHEME

An Outline CEMP was submitted alongside the original planning application in May 2019. This document has been updated to take account of the 2020 scheme amendments and is provided in Appendix 2.1, ES Volume IV. This document provides an outline from which a final CEMP will be developed in due course. It is anticipated that the final CEMP will be secured by planning condition on any future consent.

Updated Planning Drawings

The planning drawings that have been amended are presented in Table 2.6 below.

Table 2.6

Final Updated Planning Drawings

PLAN	ORIGINAL PLAN REF	UPDATED PLAN REF
Site:		
Site Location Plan - Box Level	606_07_001 P1	606_07_001 P2
Site Location Plan - Lower Ground Level	606_07_002 P1	606_07_002 P2
Site Location Plan - Ground Level	606_07_003 P1	606_07_003 P2
Site Location Plan - All levels	606_07_004 P1	606_07_004 P2
Existing Box Level Demolition Plan	606_07_010 P1	606_07_010 P2
Existing Lower Ground Level Demolition Plan	606_07_011 P1	606_07_011 P2
Existing Ground Level Demolition Plan	606_07_012 P1	606_07_012 P2
Existing Demolition Sections	606_07_013 P1	606_07_013 P2
Plans:		
Proposed Lower Box Level Plan	606_07_100 P1	606_07_100 P2
Proposed Upper Box Level Plan	606_07_101 P1	606_07_101 P2
Proposed Lower Ground Level Plan	606_07_102 P1	606_07_102 P2
Proposed Ground Level Plan	606_07_103 P1	606_07_103 P2
Proposed Mezzanine Plan	606_07_104 P1	606_07_104 P2
Proposed Level 01 Plan	606_07_105 P1	606_07_105 P2
Proposed Typical Lower Office Level Plan	606_07_111 P1	606_07_111 P2
Proposed Typical Upper Office Level Plan	606_07_119 P1	606_07_119 P2

PLAN	ORIGINAL PLAN REF	UPDATED PLAN REF
Proposed Level 19 Plan	606_07_123 P1	606_07_123 P2
Proposed Roof Plan	606_07_124 P1	606_07_124 P2
Elevations:		
Existing Context Elevation - North	606_07_200 P1	606_07_200 P2
Existing Context Elevation - West	606_07_201 P1	606_07_201 P2
Existing Context Elevation - South	606_07_202 P1	606_07_202 P2
Existing Context Elevation - East	606_07_203 P1	606_07_203 P2
Existing Context Section - Kingdom Street	606_07_204 P1	606_07_204 P2
Proposed Context Elevation - North	606_07_205 P1	606_07_205 P2
Proposed Context Elevation - West	606_07_206 P1	606_07_206 P2
Proposed Context Elevation - South	606_07_207 P1	606_07_207 P2
Proposed Context Elevation - East	606_07_208 P1	606_07_208 P2
Proposed Context Section - Kingdom Street	606_07_209 P1	606_07_209 P2
Proposed North Elevation	606_07_210 P1	606_07_210 P2
Proposed North Elevation - No Westway	606_07_211 P1	606_07_211 P2
Proposed East Elevation	606_07_212 P1	606_07_212 P2
Proposed East Elevation - No Buildings	606_07_213 P1	606_07_213 P2
Proposed South Elevation	606_07_214 P1	606_07_214 P2
Proposed West Elevation	606_07_215 P1	606_07_215 P2
Proposed West Elevation - No Bridges	606_07_216 P1	606_07_216 P2
Sections:		
Proposed Section AA	606_07_300 P1	606_07_300 P2
Proposed Section BB	606_07_301 P1	606_07_301 P2
Proposed Section CC	606_07_302 P1	606_07_302 P2
Bay Studies		

PLAN	ORIGINAL PLAN REF	UPDATED PLAN REF
Bay Study - Lower Levels South	606_07_400 P1	606_07_400 P2
Bay Study - Typical Levels South	606_07_401 P1	606_07_401 P2
Bay Study - Upper Levels South	606_07_402 P1	606_07_402 P2
Bay Study - Upper Levels North	606_07_403 P1	606_07_403 P2
Bay Study - Kingdom Square Pavilion	606_07_404 P1	606_07_404 P2
Bay Study - West Link Pavilion	606_07_405 P1	606_07_405 P2
Bay Study - The Plinth	606_07_406 P1	606_07_406 P2
Bay Study - Plinth At South West	606_07_407 P1	606_07_407 P2
Bay Study - Plinth At North	606_07_408 P1	606_07_408 P2

Source: Allies & Morrison (P1 & P2 refer to revision number)

Planning Documentation

This ES Addendum is one of a number of amended documents which have been submitted. All of the amended documents that have been submitted are listed in Table 2.7 below.

Table 2.7

Amended Documents Submitted

DOCUMENT TITLE
Planning Statement
Revised CIL Form
Existing and Proposed Plans and Drawings
Design and Access Statement
Sustainability Statement
Energy Assessment
Delivery, Servicing and Waste Management Plan Addendum
Financial Viability Assessment
Fire statement
Environmental Statement Addendum

3 EIA METHODOLOGY

3.1 INTRODUCTION

This chapter sets out:

- the stages of the EIA that have been undertaken; and
- the methodology that has been used to assess the significance of effects associated with the amended scheme.

Screening

Screening is the first stage of the EIA process. It establishes if a development is 'EIA development' and whether the planning application therefore needs to be accompanied by an ES.

As set out in Chapter 1: *Introduction* of this ES Addendum, the Applicant has chosen to voluntarily submit an ES Addendum in accordance with Part 2, 5(2) (a) of the EIA Regulations 2017. A request for a screening opinion was not submitted to WCC under Regulation 6(1) of the EIA Regulations 2017 (1).

Scoping

The Intended Focus of EIA

EIA is a process that should be focussed on the likely significant environmental effects of a proposed development. It is not intended to be a process to address all the possible environmental effects. One of the main criticisms of current EIA practice is that the scope is often drawn too widely, which results in ES documents that are unnecessarily long and are less useful for their intended purpose, i.e. to act as a decision-making tool.

"At its best, EIA helps to shape the design and siting of development such that social value to communities and broader economic value to investors can both be met, without eroding natural capital and pushing the boundaries of environmental limits – a tool that can truly support moves towards sustainability. However, the many competing demands can often serve to stifle the process, resulting in reams of information that mask the key environmental issues that need to be considered." (2)

Request for a Scoping Opinion

Scoping is an important, though optional, exercise undertaken throughout the early stages of the EIA process. Its purpose is to focus the EIA and resultant ES on key issues and to avoid the unnecessarily complicated examination of minor issues. In practice, the process involves determining the information that needs to be included in the ES through consultation with the competent authority, statutory consultees and other stakeholders.

Previous Scope of ES

As part of the scoping exercise undertaken prior to submission of the original ES, it was agreed with WCC that the following topics would be 'scoped in' for further consideration in the ES:

- Socio-Economics;

- Townscape, Built Heritage & Visual Amenities;
- Daylight, Sunlight, Overshadowing & Solar Glare; and
- Wind Microclimate.

As part of the scoping exercise, it was agreed that the following topics would be 'scoped down' (i.e. included within the ES technical appendices but not meriting the preparation of a stand-alone technical chapter within the main volume). It was considered unlikely that these technical topics would exhibit significant environmental effects but further assessment was required to satisfy planning requirements:

- Archaeology;
- Ground Conditions;
- Water Environment;
- Biodiversity;
- Transport;
- Air Quality; and
- Noise & Vibration.

Finally, it was agreed that the following technical issues would be 'scoped out' of further consideration within the ES on the basis that they were considered unlikely to exhibit significant environmental effects and did not warrant a stand-alone chapter:

- Waste management.

The proposed scheme amendments have been considered in the context of the previous ES assessment scope. The following factors were taken into consideration when establishing whether or not it was necessary to update each of the technical topic chapters:

- The relevance and scale of the proposed scheme amendments;
- Interim updates in legislation, policy, or guidance;
- The validity of the baseline data; and
- The continued applicability of the previously identified and conditioned mitigation measures.

Were it to be considered that, against the above four criteria, no significant changes to the previously assessed significant effects would take place, the technical topic would be deemed to be unaffected and the original findings of the ES would remain valid.

Based on this review process, the decision was made to update each of the original technical topic chapters to ensure a robust and comprehensive assessment of the scheme amendments. The updated assessments are provided in Chapters 4-6 of ES Addendum Volume II and in ES Addendum Volume III.

Where considered necessary, the environmental planning reports that were included in the ES appendices in Volume IV of the original ES have

also been updated. These reports are discussed in section 3.8 of this ES Addendum chapter and where updates to the reports have been made, these are included within ES Addendum Volume IV.

Impact Significance Criteria

Within the original ES, each technical chapter describes the approach taken to the assessment of impacts, including surveys and studies undertaken to determine the baseline conditions and the procedure followed to assess impacts. Topic-specific impact significance criteria and the standards / guidance from which they are derived are explained within each individual technical chapter, and the definitions of minor, moderate and major (adverse or beneficial) and negligible significance are given.

A full detailed EIA methodology is presented in Chapter 2: EIA Methodology in the original ES.

3.2 RECEPTORS

Receptors that have been considered within this ES Addendum remain consistent with those that were assessed within the original ES.

3.3 GEOGRAPHICAL SCOPE

Geographical Scope of Assessment

The relevant geographical scope of assessment for each technical assessment is stated within the relevant technical chapter in the original ES.

3.4 CUMULATIVE EFFECTS

The EIA Regulations 2017 require the consideration of cumulative effects, which can be:

- **Inter-development effects:** The combined effects of the proposed development together with other developments that are consented but not yet completed (taking into consideration effects during both the construction and operational phases); and/or
- **Intra-development effects:** Effects caused by the combination of a number of effects of the proposed development on a particular receptor (taking into consideration effects during both the construction and operational phases), which may collectively cause a more significant effect than individually.

Under the EIA Regulations 2017, the requirement for considering cumulative schemes (within the inter-development cumulative assessment) has been restricted to 'cumulation with other existing development and/or approved development'. This omits the previous requirement to assess schemes that are 'reasonably foreseeable' (e.g. were allocated for future development).

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Inter-Development Effects

In their response to the technical consultation on EIA thresholds in 2015, the Ministry of Housing, Communities and Local Government (MHCLG) stated that urban development projects below the revised EIA screening thresholds “will not be likely to have significant effects either alone or in combination with other projects because of their nature, location or impact”. On this basis, the consideration of cumulative effects should be limited to those projects where:

- the development includes more than 1 hectare (site area) of urban development which is not dwellinghouse development; or
- the development includes more than 150 dwellings; or
- the overall area of the development exceeds 5 hectares.

Existing developments that were in place prior to completion of the original ES form part of the baseline and have therefore been considered in the original ES and the ES Addendum in this way. Consented developments within 1 km of the application site, that meet the aforementioned criteria and/or provide over 10,000 sq.m of non-residential floorspace, and have yet to be completed were identified as part of the original EIA scoping exercise. Through consultations with WCC 14 cumulative schemes were agreed for inclusion in the original ES assessments. This list has been reviewed during the preparation of this ES Addendum and has been updated to include additional schemes that have since been consented, including follow up applications, such as reserved matters applications and s.73 minor material amendment applications. The updated list of cumulative schemes is provided in Table 3.1. While a number of the schemes on the list were under construction at the time the original ES was prepared and have since been completed, they have been retained on the list rather than being included in the baseline to ensure a consistent approach between the ES Addendum Assessments and the original ES assessments.

Table 3.1

Updated Cumulative Schemes List

NAME / ADDRESS / PLANNING REF	SCHEME DESCRIPTION	STAGE
1A Sheldon Square 17/05609/FULL	Demolition of existing management office building and lift building, and erection of a new building comprising basement, three lower levels (canal level - 1, amphitheatre level -2 and railway level -3), ground and 19 upper levels plus rooftop plant to provide a hotel with up to 200 bedrooms/suites and associated ancillary facilities including conference facilities/ meeting rooms/ private dining/ bars/ restaurants including publicly accessible restaurant/ bar at Level 19 (Class C1), flexible hotel/ retail (Class C1/ A1) at part ground level, flexible hotel/ retail/ restaurant/ bar use (Class C1/ A1/ A3/ A4) at part - 1, and part - 2 level, and hotel (Class C1) at part -2 level as well as Level 17 roof terrace, replacement lift, plant, cycle parking, landscaping and other associated works.	Consented. Construction has not yet commenced
Paddington Triangle OSD, Praed Street 12/07668/FULL	Development of an office building comprising canal-side reception with 21 storeys of offices measuring 34,184m ² (GIA) and including 132m ² of either Class A1/A2/A3 use at canal-side and first floor level, alongside pedestrian linkages to Paddington Station and Bishop's Bridge Road, in conjunction with landscaping and other associated works.	Consented. Construction has not yet commenced
Paddington Quarter, 31 London Street 16/09050/FULL 18/08240/FULL	16/09050/FULL Demolition of existing buildings and mixed use redevelopment comprising a commercial cube providing up to 50,000 sqm (GEA) floorspace of office/commercial uses, retail and café/restaurant uses at lower levels and top floor level, a retail/restaurant building on Praed Street; a new major piazza including pedestrianisation of London Street, a new access road between Winsland Street and Praed Street, hard and soft landscaping, new underground station entrance and new Bakerloo Line Ticket Hall; and associated infrastructure and interface highway and transport works for underground connections, and ancillary works.	Construction commenced

NAME / ADDRESS / PLANNING REF	SCHEME DESCRIPTION	STAGE
	18/08240/FULL Variation of condition 1 . . . NAMELY, to allow adjustments to layout of steps in the public realm; Change in orientation of escalators linking street level to office Level 02; amendment to lift strategy and location; amendment to the public realm to address level changes and provision of accessible routes; increase in height and footprint of Praed Street building by 2.5 metres and minor increase in footprint with adjustments to detailed design; amendment to layout and configuration of below-ground concourse area and retail units; amendment to the layout and configuration of the LUL Station Box; and reconfiguration of main office core. Additionally Details of soft Landscaping, Soil depth and specification and Rainwater harvesting pursuant to conditions. 33,49 and 51 of the original permission. Paddington Sorting & Delivery 31 London Street London W2 1DJ	
55-65 North Wharf Road 14/12648/FULL	Variation of Condition 1 of planning permission dated 18 April 2011 (RN: 03/05999) for redevelopment to provide a mixed use development comprising Class B1 (offices), Class A1 (retail) and/or A2 (financial and professional) and/or A3/A4/A5 (food and drink) units and 100 Class C3 (residential) units, parking, open space and associated works; namely, to amend the detailed design of the building facades; amend internal floor layouts, including alterations to ground floor service bay, cycle storage and refuse storage arrangements; alterations at roof level and revision of public realm/ landscaping and pedestrian staircase and lift arrangement between the canal side and Bishop's Bridge Road.	Completed
Dudley House, North Wharf Road 15/11458/COFUL	Demolition of existing buildings at Nos.139-147 Harrow Road and Dudley House and proposed redevelopment ranging in height from 7 storeys to 22 storeys, comprising between 187 and 197 residential units (Class C3); a new secondary school (Class D1); a replacement church (Class D1); a retail unit (flexible Class A1/A2/A3 use); basement car parking; cycle and motorcycle parking; provision of shared amenity space, landscaping; and amended vehicular and pedestrian access (Council's Own Development).	Completed

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NAME / ADDRESS / PLANNING REF	SCHEME DESCRIPTION	STAGE
Merchant Square — Buildings 1, 2 and 6, Paddington Basin 10/09756/FULL 10/09757/FULL 10/09762/FULL	Building 1: 42-storey building of 222 flats, a 90-room hotel, and a rooftop bar. Building 2: 17-storey building of 20,526 sq.m. office with 396 sq.m. of retail at ground floor level. Building 6: 15-storey building including 9 market residential units and 110 affordable units, together with a medical or retail use (811 sq.m.) and additional retail (583 sq.m.) at ground floor level.	Implemented, but construction works currently on hold
West End Green, 285-329 Edgware Road 15/11677/FULL 16/07226/FULL	Redevelopment to provide buildings of between ground + 6 and ground + 29 storeys including commercial space (Class A1, A2, A3, A4 and B1), up to 652 residential units (including 126 affordable housing units), landscaping and associated car and cycle parking. Variation, NAMELY, incorporation of 283 Edgware Road into site, extension of Block B to provide 20 additional residential units (672 in total), with associated swap in housing tenure with Blocks E and F, associated amendments to permitted public realm and landscaping strategy.	Under Construction
St Mary’s Hospital, Praed Street 16/11914/FULL	Demolition of existing buildings and the erection of a basement plus eight storey hospital building with associated link bridge (Use Class D1), with flexible Class D1/A1/A3 floorspace at ground floor level, and associated works including access, servicing and patient drop-off facilities.	Consented. Construction has not yet commenced
Queensway, 117-125 Bayswater Road, 2-6 Queensway, Consort House and 7 Fosbury Mews 15/10671/FULL 17/02957/FULL	Demolition and redevelopment of 117 to 125 Bayswater Road, together with 2 to 6 Queensway and 7 Fosbury Mews for a new building comprising 3 basements, ground and 9 upper storeys to include 55 residential units and ancillary residential facilities (class C3), together with retail (class A1) unit, a retail (class A1) and/or restaurant (class A3) unit, a dentist (class D1) and a spa use (class D2), highway works and the use of car parking within the basement of Consort House. Variation of Conditions 1 and 6 to vary the approved drawings to amend the ground floor frontage to allow the existing bureau de change to remain in situ and be part of the scheme temporarily and to extend the spa over all three basement levels rather than two.	Consented. Construction has not yet commenced

NAME / ADDRESS / PLANNING REF	SCHEME DESCRIPTION	STAGE
North Wharf Gardens — Site 2 16/12289/FULL 18/03869/FULL	Demolition of existing buildings to the centre and eastern end of the site and redevelopment comprising erection of buildings of between six and 20 storeys in height to provide 335 residential units (Class C3), a hotel and serviced apartments (Class C1), offices (Class B1), gym (Class D2), retail (Class A1/A3) and a primary school (Class D1) with associated landscaping and open space, highways works, off street ground floor service bay and two storey basement to provide car, cycle and motorcycle parking and ancillary servicing space. Namely, to provide a second servicing bay accessed from the approved vehicular entrance in North Wharf Road, alterations to the car and cycle parking layout, relocation of substation from basement to ground floor level, amendment to the layout and quantum of ground floor commercial spaces (Classes A1, A3, B1 and D2), raising of the height of the gym block to accommodate second floor, amendment of gym block west facade alignment and detailing, amendments to landscaping including a revision to the locations of trees and planters, amendment of residential layouts including alteration to the mix of the market residential flats, facade amendments including the insertion of additional windows, balcony detailing and introduction of window mullions, introduction of balconies at Levels 18 and 19 to Block C to replace winter gardens and minor increases in the height of the buildings. Variation of Conditions 1, 3, 4, 6, 8, 9, 12, 17 and 30 for external alterations to approved hotel, serviced apartments and school building, internal layout changes to hotel and serviced apartments with the number of hotel rooms increased from 224 to 373 rooms and serviced apartments increased from 55 to 247, internal alterations to school, and amendment of conditions to allow phased delivery of amended scheme and to amend condition triggers.	Consented. Construction has not yet commenced
Crossrail Station 11/05349/XRPS 17/09562/XRPS	Request for approval of plans and specifications pursuant to Schedule 7 of the Crossrail Act 2008 for a new station comprising a ticket hall, canopy, two ventilation structures, stairs, escalators, lifts, railings and other associated works.	Approaching completion

NAME / ADDRESS / PLANNING REF	SCHEME DESCRIPTION	STAGE
	Alterations to the Departures Road elevation and station box approved by the plans and specifications approval dated 6 October 2011 (11/05349/XRPS).	
40 Eastbourne Terrace London W2 6LG 19/03058/FULL	Demolition of top floor and erection of replacement floor plus one storey extension, rear extensions, and replacement facades with associated external alterations for use as a 366 bed hotel (Class C1) with flexible use at part of ground floor for restaurant/hotel use (Class A3/C1).	Consented. Construction has not yet commenced
50 Eastbourne Terrace London W2 6LX 16/07359/FULL 18/09733/FULL 19/07378/FULL	Variation of condition 1 of planning permission dated 10 July 2019 (RN: 18/09733/FULL) which itself varied condition 1 of planning permission dated 15 November 2016 (RN: 16/07359/FULL) for demolition of existing buildings and redevelopment of the site to provide a 6 storey (plus existing lower ground floor) 'L' shaped building, including terraces, a plant room, a green roof and solar panels at roof level to comprise 2 x A1 (retail shops) units and 1 x flexible A1 (retail shop)/ A2 (financial and professional services) / A3 (cafe and restaurant) unit at ground floor level and B1 (office) floorspace at part ground and all upper stories, Erection of 7 residential townhouses, incorporating concealed roof terraces and landscaped areas to the front on Chilworth Mews. NAMELY, to allow the relocation of cycle and refuse storages into defensible zone landscaping along Chilworth Mews; party wall adjustments to incorporate services; amendment to unit mix increasing the provision of family sized dwellings; amendments to facade and roof; to the mews buildings and changes to the ground floor office reception layout and the introduction of an ancillary cafe unit.	Under construction

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NAME / ADDRESS / PLANNING REF	SCHEME DESCRIPTION	STAGE
West End Gate Phase 2, 14-17 Paddington Green 16/11562/FULL 18/08004/FULL	Variation of condition 1 of planning permission dated 21 December 2017 (RN: 16/11562/FULL) for the Demolition and redevelopment of 14-16 Paddington Green; alteration and partial demolition of 17 Paddington Green; development of land to the east and south of 14-17 Paddington Green (part of site known as 'West End Green') to provide buildings ranging between 4 and 14 upper storeys to provide up to 200 residential units, with associated landscaping, basement car and cycle parking and servicing provision. NAMELY, to allow addition of one floor of residential accommodation to Block G and to parts of Block H to add 16 residential units and to reduce carbon offset payment to allow connection to Church Street District Heating Scheme.	Consented. Construction has not yet commenced
Capland Street, Bledlow Close and Luton Street London 17/08619/FULL	Demolition of buildings and redevelopment to provide two six storey buildings above lower ground and row of three storey townhouses comprising up to 168 residential units with ancillary facilities (Class C3) and a Sports Hall (Class D2), and associated car park, energy centre and all other works incidental to the proposed development. Open for comment icon	Consented. Construction has not yet commenced
Whiteleys Centre Queensway W2 4YH 15/10072/FULL 16/12203/FULL 18/04595/FULL 19/02449/FULL	<u>15/10072/FULL</u> Demolition of and redevelopment of building behind retained and refurbished facades to Queensway and Porchester Gardens facades to provide a mixed use development comprising three basement levels, ground floor and up to 10 upper floor levels, containing up to 103 residential units (Class C3), retail floorspace (Class A1 and A3) facing Queensway and arranged around a new retail arcade below re-provided central atrium and central retail courtyard, public car park, hotel (Class C1), cinema (Class D2) gym (Class D2), crèche (Class D1), with associated landscaping and public realm improvements, provision of 103 basement residential parking spaces, cycle parking and associated basement level plant and servicing provision. <u>19/02449/FULL</u>	Under construction

NAME / ADDRESS / PLANNING REF	SCHEME DESCRIPTION	STAGE
	Variation of Condition 1 to increase number of residential units from 129 to 153 units, including 14 affordable units; amendment to townhouses along Redan Place; amendment of residential unit mix; reduction in basement excavation depth with associated amendment to car and cycle parking and basement level plant, relocation of servicing bay to ground level and removal of public car park; revisions to hotel, cinema and gym floorspace, including increase in hotel room numbers to 111 and relocation of swimming pool to hotel; removal of crèche use; and replacement of windows to parts of the historic façade with double glazed windows	

An additional cumulative scheme that has been granted planning consent (Blomfield Mews, planning reference: 19/00026/COFUL) has also be considered in the cumulative assessment reported in the Daylight, Sunlight, Overshadowing and Solar Glare ES Addendum Chapter (Chapter 5 of this volume of the ES Addendum). The description of the scheme from the planning application is as follows:

“Demolition of 28 single storey garages and erection of replacement three storey buildings, with the exception of one building comprising four storeys fronting Warwick Crescent and two lower floors to connect with the mews, to provide 18 residential units comprising 4 dwellinghouses and 14 flats (Class C3), car parking spaces and waste and cycle storage. Reconfiguration of communal landscaping of gardens to the rear of Warwick Crescent.”

The scheme falls well below the cumulative scheme screening thresholds that have been applied across the EIA assessments (i.e. the EIA screening thresholds noted in the text above). However, an assessment of the cumulative daylight and sunlight effects of the scheme alongside the original 2019 5 Kingdom Street proposals was undertaken following submission of the original ES and planning application in January 2020, in response to a request from WCC (Appendix 5.5). For consistency, this scheme has therefore been included within the cumulative daylight and sunlight impact assessment scenario in the Daylight, Sunlight, Overshadowing & Solar Glare ES Addendum chapter.

As the Blomfield Mews scheme falls well below the cumulative scheme screening thresholds and is considered unlikely to result in any significant cumulative effects in relation to the other EIA topic areas, it has not been included within the cumulative scheme assessments in the other ES Addendum technical topic chapters.

Intra-Development Effects

Intra-development or synergistic effects have been considered where the proposed scheme amendments would result in any changes to the intra-development effects of the original 2019 scheme, reported in the original ES. These are addressed in Chapter 7: Summary & Conclusions of this volume of the ES Addendum.

3.5 CONSIDERATION OF ALTERNATIVES

Schedule 4 of the EIA Regulations 2017 requires the ES to contain:

"A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects".

Government Planning Practice Guidance on Environmental Impact Assessment states at paragraph 035 that:

“Where alternative approaches to development have been considered, the Environmental Statement should include an outline of the main alternatives studied and the main reasons for the choice made, taking into account the environmental effects”

Potential alternatives can be broadly grouped into the following categories:

- Alternative sites;
- Alternative land uses;
- Alternative processes; and
- Alternative development layouts.

Alternative sites have not been considered by the Applicant, on the basis that the proposals are specific to the application site, and the land uses proposed are supported by local planning policy and fulfil an identified need or meet commercial market demand. Alternative processes, which are typically more relevant to industrial uses, have also not been considered. Given that alternative sites and processes have not been considered, the alternatives considered in the original ES focuses primarily on the design evolution of the proposed development, including the alternative layouts and land uses considered during this process.

The very nature of the proposed scheme amendments is as a result of ongoing design development that has identified the need to amend the proposals in a number of ways. The amendments represent an alternative development layout from that of the original 2019 scheme.

3.6 RELEVANCE & SCALE OF THE PROPOSED DEVELOPMENT VARIATIONS

Table 3.2 sets out whether the proposed scheme amendments are considered to affect the respective technical topics.

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Table 3.2
Proposed Scheme Amendment Implications on Technical Topics

TECHNICAL AREA	PROPOSED SCHEME AMENDMENT IMPLICATIONS
Socio-economics	The proposed amendments in floorspace quanta in the various fixed and flexible uses proposed throughout the building, including the uplift in the fixed affordable workspace floorspace in ‘the Box’, will affect the number of jobs generated by the operational scheme.
Daylight, Sunlight, Overshadowing & Solar Glare	The proposed amendments to the building massing and height, including the increase in the height of the lift over-runs and selected rooftop plant at Level 19 by 4.32 m from the original 2019 scheme, have the potential to alter the daylight, sunlight, overshadowing and solar glare effects previously assessed for the original 2019 scheme in the original ES.
Wind Microclimate	The proposed amendments to the building massing and height have the potential to alter the wind microclimate conditions within the pedestrian environment at the site and in the immediate surrounding area previously assessed for the original 2019 scheme in the original ES. The changes to the proposed outdoor office amenity terraces (including the removal of the Level 18 terrace and the addition of the new Level 1 terrace) and other changes at the base of the building, such as the change in design of the office entrance on Kingdom Street, also have the potential to change the specific desired uses at these locations, potentially resulting to changes in the target wind environment at these locations.
Townscape, Heritage & Visual	The proposed amendments to the building massing and height and other elements of the external building design, such as the office entrance on Kingdom Street, have the potential to result in changes to the effects of the scheme on local townscape character areas, views of the site from the surrounding area and on the setting of local built heritage assets, as assessed in the original 2019 ES.

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3.7 INTERIM UPDATES IN LEGISLATION, POLICY, OR GUIDANCE

EIA Regulations

As previously noted, since the original 2019 ES was submitted, the EIA Regulations 2017 have been amended by the Town and Country Planning (Development Management Procedure, Listed Buildings and Environmental Impact Assessment) (England) (Coronavirus) (Amendment) Regulations 2020. These regulations set out amendments to a number of previous statutory requirements to allow for certain restrictions brought about by the 2020 Covid-19 pandemic.

National Planning Policy Framework (NPPF)

A minor update was made to the National Planning Policy Framework (NPPF) in June 2019 which is not relevant to the assessments included within the EIA. Relevant parts of the NPPF remain the same as the version of the NPPF published on 19 February 2019 and described in the original ES.

The Draft London Plan

The Draft London Plan: Intend to Publish Version was published in December 2019. The Examination in Public (EiP) on the London Plan was held between 15 January and 22 May 2019. The Panel of Inspectors appointed by the Secretary of State issued their report and recommendations to the Mayor on 8 October 2019. The Mayor has considered the Inspectors' recommendations and, on the 9 December 2019, issued to the Secretary of State his intention to publish the London Plan. Once adopted the new London Plan will run from 2019 to 2041. Where any of the policies in this document are relevant to the technical assessments, these are discussed within the relevant ES Addendum technical chapter. On 13 March 2020, the Secretary of State wrote to the Mayor, setting out his consideration of the Mayor's Intend to Publish London Plan and an Annex with proposed amendments. The Mayor is considering the Secretary of State's response and will take the statutory steps to finalise the Plan. The Mayor published a response to the Secretary of State on 24 April 2020, asking to engage and finalise the modifications to the Plan. This stage is ongoing.

The Draft Local Plan for Westminster City Council

The Draft Local Plan for Westminster City Council (WCC) is undergoing an examination process. The proposed submission City Plan was submitted to the Secretary of State on 19 November 2019, following consideration by the Full Council. This is the final stage of the examination process before it can be adopted as part of Westminster's Development Plan. Where any of the policies in this document are relevant to the technical assessments, these are discussed within the relevant ES Addendum technical chapter. It should be noted that WCC is applying limited weight to these policies at this time.

3.8 TECHNICAL TOPICS SCOPED DOWN/OUT OF THE ORIGINAL ES

Archaeology

The potential archaeological effects of the original 2019 scheme were assessed and reported in a Historic Environment Assessment report, prepared by MOLA and included in Appendix 3.1 in ES Volume IV.

The only element of the proposed development with the potential to cause archaeological effects is the ground works included within the construction phase. Given that the proposed scheme amendments do not include any changes to the construction methodology or the length of the construction period, the amendments are not expected to result in any changes to the results reported in the Historic Environment Assessment report, provided within the appendices of the original ES. On this basis, it has not been considered necessary to update the existing report. This approach was agreed with Ms Valeria Cabrera at the GLA by email on 23 June 2020.

Ground Conditions

The potential effects of the original 2019 scheme on ground conditions and contamination were assessed and reported in a Phase 1 Environmental Risk Assessment report, prepared by CBRE and included in Appendix 3.2 in ES Volume IV.

Given that the baseline conditions, the construction methodology, the length of the construction period, and the sensitivity of the proposed uses of the building have not changed from the original 2019 scheme, the scheme amendments are not expected to result in any changes to the results reported in the Phase 1 Environmental Risk Assessment report. The construction phase mitigation measures set out in that report are included within the Outline CEMP (OCEMP) (Appendix 2.1, ES Addendum Volume IV) and will continue to be brought forward under the proposals. On this basis, it has not been considered necessary to update the existing report. This approach was agreed with Ms Valeria Cabrera at the GLA by email on 23 June 2020.

Transport

The potential transport effects of the original 2019 scheme were assessed and reported in a Transport Assessment (TA), prepared by Sweco and included in Appendix 3.3 in ES Volume IV. A Framework Travel Plan and a Delivery, Servicing and Waste Management Plan were also included in the ES appendices in support of the TA.

The proposed scheme amendments include changes in the floorspace quanta and employment generated by the various fixed and flexible uses proposed throughout the building and, as such, have the potential to result in changes in the trip rates generated by the scheme once operational. The amendments also include transport design elements, such as changes in cycle parking numbers and the addition of a further pick-up / set down space for taxis and private cars. A TA Addendum and Delivery, Servicing and Waste Management Plan Addendum have therefore been prepared to

consider the changes. The Reports are provided in Appendices 3.1 and 3.2 respectively in ES Addendum Volume IV.

The TA Addendum concludes that with such high levels of public transport accessibility in the area, the level of trip generation associated with the amended scheme is not anticipated to have a notable impact on these local networks. The number of daily servicing vehicle trips is expecting to be extremely low in the context of the surrounding road network.

Pedestrian and cycle access to the Paddington Central Campus is expected to be substantially improved by the amended scheme.

Water Environment

A Flood Risk Assessment, including SUDS Assessment and Drainage Strategy, was prepared by Ramboll in relation to the original 2019 scheme and was included in Appendix 3.6 in ES Volume IV.

Given that the baseline conditions, the construction methodology, the sensitivity of the proposed uses of the building and the drainage strategy have not changed from the original 2019 scheme, the scheme amendments are not expected to result in any changes to the results reported in the Flood Risk Assessment report. On this basis, it has not been considered necessary to update the existing report. This approach was agreed with Ms Valeria Cabrera at the GLA by email on 23 June 2020.

Biodiversity

The potential effects of the original 2019 scheme on biodiversity were assessed and reported in an Ecological Impact Assessment report, prepared by Lloydbore and included in Appendix 3.7 in ES Volume IV.

The application site is of limited ecological value and no material changes to the baseline conditions since the report was prepared are anticipated. As previously noted, no changes to the construction methodology are proposed under the amended scheme. The construction phase mitigation measures set out in the Ecological Impact Assessment report are included within the Outline CEMP (OCEMP) (Appendix 2.1, ES Addendum Volume IV) and will continue to be brought forward under the proposals.

While the scheme amendments include some changes in the proposed planting proposed within the building, e.g. the addition of plants in pots on the new Level 1 outdoor office terrace, no material changes to the overall ecological effects of the scheme, as reported in the Ecological Impact Assessment report, are anticipated. On this basis, it has not been considered necessary to update the existing report. This approach was agreed with Ms Valeria Cabrera at the GLA by email on 23 June 2020.

Air Quality

The potential effects of the original 2019 scheme on air quality were assessed and reported in an Air Quality Report, prepared by Ramboll and included in Appendix 3.8 in ES Volume IV.

The scheme amendments include changes relevant to the air quality assessment, such as the removal of the gas fired boilers from the energy

EIA METHODOLOGY

strategy, the addition of a new office outdoor amenity terrace at Level 1, and changes in the proposed floorspace areas, which inform the air quality neutral assessment. The Air Quality Report has therefore been updated and is provided in Appendix 3.3, ES Addendum Volume IV.

No changes to the construction methodology are proposed and the Air Quality report confirms that with the proposed mitigation measures in place, and assuming adherence to WCC's Code of Construction Practice during the construction phase, the effect of construction dust is expected to be negligible. The effects of construction vehicle movements have been screened out as significant effects are not anticipated. The construction phase mitigation measures set out in the report are included within the Outline CEMP (OCEMP) (Appendix 2.1, ES Addendum Volume IV) and will continue to be brought forward under the proposals.

Due to the removal of the gas fired boilers, the analysis of the energy centre emissions reported in the original report has now been removed. No emissions will be produced by the building's energy strategy under the amended scheme, representing an improvement in the air quality effects of the scheme on comparison with the original 2019 scheme. The delivery and servicing vehicles during the operation of the development are expected to have a negligible impact on local air quality. The air quality neutral assessment also confirms that the amended scheme is both air quality neutral for transport emissions and for building emissions. The building is considered to be suitable for its intended use in regard to air quality conditions.

Noise & Vibration

The potential effects of the original 2019 scheme on noise and vibration were assessed and reported in a Noise & Vibration Impact Assessment, prepared by Scotch Partners and included in Appendix 3.3 in ES Volume IV.

The only proposed amendment to the scheme considered to have the potential to materially alter the findings of the original Noise & Vibration Impact Assessment report is the alteration to the proposed rooftop plant assemblage, which could affect noise levels at the nearest noise sensitive receptors. An addendum to the Noise & Vibration Impact Assessment report has therefore been prepared and is provided in Appendix 3.3, ES Addendum Volume IV.

Noise from the updated normal-use plant proposals is predicted to be around 1 dB quieter at the neighbouring noise sensitive properties. This is still at least 10 dB below the background sound level that was established in the previous assessment during expected office hours. As with the previous assessment, it is expected that the noise levels from the proposed plant will considerably reduce outside of office hours, enabling the requirement to be met overnight as well.

Noise from the updated emergency-use plant proposals is also expected to readily meet the requirements for this plant set out in the original Noise and Vibration Impact Assessment report submitted as part of the original ES.

Waste Management

The operational phase waste management strategy for the original 2019 scheme was set out within the Delivery, Servicing and Waste Management Plan, provided in Appendix 3.5 in Volume IV of the original ES. An addendum to the document has been prepared to take account of the proposed scheme amendments and the document is provided in Appendix 3.2, in ES Addendum Volume IV. No material changes have been made to the waste management strategy.

The waste management measures that were to be investigated for inclusion in the construction phase of the original 2019 scheme were set out in the OCEMP provided in Appendix 3.10, in Volume IV of the original ES. The OCEMP has been updated and is provided in Appendix 2.1, ES Addendum Volume IV. However, there have been no changes to the construction waste management measures.

4 SOCIO-ECONOMICS

Company

CBRE Ltd

Author

Ceara Shields BA (Hons)

Chapter Purpose

This chapter of the ES Addendum assesses the likely significant effects of the proposed development amendments in terms of socio-economics. The chapter and its supporting appendices describe any updates to the planning policy context, the assessment methodology; the baseline conditions at the application site and surroundings; the likely significant effects; the mitigation measures required to prevent, reduce or offset any significant adverse effects; the likely residual effects after these measures have been employed; and the inter-development cumulative effects since the original ES. In summary, the objectives of the chapter remain the same, to present the results of the assessment of potential impacts and likely effects related to:

- Construction employment;
- Operational employment; and
- Crime.

Since the 2019 ES, the following potential impact and likely effect of the following has also been incorporated into the assessment:

- Economic regeneration benefits to the wider area.

Figures

Figure 6.1 and Figure 6.2 from the original ES remain valid.

Appendices

The following appendices from the original ES remain valid:

- Appendix 6.1: Consultant CVs;
- Appendix 6.2: Socio-Economic Significance Thresholds; and
- Appendix 6.3: Socio-Economic Baseline Data.

Since the 2019 ES, the following additional appendix also supports the assessment:

- Appendix 4.1: Transboundary Economic Baseline Data.

4.1 METHODOLOGY

Legislation, Policy & Guidance

The legislation, policy and guidance set out within the original ES remain valid.

Consultees

N/A

Technical Methodology

The assessment approach has not changed from the original ES.

Since the original ES, the transboundary effects of the proposed development have been taken into consideration, and details have been added to this ES Addendum chapter as appropriate. Five wards in close proximity to the application site have been assessed including three from Westminster City Council (WCC): Queen's Park, Harrow Road and Westbourne and two from the Royal Borough of Kensington (RBKC): Colville and Golborne. This additional assessment supports the conclusion of the original ES that the proposed development will bring significant regeneration benefits to the wider area. Further detail is provided in Appendix 4.1, Volume IV of this ES Addendum.

Consideration of Climate Change

The consideration of climate change has not changed from the original ES.

Consideration of Human Health

The consideration of human health has not changed from the original ES.

Consideration of Risk of Major Accidents and Disasters

The consideration of risk of major accidents and disasters has not changed from the original ES.

Alternatives

No additional alternative scenarios beyond those considered in the original ES have been considered.

Relevant Associated Development

No changes to the associated development considered in the original ES are proposed under the scheme amendments.

Assumptions/Limitations

The assumptions and limitations from the original ES remain valid.

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4.2 CONCLUSIONS FROM PREVIOUS ES

The previous assessment concluded that there would be a range of effects as a result of the permitted scheme as set out in Table 4.1 extracted from the previous ES.

Table 4.1
Socio-Economic Residual Effects Summary

TOPIC AREA	SPECIFIC ISSUE	SUMMARY OF PREVIOUS ES RESIDUAL EFFECTS
Demolition and Construction	Generation of construction employment	Moderate Beneficial: It is estimated that during the 48-month construction period the proposed development would generate 382 FTE gross jobs and 60 FTE net jobs.
Operation	Generation of operational employment	Major Beneficial: It is estimated that during the operational period the proposed development would generate 3,431-4,914 FTE gross jobs and 563-808 FTE net jobs.
Operation	Reduction in crime and fear of crime	Moderate Beneficial: The design of the scheme is in accordance with Secured by Design (SbD) principles. In terms of crime prevention design measures, lighting would be used carefully throughout the proposed development to provide security. The scheme would aim to create a safe environment for employees and provide appropriate light levels relative to the status of the route. In addition, there would be CCTV, 24/7 site security and the internal public spaces will be closed from late evening to early morning to reduce anti-social behaviour.
Operation	Contributions towards the delivery of affordable housing and social and community infrastructure	Moderate Beneficial: The Applicant would provide financial contributions to WCC for the delivery of affordable housing and social and community infrastructure, which would be secured through a Section 106 legal agreement.

Previous ES Mitigation Measures

In summary, the full complement of mitigation measures identified are shown in Table 4.2.

Table 4.2
Previous ES Mitigation Measures

MITIGATION MEASURE	HOW SECURED / TRIGGER
To maximise local construction recruitment, the Applicant would develop a construction phase Employment, Training, Skills and Local Procurement strategy, in consultation with the WCC and main contractor, which would set out targets for local employment.	Planning condition
As there is an identified planning need to maximise local operational recruitment, the Applicant would work with incoming occupiers and employers to develop an operational phase Employment, Training and Skills strategy, in consultation with WCC, which will set out targets for end-use jobs for people living in Westminster; a dedicated employment and skills manager for 18 months post completion; pre-employment training programmes to connect local residents with employment opportunities and ensure that they have the support they need to access employment opportunities within the development; and targets for apprentices on-site, including at least one property management apprentice within the Paddington Central management team.	Planning condition

This Addendum assessment reconsiders the appropriateness of the above mitigation and makes relevant recommendations as to that which should be re-conditioned as part of the proposed applications.

4.3 BASELINE CONDITIONS

KEY RECEPTORS	DESCRIPTION	SENSITIVITY/SCALE OF VALUE	SUPPORTING DATA
Existing Local Residents Demographic Profile – Age & Ethnicity	The demographic data presented in the original ES covering population growth, population density, age and ethnicity remains valid. There has been no change to this receptor and its sensitivity from that considered in the original.	N/A	Original ES (Appendix 6.3, Volume IV)
Existing Local Residents Demographic Profile – Deprivation	The demographic data presented in the original ES covering deprivation remains valid. Since the original ES was submitted further deprivation analysis has been undertaken for the wider identified wards within close proximity to the application site to highlight the transboundary economic effects. Further detail is provided in ES Addendum Appendix 4.1, Volume IV.	N/A	Original ES (Appendix 6.3, Volume IV), ES Addendum Appendix 4.1, Volume IV

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KEY RECEPTORS	DESCRIPTION	SENSITIVITY/SCALE OF VALUE	SUPPORTING DATA
	There has been no change to this receptor and its sensitivity from that considered in the original.		
Local Economy, Existing Local Residents & New Workers	There would be some updates to the economic data since 2019, however even though the data is still considered to be relevant to a certain extent, with the current COVID-19 situation it is expected that the economic profile of the local areas would have worsened.	High	Original ES (Appendix 6.3, Volume IV)
Economic Profile — Qualifications, Employment and Economic Activity	<p>PWC have produced a UK Economic Update Report, released in July 2020, with information on the potential business impact of COVID-19. A summary of the conclusions of the report is as follows:</p> <ul style="list-style-type: none">■ The economic output in May 2020 continued to weaken due to the lockdown, however there were signs the decline has slowed largely driven by improvements to the manufacturing and construction sectors. Services remained weak, with output remaining nearly a quarter below pre-crisis levels, however further improvement is expected in June 2020 and July 2020 as more non-essential retailers, restaurants and pubs emerged from lockdown.■ The labour market remains under pressure, but there are early signs of decline slowing monthly data suggest the decline in job markets is slowing as economic activity picked up in May 2020, with average weekly hours increasing for both employees and the self-employed, and a decline in the number of people temporarily away from paid work in May 2020, after an initial sharp rise in March 2020 and April 2020.■ Business activity is picking up as more emerge from lockdown. This rise coincides with the government’s announcement of non-essential retailers being allowed to re-open from June 2020 as well as the reopening of restaurants and pubs in July 2020.■ There should be a gradual recovery later this year and in 2021, although a deeper contraction in Q2 could hold back the speed of the recovery in the UK after the initial bounce from leaving lockdown.■ The demand for workers is likely to decline in tandem with falling economic activity as a result of the expected fall in economic output in 2020. The projected decline in demand for workers means in the absence of further support, a proportion of currently furloughed workers may be surplus to business requirements and at risk of redundancies. <p>Furthermore, the Office for National Statistics (ONS) released analysis on the deaths involving COVID-19 (June 2020). It was found that 46,687 deaths occurred in England and Wales between 1st March and 31st May 2020 and registered by 6th June 2020 that involved COVID-19); representing a quarter (25.9%) of all deaths occurring over this period (180,586 deaths). Between March 2020 and May 2020, London had the highest age-standardised mortality rate with 137.6 deaths involving COVID-19 per 100,000 persons; this was statistically significantly higher than any other region in England and more than a third higher than the region with the next highest rate. This significant rise in deaths, in addition to people’s decline in health affecting their ability to work, would have contributed to the economic issues.</p> <p>With COVID-19 causing rises in unemployment it is difficult to tangibly understand how local authorities have been affected specifically, however it is clear that the economy for the whole country is fundamentally changing, confirming the high sensitivity of this receptor. It is currently unknown when the economy will return to normal, although it can be reasonably assumed that it will have further improved with lockdown continuing to ease which will not have fully trickled down into the data yet. With a currently sensitive economy and a prediction of substantial job losses, it is considered that the creation of job opportunities will be beneficial for the economy.</p> <p>In addition, since the original ES was submitted further out-of-work benefits, gross value added (GVA), income and worklessness analysis has been undertaken for the wider identified wards within close proximity to the application site to highlight the transboundary effects. Further detail is provided in Appendix 4.1, Volume IV. It is acknowledged that the information will have varied as a consequence of the current COVID-19 situation, although it is considered that the effects would be exacerbated further demonstrating the high sensitivity of this receptor.</p> There has been no change to this receptor and its sensitivity from that considered in the original.		
Local Economy, Existing Local Residents & New Workers	As described above, there would be some updates to the economic data since 2019, however even though the data is still considered to be relevant to a certain extent, with the current COVID-19 situation it is expected that the economic profile of the local areas would have worsened.	High	Original ES (Appendix 6.3, Volume IV)
Economic Profile — Occupation and Industry	Therefore the receptor and its sensitivity has changed from Medium to High from that considered in the original.		
Existing Local Residents & New Employees	There would be some updates to the crime data since 2019, however it is considered that these changes would not be significant, and therefore the baseline from the original ES remains valid.	High	Original ES (Appendix 6.3, Volume IV)
Crime	There has been no change to this receptor and its sensitivity from that considered in the original.		

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4.4 POTENTIAL SIGNIFICANT IMPACTS

Since the original ES, economic regeneration benefits to the wider area impact has been added to take account of the transboundary effects.

PHASE	DESCRIPTION	ADVERSE/BENEFICIAL
Demolition and Construction	Creation of new jobs, including direct, indirect and induced jobs	Beneficial
Operation	Loss of existing employment and generation of new operational employment	Adverse/Beneficial
Operation	Economic regeneration benefits to the wider area	Beneficial
Operation	Reduction in crime and fear of crime	Beneficial
Operation	Contributions towards the delivery of affordable housing and social and community infrastructure	Beneficial

4.5 DESIGN INTERVENTIONS

As per the original ES, no design interventions are required in relation to socio-economics.

4.6 ASSESSMENT PRE-MITIGATION (INCLUDING DESIGN INTERVENTION)

Since the original ES, economic regeneration benefits to the wider area impact has been added to take account of the transboundary effects.

PHASE	RECEPTOR(S) AFFECTED	IMPACT	MAGNITUDE PRE- MITIGATION	SIGNIFICANCE PRE- MITIGATION	MITIGATION PROPOSED	SUPPORTING DATA																				
Demolition and Construction	Existing: Local Authority working age residents	<p>Generation of Demolition and Construction Employment</p> <p>As the construction cost and length of the construction programme has not changed the assessment pre-mitigation from the original ES remains valid.</p> <p>The impact magnitude and effect significance remain consistent with that reported in the original ES chapter.</p> <p>*It should be noted that there was a typo in the 2019 ES where the significance was stated as Minor Beneficial although should have read Moderate Beneficial.</p>	Medium	Moderate Beneficial*	Yes — commitment to local recruitment, training and apprenticeships	Original ES (Appendix 6.3, Volume IV)																				
Operation	Existing: Local Authority working age residents	<p>Economic Regeneration Benefits to the Wider Area</p> <p>Due to the significant employment opportunities that the proposed development would bring to not only the local area but also the wider area through transboundary effects, it is considered that the economic regeneration would result in a Major Beneficial effect.</p>	Large	Major Beneficial	No — none required	ES Addendum Appendix 4.1, Volume IV																				
<p>Table 4.3 Proposed Development Fixed Floorspace Assessed</p> <table><tr><th>EMPLOYMENT USE</th><th>LOCATION</th><th>TOTAL FLOORSPACE (SQM GIA)</th><th>BEST CASE</th><th>WORST CASE</th></tr><tr><td>Offices B1a</td><td>Lower Ground Floor, Ground Floor Level, Mezzanine & Levels 1-19</td><td>48,264m² GIA</td><td>B1a Office: 1 job per 8m²</td><td>B1a Office: 1 job per 10m²</td></tr><tr><td>Auditorium (sui generis)</td><td>Lower Box and Upper Box Levels</td><td>738m² GIA (250 seats)</td><td>N/A (assuming 5 FTE)</td><td>N/A (assuming 5 FTE)</td></tr><tr><td>Affordable Workspace B1a</td><td>Lower Box and Upper Box Levels</td><td>3,900m² GIA</td><td>B1a Office: 1 job per 8m²</td><td>B1a Office: 1 job per 10m²</td></tr></table>							EMPLOYMENT USE	LOCATION	TOTAL FLOORSPACE (SQM GIA)	BEST CASE	WORST CASE	Offices B1a	Lower Ground Floor, Ground Floor Level, Mezzanine & Levels 1-19	48,264m² GIA	B1a Office: 1 job per 8m²	B1a Office: 1 job per 10m²	Auditorium (sui generis)	Lower Box and Upper Box Levels	738m² GIA (250 seats)	N/A (assuming 5 FTE)	N/A (assuming 5 FTE)	Affordable Workspace B1a	Lower Box and Upper Box Levels	3,900m² GIA	B1a Office: 1 job per 8m²	B1a Office: 1 job per 10m²
EMPLOYMENT USE	LOCATION	TOTAL FLOORSPACE (SQM GIA)	BEST CASE	WORST CASE																						
Offices B1a	Lower Ground Floor, Ground Floor Level, Mezzanine & Levels 1-19	48,264m² GIA	B1a Office: 1 job per 8m²	B1a Office: 1 job per 10m²																						
Auditorium (sui generis)	Lower Box and Upper Box Levels	738m² GIA (250 seats)	N/A (assuming 5 FTE)	N/A (assuming 5 FTE)																						
Affordable Workspace B1a	Lower Box and Upper Box Levels	3,900m² GIA	B1a Office: 1 job per 8m²	B1a Office: 1 job per 10m²																						

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PHASE	RECEPTOR(S) AFFECTED	IMPACT			MAGNITUDE PRE- MITIGATION	SIGNIFICANCE PRE- MITIGATION	MITIGATION PROPOSED	SUPPORTING DATA
Table 4.4 Proposed Development Flexible Floorspace Assessed								
EMPLOYMENT USE		LOCATION	TOTAL FLOORSPACE (SQM GIA)	BEST CASE	WORST CASE			
Flexible Retail Uses (A1/A3)		Lower Ground Floor Level	265m ² GIA	A1 Retail/A3 Restaurants & Cafes: 1 job per 15m ² (100%)	A1 Retail/A3 Restaurants & Cafes: 1 job per 20m ² (100%)			
Flexible Retail/Office Uses (A1/A3/B1a)		Lower Ground Floor, Ground Floor & Mezzanine	723m ² GIA	B1a Office: 1 job per 8m ² (100%)	A1 Retail/A3 Restaurants & Cafes: 1 job per 20m ² (100%)			
Flexible Commercial/Community /Leisure/Cultural Uses (A3/D1/D2/sui generis)		Lower Box & Upper Box Levels	3,490m ² GIA (D1 Conference /Exhibition space): 698 people)	A3 Restaurants & Cafes: 1 job per 15m ² (100%)	D1 Conference/Exhibition Centre: 1 steward for every 150 seated attendees plus 5 management jobs (100%)			
<p>Based on the standard employment densities, this space would create an estimated 3,890 – 5,086 FTE jobs as set out in Table 4.5. In comparison to the original ES, this is an increase in 172 from the best case employment figure and an increase in 459 from the worst case employment figure. . It should be noted that the affordable workspace has increased substantially since the original ES.</p> <p>Given the potential for the flexible uses to provide part-time and flexible work opportunities, the actual employment that could be created on-site has the potential to be higher. In addition, the flexible uses have the potential for much higher levels of local recruitment than the fixed office space.</p>								
Table 4.5 Proposed Development Gross Direct Employment Uplift								
EMPLOYMENT USE		LOCATION	FLOORSPACE (SQM) GIA	NIA*	EMPLOYMENT DENSITY/BENCHMARK	BEST CASE FULL TIME EQUIVALENT (FTE)	WORST CASE	
FIXED FLOORSPACE								
Offices B1a	Lower Ground Floor, Ground Floor Level, Mezzanine & Levels 1-19	48,264	35,017		<u>Best Case:</u> B1a Office – 1 job per 8m ² <u>Worst Case:</u> B1a Office – 1 job per 10m ²	4,377	3,502	
Auditorium (sui generis)	Lower Box and Upper Box Levels	738 (250 seats)	N/A		N/A (assuming 5 FTE)	5	5	
Affordable Workspace B1a	Lower Box and Upper Box Levels	3,900	3,315		<u>Best Case:</u> B1a Office – 1 job per 8m ² <u>Worst Case:</u> B1a Office – 1 job per 10m ²	414	332	
Sub-Total						4,797	3,838	
FLEXIBLE FLOORSPACE								
Flexible Retail Uses (A1/A3)	Lower Ground Floor Level	265	225		<u>Best Case:</u> A1 Retail/A3 Restaurants & Cafes – 1 job per 15m ² (100%)	18	14	

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PHASE	RECEPTOR(S) AFFECTED	IMPACT			MAGNITUDE PRE- MITIGATION	SIGNIFICANCE PRE- MITIGATION	MITIGATION PROPOSED	SUPPORTING DATA
	Flexible Retail/Office Uses (A1/A3/B1a)	Lower Ground Floor, Ground Floor & Mezzanine	723	615	<u>Worst Case:</u> A1 Retail/A3 Restaurants & Cafes – 1 job per 20m ² (100%) <u>Best Case:</u> B1a Office – 1 job per 8m ² (100%) <u>Worst Case:</u> A1 Retail/A3 Restaurants & Cafes – 1 job per 20m ² (100%)	61	24	
	Flexible Commercial/Community /Leisure/Cultural Uses (A3/D1/D2/sui generis)	Lower Box & Upper Box Levels	3,490 (Conference/ Exhibition: 698 people)	2,967 (Conference/ Exhibition: 698 people)	<u>Best Case:</u> A3 Restaurants & Cafes (50%): 1 job per 15m ² <u>Worst Case:</u> D1 Conference/Exhibition Centre (100%): 1 steward for every 150 seated attendees plus 5 management jobs	198	10	
	<i>Sub-Total</i>					290	52	
	Grand Total					5,086	3,890	
	* NIA/GIA have been used in line with assessment methodology in the employment density guide published by the HCA, and conversions have been used where necessary.							

Generation of Net Direct and Indirect Employment

To ascertain the net direct and indirect employment benefits to the target area of the local authority, an additionality assessment has been undertaken again. The adjustment factors are the same as the construction assessment from the original ES, with the exception of the multiplier. Due to the proposed development bringing forward affordable workspace, it is considered that the operational phase would benefit from better local connections. Therefore, a neighbourhood medium composite multiplier of 1.1 has been applied.

As shown in **Table 4.6**, the proposed development is considered to result in 642 – 839 net operational employment opportunities to the target area of the local authority.

Table 4.6
Operational Employment Additionality Assessment

ADDITIONALITY STEPS	PROPOSED DEVELOPMENT*	EXISTING EMPLOYMENT (DEADWEIGHT)*
A: Gross direct operational employment (A)	3,890-5,086	15-20
B: Estimated leakage (A*leakage)	3,112-4,069	12-16
C: Gross direct operational employment to a target area (A-B)	778-1,017	3-4
D: Less displacement (C*displacement)	195-254	1
E: Net direct operational employment to target area (C-D)	584-763	2-3
F: Plus multiplier effects (E*(multiplier-1))	58-76	0
G: Net operational employment to target area (E + F)	642-839	2-3

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PHASE	RECEPTOR(S) AFFECTED	IMPACT	MAGNITUDE PRE- MITIGATION	SIGNIFICANCE PRE- MITIGATION	MITIGATION PROPOSED	SUPPORTING DATA
		H: Net operational employment to target area less Deadweight (G(Development)-G(Deadweight))	639-837	-		
		Total net additional local effects	639-837			
		*Figures rounded to nearest number				
		<p>The additionality assessment has identified the net new employment created as a result of the proposed development above and beyond that existing on site (known as the deadweight). The proposed development would bring forward approximately 639 – 837 FTE jobs. In comparison to the original ES, this is an increase in 29 from the best case employment figure and an increase in 76 from the worst case employment figure. These changes in figures is not considered significant, and therefore would still result in a Major Beneficial effect at a local authority level.</p> <p>In regards to the COVID-19 situation, as lockdown is easing, the development will be reviewed as appropriate to ensure it remains attuned to the needs of the local economy. With a proportion of the employment floorspace remaining flexible, this provides opportunity for varying how the development is delivered as appropriate. It should be noted that for the B1a floorspace, employment densities of 1 job per 8m² and 1 job per 10m² have been used. As it is unknown how long the effects of COVID-919 will last, the development has been designed for the long-term to meet normal circumstances with the intention to return to normality by the time the time the development is built. If current restrictions lower then these job densities are still feasible, although it should be noted that the employment density could potentially lower.</p> <p>The impact magnitude and effect significance remain consistent with that reported in the original ES chapter.</p>				
Operation	Existing: Local Authority working age residents	Economic Regeneration Benefits to the Wider Area Due to the significant employment opportunities that the proposed development would bring to not only the local area but also the wider area through transboundary effects, it is considered that the economic regeneration would result in a Major Beneficial effect.	Large	Major Beneficial	No — none required	ES Addendum Appendix 4.1, Volume IV
Operation	Existing & Future Neighbourhood and Local Authority users of the site	Reduction in Crime and Fear of Crime As the safety and security design interventions have not changed the assessment pre-mitigation from the original ES remains valid. The impact magnitude and effect significance remain consistent with that reported in the original ES chapter.	Medium	Moderate Beneficial	No — none required.	Original ES (Appendix 6.3, Volume IV)
Operation	Existing & Future Neighbourhood and Local Authority users of the site	Contributions towards the delivery of Affordable Housing and Social and Community Infrastructure As the Applicant would provide a substantial increase in financial contributions to WCC for the delivery of affordable housing and social and community infrastructure since the original ES, which would be still be secured through a Section 106 legal agreement, the assessment pre-mitigation from the original ES changes from Moderate Beneficial to Major Beneficial. The impact magnitude has changed from Medium to Large and effect significance has changed from Moderate Beneficial to Major Beneficial from that reported in the original ES chapter.	Large	Major Beneficial	No — none required.	Original ES (Appendix 6.3, Volume IV)

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4.7 MITIGATION & ENHANCEMENT MEASURES

Since the original ES, economic regeneration benefits to the wider area impact has been added to take account of the transboundary effects.

PHASE	POSSIBLE EFFECT BEING MITIGATED/ENHANCED	MITIGATION MEASURE	HOW SECURED / TRIGGER	MAGNITUDE POST-MITIGATION	ADVERSE/BENEFICIAL	SUPPORTING DATA
Demolition and Construction	Generation of construction employment	<p>To maximise local construction recruitment, the Applicant will develop a construction phase Employment, Training, Skills and Local Procurement strategy, in consultation with the WCC and main contractor, which will set out targets for local employment including an employment and skills manager during the construction period; targets for apprentices on-site and within the supply chain; and targets for value going to local businesses within the supply chain including preparing a local supplier database and hosting ‘meet the buyer’ events. In addition, the Applicant will work with local schools and colleges to deliver a programme of activities, as part of their wider community investment programme, to secure opportunities for young people in the construction industry.</p> <p>The construction phase Employment, Training, Skills and Local Procurement strategy will be submitted to WCC for approval prior to commencement of development.</p> <p>There has been no change to this mitigation measure from that reported in the original ES.</p>	Planning condition	Large	Beneficial	Original ES (Appendix 6.3, Volume IV)
Operation	Generation of operational employment	<p>As there is an identified planning need to maximise local operational recruitment, the Applicant will work with incoming occupiers and employers to develop an operational phase Employment, Training and Skills strategy, in consultation with WCC, which will set out targets for end-use jobs for people living in Westminster; a dedicated employment and skills manager for 18 months post completion; pre-employment training programmes to connect local residents with employment opportunities and ensure that they have the support they need to access employment opportunities within the development; and targets for apprentices on-site, including at least one property management apprentice within the Paddington Central management team.</p> <p>In addition, the Applicant will target long-term unemployed residents and ensure that their programmes recognise their needs, e.g. Starting Out in Building Services. They will partner with local service providers, including Westminster Employment Service, Recruit London, CoW College and Westminster Kingsway College, to recruit construction, property management, building services, hospitality and retail employees.</p> <p>The operational phase Employment, Training and Skills strategy will be submitted to WCC for approval prior to occupation of the development.</p> <p>There has been no change to this mitigation measure from that reported in the original ES.</p>	Planning condition	Large	Beneficial	Original ES (Appendix 6.3, Volume IV)
Operation	Economic regeneration benefits to the wider area	None required	N/A	Large	Beneficial	ES Addendum Appendix 4.1, Volume IV
Operation	Reduction in crime and fear of crime	<p>None required</p> <p>There has been no change to this mitigation measure from that reported in the original ES.</p>	N/A	Medium	Beneficial	Original ES (Appendix 6.3, Volume IV)
Operation	Contributions towards the delivery of affordable housing and social and community infrastructure	<p>None required</p> <p>There has been no change to this mitigation measure from that reported in the original ES.</p>	N/A	Large	Beneficial	Original ES (Appendix 6.3, Volume IV)

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4.8 ASSESSMENT POST-MITIGATION

The assessment post-mitigation has largely remained unchanged from the original ES and the results have been re-provided below for completeness. Although, since the original ES, economic regeneration benefits to the wider area impact has been added to take account of the transboundary effects and has been added to the table accordingly and the contributions towards the delivery of affordable housing and social and community infrastructure has increased from Moderate Beneficial to Major Beneficial.

PHASE	RECEPTOR	RESIDUAL IMPACT	RESIDUAL EFFECT SIGNIFICANCE	ADV/BEN	ST/MT/LT	D/IND	P/T	R/IRR
Demolition and Construction	Existing: Local Authority working age residents	Generation of construction employment	Moderate	BEN	ST	D	T	IRR
Operation	Existing: Local Authority working age residents	Generation of operational employment	Major	BEN	LT	D	P	IRR
Operation	Existing: Local Authority working age residents	Economic regeneration benefits to the wider area	Major	BEN	LT	D	P	IRR
Operation	Existing & Future: Neighbourhood and Local Authority users of the site	Reduction in crime and fear of crime	Moderate	BEN	LT	D	P	IRR
Operation	Existing & Future: Neighbourhood and Local Authority users of the site	Contributions towards the delivery of affordable housing and social and community infrastructure	Major	BEN	LT	D	P	IRR
Key: ADV/BEN= Adverse/Beneficial; ST/MT/LT = Short-term/Medium-term/Long-term; D/IND = Direct/Indirect; P/T = Permanent/Temporary; R/IRR = Reversible/Irreversible. ** Post mitigation magnitude of impacts is negligible and neither beneficial nor adverse.								

4.9 INTER-DEVELOPMENT CUMULATIVE EFFECTS

The changes to the cumulative schemes from the original ES and the two additional cumulative schemes as part of this ES addendum would not significantly change the socio-economic inter-development cumulative effects. Therefore the cumulative assessment from the original ES remains valid. Although, since the original ES, economic regeneration benefits to the wider area impact has been added to take account of the transboundary effects and would result in a Major Beneficial cumulative effect.

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Maddalena has a MSc in Building Engineering and Architecture and is a registered ARB Architect with 9 years' experience in the industry. As a Partner in the largest dedicated Daylight and Sunlight department in the UK, she has advised on daylight and sunlight matters for large scale development schemes and EIA projects including Battersea Powerstation, Heygate Masterplan, London Dock and Canada Water.

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Conor is a senior surveyor with over 4 years' experience in providing strategic advice on large scale developments in relation to daylight and sunlight.

Chapter Purpose

The purpose of this chapter of the ES Addendum is to assess the likely significant effects of the July 2020 amended scheme (depicted on drawings 14279/09/01/04-06 within **Appendix 5.1**) on the environment in terms of daylight, sunlight, overshadowing and solar glare. The chapter also describes where the effect experienced at each of the receptors is materially different from those reported in the original ES chapter (Chapter 7, ES Volume II) (depicted in drawings 14279/06/05/04-06 within **Appendix 5.1**).

Daylight and Sunlight

Following a review of the original 2019 scheme and the July 2020 amended scheme, it was considered that the massing alterations would be unlikely to result in a change in effect to the properties considered sensitive to daylight alterations, as reported in the original ES chapter.

To ensure that the potential daylight and sunlight effects of the July 2020 amended scheme are reported, a new assessment has been undertaken. The following paragraphs outline the similarities in massing of the original 2019 scheme and the July 2020 amended scheme, which lead to the non-material changes in daylight and sunlight effects to surrounding sensitive properties.

In order to understand where massing changes occur, GIA completed an overlay exercise with the 3D model of the July 2020 amended scheme and the original 2019 scheme. The overlay drawing 14279/09/01/07 can be found in **Appendix 5.1** Drawings.

The overlay was analysed to understand if differences in massing occur and, if so, whether this would result in a potential change to the previously reported results on daylight and sunlight impacts to surrounding properties.

It was found that the change in massing occurs at ground level to the west and east of the site and at roof level with the increase in height of the lift over-runs and roof plant installations.

At the ground level, the additional massing is not significant in nature, when compared to the main building massing of the July 2020 amended scheme, which would create the majority of the impact to the neighbouring properties. As such, no additional impact would be caused by the massing change at ground level.

Under the amended scheme, it is understood that increase in height of the lift over-runs and roof plant is 4.32m when compared to the original 2019 scheme. However, the increased massing for the plant at roof level is stepped back from the edge of the main body of the building. The distance from the edge of the building compared with the original 2019 scheme is between 6.15m at the closest point and 15.2m at the furthest, as can be seen in the below image.

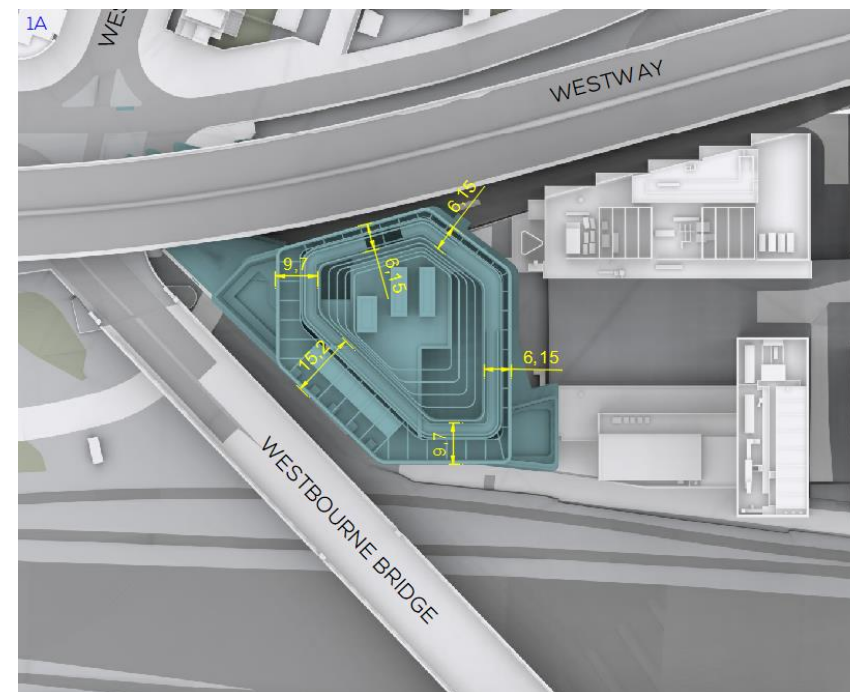


Figure 5.1

Massing Comparison

Due to this step back from the building edge, it is unlikely that this increase in massing would be visible to the neighbouring residential receptors.

The overlay exercise formed GIA's professional opinion that the massing alterations are non-material in relation to daylight and sunlight impacts experienced at surrounding sensitive properties.

To ensure a robust consideration of the scheme amendments, GIA tested this professional opinion by rerunning the daylight and sunlight analyses in

full for the amended scheme. The results are set out in Section 5.6 of this ES Addendum chapter. The results support this professional opinion.

The July 2020 amended scheme scenario is depicted on drawings 14279/09/01/04-06 in **Appendix 5.1, ES Addendum Volume IV**. The results of the July 2020 amended scheme daylight and sunlight assessment are presented in **Appendix 5.2, ES Addendum Volume IV**.

Overshadowing

Owing to the location and relative proximity of surrounding amenity areas sensitive to overshadowing, the increase in massing under the amended scheme has potential to generate additional effects at these amenity areas by reducing the total area of amenity areas which receives two or more hours of sunlight on March 21st. Therefore, a new technical overshadowing assessment of the July 2020 amended scheme has been undertaken.

A Transient Overshadowing (TOS) assessment plotting the hourly shadow path of the baseline condition, July 2020 amended scheme scenario and 2010 consented scheme scenario on March 21st, June 21st and December 21st is depicted in **Appendix 5.3, ES Addendum Volume IV**. A sun hours on ground test has also been undertaken at surrounding private gardens to quantify where there is a reduction in the total area which would experience less than 2 hours of sunlight on March 21st as a result of the July 2020 amended scheme.

The overshadowing assessment of the July 2020 amended scheme states where the results of the original 2019 ES remains the same and where there is a change in the impact and overall significance of effect at any receptor.

Solar Glare

A new assessment of the potential solar glare effects has been carried out on the July 2020 amended scheme. The results can be found in **Appendix 5.4, ES Addendum Volume IV**. The viewpoints identified as sensitive to solar glare in the 2019 ES remain the same. However, the design changes to the base of the new scheme have the potential to change what elements of the reflective façade would be visible to road users and train drivers. As such, the potential for solar reflections at each of the viewpoints has been retested.

The solar glare assessment of the July 2020 amended scheme states where the results of the original 2019 ES remains the same and where there is a change in the impact and overall significance of effect.

Summary of Objectives

In summary, the objectives of this ES addendum chapter are to determine the following:

- Changes to daylight and sunlight conditions at the surrounding sensitive receptors as a result of the July 2020 amended scheme, once complete;
- Changes to overshadowing of surrounding outdoor amenity spaces as a result of the July 2020 amended scheme, once complete; and

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- The potential for solar glare effects on surrounding road users as a result of the July 2020 amended scheme once complete.

Inter-Development Cumulative Effects

Following the submission of the original 2019 ES and planning application, in response to a request from WCC, an assessment of the cumulative daylight and sunlight effects of the original 2019 5 Kingdom Street proposals in conjunction with the consented Blomfield Mews scheme (reference 19/00026/COFUL) was undertaken. The outcome of this assessment was reported in a letter dated January 2020, which is provided in **Appendix 5.5, ES Addendum Volume IV**.

For consistency, a cumulative assessment of the July 2020 amended scheme in conjunction with the surrounding consented schemes, which have the potential to generate cumulative effects, has been undertaken in this ES Addendum chapter, with the results presented in Section 5.9. The results have been compared against the conclusions of the January 2020 letter.

With one exception, all other schemes on the cumulative scheme list provided in Table 3.1, in Chapter 3 of this volume of the ES Addendum, are located beyond 250m from the application site boundary and therefore are not considered to have the potential to result in significant cumulative effects alongside the 5 Kingdom Street scheme. The one exception is the 1A Sheldon Square. Therefore, this scheme is included within the cumulative assessment of daylight and sunlight impacts to surrounding sensitive properties. .

The cumulative scenario is depicted on drawings 14279/09/03/04-06 in **Appendix 5.1**. The results of the cumulative daylight and sunlight assessment are presented in **Appendix 5.2**.

Figures

- **Figure 5.1** – Massing Comparison

Appendices

This chapter is supported by appendices:

- **Appendix 5.1** Drawings;
- **Appendix 5.2** Daylight and Sunlight Assessment;
- **Appendix 5.3** Overshadowing Assessment;
- **Appendix 5.4** Solar Glare Assessment;
- **Appendix 5.5** Blomfield Mews Letter (January 2020)

5.1 METHODOLOGY

Legislation, Policy & Guidance

The following section outlines the legislation, policy & guidance updates since the production of the original 2019 ES. The updates do not have any

bearing on the assessments undertaken within this ES Addendum. The relevant legislation, policy and guidance preceding that date is set out in the original ES chapter

A minor update was made to the National Planning Policy Framework (NPPF) in June 2019 which is not relevant to this assessment. Relevant parts of the NPPF remain the same as the version of the NPPF published on 19 February 2019 and described in the original ES chapter.

The Draft London Plan: Intend to Publish Version was published in December 2019. The Examination in Public (EiP) on the London Plan was held between 15 January and 22 May 2019. The Panel of Inspectors appointed by the Secretary of State issued their report and recommendations to the Mayor on 8 October 2019. The Mayor has considered the Inspectors' recommendations and, on the 9 December 2019, issued to the Secretary of State his intention to publish the London Plan. Once adopted the new London Plan will run from 2019 to 2041. The following policies within the Intend to Publish document are of relevance. Policy D6 Housing Quality and Standards states that:

'The design of development should provide sufficient daylight and sunlight to new and surrounding housing that is appropriate for its context, whilst avoiding overheating, minimising overshadowing and maximising the usability of outside amenity space.'

Policy D9 Tall buildings states that:

'...development proposals should address the following impacts: ...buildings should not cause adverse reflected glare [and] ...buildings should be designed to minimise light pollution from internal and external lighting.' It continues that "wind, daylight, sunlight penetration and temperature conditions around the building(s) and neighbourhood must be carefully considered and not compromise comfort and the enjoyment of open spaces, including water spaces, around the building.'

The Draft Local Plan for Westminster City Council (WCC) is undergoing an examination process. The proposed submission City Plan was submitted to the Secretary of State on 19 November 2019, following consideration by the Full Council. This is the final stage of the examination process before it can be adopted as part of Westminster's Development Plan.

The British Standard BS8206:2, which is referenced in the BRE Guidelines, has been superseded by the European Standard BS EN 17037:2018. Whilst the methodologies to assess new spaces considering recorded climate data are acknowledged, the full details of the neighbouring properties including window and room sizes/locations as well as internal and external finishes to understand the effect of reflected light would be required. The local and regional policy stipulates that the methodologies outlined in the BRE Guidelines remain the standard method of assessment. As such, the EU Standard is not applicable in the context of considering daylight and sunlight impacts to neighbouring properties and the BRE Guidelines remains the primary guidance relevant to this technical discipline.

The policy and guidance set out in these new and revised documents has been reviewed in relation to this assessment of the proposed development.

They do not introduce any considerations beyond those factored into the original ES chapter. The assessment in this ES Addendum chapter has been made with reference to all relevant current policy and guidance.

Consultees

No consultation has been undertaken in relation to the technical aspects of this ES Addendum chapter.

Technical Methodology

There have been no changes to the technical assessment methodologies that were applied to the assessments reported in the original ES chapter.

Consideration of Climate Change

The consideration of climate change in the assessments has not changed from that described in the original ES chapter.

Consideration of Human Health

People expect good natural lighting in their homes. Human health is an integral factor and basis of the assessments within this Daylight, Sunlight, Overshadowing and Solar Glare ES Chapter.

Consideration of Risk of Major Accidents and Disasters

Major accidents and/or disasters identified as relevant to the proposed development are not applicable to the daylight, sunlight, overshadowing and solar glare studies and so have not been considered in this chapter.

Alternatives

No additional alternative scenarios beyond those considered in the original ES have been considered.

Relevant Associated Development

The changes to the proposed associated development from that set out in the original ES are not considered to affect the outcome of this assessment.

Assumptions/Limitations

The assumptions and limitations relevant to this updated assessment remain consistent with those of the original ES assessment, as reported in Section 7.2 of the original ES chapter.

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5.2 CONCLUSIONS FROM ORIGINAL ES

The original assessment concluded that there would be a range of effects as a result of the original 2019 scheme, as set out in the tables in Section 7.6 of the original ES chapter.

Previous ES Mitigation Measures

No mitigation or enhancement measures were proposed in regard to the assessments reported in the original ES chapter.

5.3 BASELINE CONDITIONS

Following a review of any changes in relevant legislation, policy and guidance, emerging cumulative schemes and the baseline context, there have been no changes to the properties, amenity areas or viewpoints considered in the assessment or the baseline conditions relevant to each receptor since the original ES chapter was prepared.

5.4 DESIGN INTERVENTIONS

DESIGN INTERVENTION	DESCRIPTION	REASON FOR INTERVENTION	SUPPORTING DATA
In relation to daylight, sunlight, overshadowing and solar glare, no design interventions have been implemented. This is consistent with the original ES chapter.	N/A	N/A	N/A

5.5 ASSESSMENT PRE-MITIGATION (INCLUDING DESIGN INTERVENTION)

Daylight: 2020 Amended Scheme Scenario

Table 5.1
Summary of daylight effect

RECEPTORS ASSESSED	VSC						NSL						DESCRIPTION OF DAYLIGHT EFFECTS OF THE JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH THE ORIGINAL 2019 ES	FURTHER INFORMATION
	TOTAL NO. OF WINDOWS	NO. WINDOWS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES				TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES							
			20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION	TOTAL			20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION	TOTAL				
140 Gloucester Terrace	13	11	2	0	0	2	8	5	1	1	1	3	<p>For VSC, 11 of the 13 (84.6%) windows assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p> <p>Of the two affected windows, both would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect; although, it should be noted that one of the affected windows only experiences a marginal breach of the guidelines, with an alteration of 21.2%.</p> <p>For NSL, five of the eight (62.5%) rooms assessed meet BRE's criteria. These windows are therefore considered to experience a negligible effect.</p>	Minor Adverse	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2

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RECEPTORS ASSESSED	VSC						NSL						DESCRIPTION OF DAYLIGHT EFFECTS OF THE JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH THE ORIGINAL 2019 ES	FURTHER INFORMATION
	TOTAL NO. OF WINDOWS	NO. WINDOWS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES				TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES							
			20-29.9% REDUCTION	30-39.9% REDUCTION	>40% REDUCTION	TOTAL			20-29.9% REDUCTION	30-39.9% REDUCTION	>40% REDUCTION	TOTAL				
													<p>Of the three affected rooms, one would experience an alteration in NSL between 20-29.9% which is considered a Minor Adverse effect and one would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect. The remaining room would experience an alteration in excess of 40% which is considered a Major Adverse effect.</p> <p>Overall, due to the high level of VSC compliance, the effect to this building is considered Minor Adverse.</p>			
172 Gloucester Terrace	13	9	4	0	0	4	13	13	0	0	0	0	<p>For VSC, nine of the 13 (69.2%) windows assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p> <p>Of the four affected windows, all would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect.</p> <p>For NSL, all rooms assessed would meet BRE's criteria and so are considered to experience a negligible effect.</p> <p>Overall, the effect to this building is considered Minor Adverse.</p>	Minor Adverse	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
174 Gloucester Terrace	11	11	0	0	0	0	11	11	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
176 Gloucester Terrace	9	9	0	0	0	0	9	9	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
178 Gloucester Terrace	15	15	0	0	0	0	11	11	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
180 Gloucester Terrace	14	14	0	0	0	0	9	8	1	0	0	1	<p>For VSC, all windows assessed would meet BRE's criteria and so are considered to experience a negligible effect.</p> <p>For NSL, eight of the nine (88.9%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p> <p>The affected room would experience an alteration in NSL between 20-29.9% which is considered a Minor Adverse effect. It should be noted that this one affected room would retain a good level of NSL of 70.4%.</p> <p>Overall, the effect to this building is considered Negligible.</p>	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2

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RECEPTORS ASSESSED	VSC							NSL							DESCRIPTION OF DAYLIGHT EFFECTS OF THE JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH THE ORIGINAL 2019 ES	FURTHER INFORMATION
	TOTAL NO. OF WINDOWS	NO. WINDOWS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES				TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES									
			20-29.9% REDUCTION	30-39.9% REDUCTION	>40% REDUCTION	TOTAL			20-29.9% REDUCTION	30-39.9% REDUCTION	>40% REDUCTION	TOTAL						
182 Gloucester Terrace	10	8	2	0	0	2	9	8	1	0	0	1	<p>For VSC, eight of the 10 (80%) windows assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p> <p>Of the two affected windows, both would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect.</p> <p>For NSL, eight of the nine (88.9%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p> <p>The affected room would experience an alteration in NSL between 20-29.9% which is considered a Minor Adverse effect. It should be noted that this one affected room would retain a good level of NSL of 77.8%, marginally below the BRE recommended 80%.</p> <p>Overall, the effect to this building is considered Minor Adverse.</p>	Minor Adverse	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2		
184 Gloucester Terrace	12	12	0	0	0	0	11	8	3	0	0	3	<p>For VSC, all 12 windows assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p> <p>For NSL, eight of the 11 (72.7%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.</p> <p>Of the three affected rooms, all would experience an alteration in NSL between 20-29.9% which is considered a Minor Adverse effect.</p> <p>Overall, the effect to this building is considered Minor Adverse.</p>	Minor Adverse	One window would see an improvement from a Minor Adverse alteration in VSC to a Negligible alteration. <p>Overall, the effect to this building does not differ from what was reported in the original 2019 ES.</p>	Appendix 5.2		
186 Gloucester Terrace	10	9	1	0	0	1	9	6	3	0	0	3	<p>For VSC, nine of the 10 (90%) windows assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p> <p>The affected window would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect.</p> <p>For NSL, six of the nine (66.7%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p> <p>Of the three affected rooms, all would experience an alteration in NSL between 20-29.9% which is considered a Minor Adverse effect.</p> <p>Overall, the effect to this building is considered Minor Adverse.</p>	Minor Adverse	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2		
188 Gloucester Terrace	10	9	1	0	0	1	9	7	1	1	0	2	<p>For VSC, nine of the 10 (90%) windows assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p> <p>The affected window would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect.</p> <p>For NSL, seven of the nine (77.8%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p>	Minor Adverse	One window would see an improvement from a Minor Adverse alteration in VSC to a Negligible alteration. <p>Overall, the effect to this building does not differ from what was reported in the original 2019 ES.</p>	Appendix 5.2		

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RECEPTORS ASSESSED	VSC							NSL							DESCRIPTION OF DAYLIGHT EFFECTS OF THE JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH THE ORIGINAL 2019 ES	FURTHER INFORMATION
	TOTAL NO. OF WINDOWS	NO. WINDOWS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES				TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES									
			20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION	TOTAL			20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION	TOTAL						
													Of the two affected rooms, one would experience an alteration in NSL between 20-29.9% which is considered a Minor Adverse effect whilst one would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect. Overall, due to the vast majority of affected windows and rooms experiencing a Minor Adverse effect, the effect to this building is considered Minor Adverse.					
190 Gloucester Terrace	14	12	2	0	0	2	11	11	0	0	0	0	For VSC, 12 of the 14 (85.7%) windows assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. Of the two affected windows, both would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect. For NSL, all rooms assessed would meet BRE's criteria and so are considered to experience a negligible effect. Overall, the effect to this building is considered Minor Adverse.	Minor Adverse	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2		
192 Gloucester Terrace	14	12	2	0	0	2	9	9	0	0	0	0	For VSC, 12 of the 14 (85.7%) windows assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. Of the two affected windows, both would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect. For NSL, all rooms assessed would meet BRE's criteria and so are considered to experience a negligible effect. Overall, the effect to this building is considered Minor Adverse.	Minor Adverse	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2		
194 Gloucester Terrace	15	13	2	0	0	2	12	12	0	0	0	0	For VSC, 13 of the 15 (86.7%) windows assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. Of the two affected windows, both would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect. It should be noted that both affected windows are very marginally above the BRE recommendations, with alterations of 20.1% and 20.7%. For NSL, all rooms assessed would meet BRE's criteria and so are considered to experience a negligible effect. Overall, because of the very marginal breach of the BRE guidelines and fully compliant NSL, the effect to this building is considered Negligible	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2		
2-6 Orsett Terrace	42	42	0	0	0	0	37	37	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2		

DAYLIGHT, SUNLIGHT, OVERSHADOWING & SOLAR GLARE

RECEPTORS ASSESSED	VSC						NSL						DESCRIPTION OF DAYLIGHT EFFECTS OF THE JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH THE ORIGINAL 2019 ES	FURTHER INFORMATION
	TOTAL NO. OF WINDOWS	NO. WINDOWS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES				TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES							
			20-29.9% REDUCTION	30-39.9% REDUCTION	>40% REDUCTION	TOTAL			20-29.9% REDUCTION	30-39.9% REDUCTION	>40% REDUCTION	TOTAL				
8 Orsett Terrace	14	5	8	1	0	9	14	10	4	0	0	4	<p>For VSC, five of the 14 (35.7%) windows assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p> <p>Of the nine affected windows, eight would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect whilst one would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect.</p> <p>For NSL, 10 of the 14 (71.4%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p> <p>Of the four affected rooms, three would experience an alteration in NSL between 20-29.9% which is considered a Minor Adverse effect whilst one would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect.</p> <p>Overall, the effect to this building is considered Minor Adverse.</p>	Minor Adverse	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
10-14 Orsett Terrace	36	31	1	3	1	5	36	33	3	0	0	3	<p>For VSC, 31 of the 36 (86.1%) windows assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p> <p>Of the five affected windows, one would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect and three would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect. The remaining window would experience an alteration in excess of 40% which is considered a Major Adverse effect. It should be noted that all five affected windows, including the one with Major Adverse effects has low existing values of VSC which would result in a disproportionate percentage change and small absolute losses ranging from 1.5% to 2.6%, which is unlikely to be noticeable.</p> <p>For NSL, 32 of the 36 (88.9%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p> <p>Of the four affected rooms, all would experience an alteration in NSL between 20-29.9% which is considered a Minor Adverse effect.</p> <p>Overall, as to the vast majority of affected windows for VSC have low existing values of VSC resulting in a disproportionate percentage change, the effect to this building is considered Minor Adverse</p>	Minor Adverse	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
16 Orsett Terrace	12	12	0	0	0	0	12	12	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2

DAYLIGHT, SUNLIGHT, OVERSHADOWING & SOLAR GLARE

RECEPTORS ASSESSED	VSC							NSL						DESCRIPTION OF DAYLIGHT EFFECTS OF THE JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH THE ORIGINAL 2019 ES	FURTHER INFORMATION
	TOTAL NO. OF WINDOWS	NO. WINDOWS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES				TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES								
			20-29.9% REDUCTION	30-39.9% REDUCTION	>40% REDUCTION	TOTAL			20-29.9% REDUCTION	30-39.9% REDUCTION	>40% REDUCTION	TOTAL					
Battleship Building	1	1	0	0	0	0	1	1	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2	
3-65 Warwick Crescent	43	30	10	3	0	13	26	24	1	1	0	2	<p>For VSC, 30 of the 43 (70%) windows assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p> <p>Of the 13 affected windows, 10 would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect whilst three would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect.</p> <p>For NSL, 24 of the 26 (92%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p> <p>Of the two affected rooms, one would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect and the remaining room would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect.</p> <p>It should be noted that the affected windows and rooms are located directly below balconies. The availability of daylight and sky visibility to these windows and rooms would therefore be reduced as a result of this architectural feature. In addition, the absolute losses for all of the affected windows are small and unlikely to be noticeable.</p> <p>Overall, due to the architectural features of this building reducing daylight availability to all the affected windows and rooms, the effect to this building is considered Minor Adverse.</p>	Minor Adverse	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2	
1-80 Brewers Court	152	94	22	8	28	58	127	126	1	0	0	1	<p>For VSC, 92 of the 152 (60.5%) windows assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p> <p>Of the 58 affected windows, 22 would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect and eight would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect. The remaining 28 windows would experience an alteration in excess of 40% which is considered a Major Adverse effect.</p> <p>It is important to note that all of the affected windows have very low existing values of VSC ranging from 0.3 to 6.7% which would result in a disproportionate percentage change and small absolute losses, which are unlikely to be noticeable. In addition, all windows experiencing a Major Adverse effect have existing levels below 3% VSC.</p> <p>For NSL, 126 of the 127 (99.2%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p>	Minor Adverse	<p>Two fewer windows would be affected in terms of VSC in the July 2020 amended scheme compared to the original 2019 ES.</p> <p>Overall, the effect to this building does not differ from those reported in the original 2019 ES.</p>	Appendix 5.2	

DAYLIGHT, SUNLIGHT, OVERSHADOWING & SOLAR GLARE

RECEPTORS ASSESSED	VSC						NSL						DESCRIPTION OF DAYLIGHT EFFECTS OF THE JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH THE ORIGINAL 2019 ES	FURTHER INFORMATION
	TOTAL NO. OF WINDOWS	NO. WINDOWS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES				TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES							
			20-29.9% REDUCTION	30-39.9% REDUCTION	>40% REDUCTION	TOTAL			20-29.9% REDUCTION	30-39.9% REDUCTION	>40% REDUCTION	TOTAL				
2 Blomfield Villas	37	33	2	2	0	4	32	26	5	1	0	6	<p>The affected room would experience an alteration in NSL between 20-29.9% which is considered a Minor Adverse effect.</p> <p>Overall, due to the low existing values for all affected windows which would result in effects that are unlikely to be noticeable to occupants, the effect to this building is considered to be Minor Adverse.</p> <p>For VSC, 33 of the 37 (89.2%) windows assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p> <p>Of the four affected windows, two would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect whilst two would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect.</p> <p>For NSL, 26 of the 32 (81.3%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p> <p>Of the six affected rooms, five would experience an alteration in NSL between 20-29.9% which is considered a Minor Adverse effect and one would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect.</p> <p>It should be noted that all the affected windows and rooms are located below balconies which would reduce daylight availability. Windows and rooms that are not under a balcony are fully BRE compliant and therefore the effects are largely attributed to this building’s architectural features.</p> <p>Overall, due to the architectural features of this building reducing daylight availability, the effect to this building is considered Minor Adverse.</p>	Minor Adverse	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
20 Blomfield Villas	16	16	0	0	0	0	16	16	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
18 Blomfield Villas	8	8	0	0	0	0	8	8	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
16 Blomfield Villas	8	8	0	0	0	0	8	8	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2

DAYLIGHT, SUNLIGHT, OVERSHADOWING & SOLAR GLARE

RECEPTORS ASSESSED	VSC							NSL							DESCRIPTION OF DAYLIGHT EFFECTS OF THE JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH THE ORIGINAL 2019 ES	FURTHER INFORMATION
	TOTAL NO. OF WINDOWS	NO. WINDOWS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES				TOTAL	TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES				TOTAL				
			20-29.9% REDUCTION	30-39.9% REDUCTION	>40% REDUCTION				20-29.9% REDUCTION	30-39.9% REDUCTION	>40% REDUCTION							
14 Blomfield Villas	8	8	0	0	0	0	8	8	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2		
12 Blomfield Villas	8	8	0	0	0	0	8	8	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2		
10 Blomfield Villas	8	8	0	0	0	0	8	8	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2		
8 Blomfield Villas	8	8	0	0	0	0	8	8	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2		
6 Blomfield Villas	8	8	0	0	0	0	8	8	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2		
4 Blomfield Villas	9	9	0	0	0	0	8	8	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2		
1-96 Westbourne Court	62	33	26	3	0	29	46	33	10	3	0	13	For VSC, 33 of the 62 (53.2%) windows assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. Of the 29 affected windows, 26 would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect whilst three would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect. It is important to note that all of the affected windows have very good retained levels of VSC, with 24 of the 29 ranging from 21.4% to 25.8% VSC, marginally below the BRE recommendations. The remaining five windows would also retain good levels of VSC ranging from 17.7 to 19.8% VSC.	Minor Adverse	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2		

DAYLIGHT, SUNLIGHT, OVERSHADOWING & SOLAR GLARE

RECEPTORS ASSESSED	VSC						NSL						DESCRIPTION OF DAYLIGHT EFFECTS OF THE JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH THE ORIGINAL 2019 ES	FURTHER INFORMATION
	TOTAL NO. OF WINDOWS	NO. WINDOWS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES				TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES							
			20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION	TOTAL			20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION	TOTAL				
1a Westbourne Terrace Road	26	16	6	4	0	10	21	12	8	1	0	9	For NSL, 33 of the 46 (71.7%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.	Moderate Adverse	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
													Of the 13 affected rooms, 10 would experience an alteration in NSL between 20-29.9% which is considered a Minor Adverse effect whilst three would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect.			
													Overall, due to the good retained levels of VSC for all affected windows, the effect to this building is considered Minor Adverse.			
1 Westbourne Terrace Road	15	10	5	0	0	5	9	8	1	0	0	1	For VSC, 16 of the 26 (61.5%) windows assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.	Minor Adverse	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
													Of the 10 affected windows, six would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect whilst four would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect.			
													For NSL, 12 of the 21 (57%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.			
													Of the nine affected rooms, eight would experience an alteration in NSL between 20-29.9% which is considered a Minor Adverse effect whilst one would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect.			
2 Westbourne Terrace Road	15	15	0	0	0	0	9	9	0	0	0	0	Overall, the effect to this building is considered Moderate Adverse.	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
													For VSC, 10 of the 15 (66.6%) windows assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.			
													Of the five affected windows, all would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect.			
													For NSL, eight of the nine (88.8%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.			
													The affected room would experience an alteration in NSL between 20-29.9% which is considered a Minor Adverse effect.			
													Overall, the effect to this building is considered Minor Adverse.			

DAYLIGHT, SUNLIGHT, OVERSHADOWING & SOLAR GLARE

RECEPTORS ASSESSED	VSC							NSL						DESCRIPTION OF DAYLIGHT EFFECTS OF THE JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH THE ORIGINAL 2019 ES	FURTHER INFORMATION
	TOTAL NO. OF WINDOWS	NO. WINDOWS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES				TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES								
			20-29.9% REDUCTION	30-39.9% REDUCTION	>40% REDUCTION	TOTAL			20-29.9% REDUCTION	30-39.9% REDUCTION	>40% REDUCTION	TOTAL					
3 Westbourne Terrace Road	15	15	0	0	0	0	9	9	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2	
4 Westbourne Terrace Road	15	15	0	0	0	0	9	9	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2	
5 Westbourne Terrace Road	15	15	0	0	0	0	9	9	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2	
6 Westbourne Terrace Road	15	15	0	0	0	0	9	9	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2	
22 Westbourne Terrace Road	6	6	0	0	0	0	5	5	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2	
23 Westbourne Terrace Road	11	11	0	0	0	0	10	10	0	0	0	0	Fully BRE compliant	Negligible	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2	
24 Westbourne Terrace Road	18	13	1	4	0	5	10	9	0	1	0	1	For VSC, 13 of the 18 (72.2%) windows assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. Of the five affected windows, one would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect whilst four would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect. For NSL, nine of the 10 (90%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. The affected room would experience an alteration in NSL between 30-39.9% which is considered a Moderate Adverse effect. Overall, the effect to this building is considered Moderate Adverse.	Moderate Adverse	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2	

DAYLIGHT, SUNLIGHT, OVERSHADOWING & SOLAR GLARE

RECEPTORS ASSESSED	VSC							NSL							DESCRIPTION OF DAYLIGHT EFFECTS OF THE JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH THE ORIGINAL 2019 ES	FURTHER INFORMATION
	TOTAL NO. OF WINDOWS	NO. WINDOWS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES				TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES									
			20-29.9% REDUCTION	30-39.9% REDUCTION	>40% REDUCTION	TOTAL			20-29.9% REDUCTION	30-39.9% REDUCTION	>40% REDUCTION	TOTAL						
25 Westbourne Terrace Road	11	7	4	0	0	4	10	10	0	0	0	0	<p>For VSC, seven of the 11 (63.6%) windows assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p> <p>Of the four affected windows, all would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect. It should be noted that this building, three of the four affected windows would retain very good levels of VSC, ranging from 24.3% and 26.2%. The remaining affected window would also experience a good level of retained VSC of 17.9%.</p> <p>For NSL, all rooms assessed would meet BRE's criteria and so are considered to experience a negligible effect.</p> <p>Overall, the effect to this building is considered Minor Adverse.</p>	Minor Adverse	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2		
26 Westbourne Terrace Road	10	3	4	1	2	7	10	10	0	0	0	0	<p>For VSC, three of the 10 (30%) windows assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.</p> <p>Of the seven affected windows, four would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect and one would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect. The remaining two windows would experience an alteration in excess of 40% which is considered a Major Adverse effect. It should be noted that three of the affected windows would retain good levels of VSC ranging from 23.6% to 25.6%.</p> <p>For NSL, all rooms assessed would meet BRE's criteria and so are considered to experience a negligible effect.</p> <p>Overall, the effect to this building is considered Moderate Adverse.</p>	Moderate Adverse	The daylight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2		
Total	812	647	105	29	31	165	662	609	43	9	1	53						

DAYLIGHT, SUNLIGHT, OVERSHADOWING & SOLAR GLARE

Sunlight: 2020 Amended Scheme Scenario

Table 5.2
Summary of sunlight effects

RECEPTORS ASSESSED	TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	TOTAL APSH BELOW BRE GUIDELINES			WINTER PSH BELOW BRE GUIDELINES			DESCRIPTION OF SUNLIGHT EFFECTS OF THE JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH ORIGINAL 2019 SCHEME EFFECT	FURTHER INFORMATION
			20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION	20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION				
140 Gloucester Terrace	1	1	0	0	0	0	0	0	Fully BRE compliant	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
180 Gloucester Terrace	1	1	0	0	0	0	0	0	Fully BRE compliant	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
184 Gloucester Terrace	1	1	0	0	0	0	0	0	Fully BRE compliant	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
2-6 Orsett Terrace	7	7	0	0	0	0	0	0	Fully BRE compliant	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
10-14 Orsett Terrace	7	7	0	0	0	0	0	0	Fully BRE compliant	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
Battleship Building	1	1	0	0	0	0	0	0	Fully BRE compliant	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
3-65 Warwick Crescent	26	23	3	0	0	0	0	0	For Annual PSH, 23 of the 26 (88.4%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. The remaining three rooms sees a loss between 20-29.9% which is considered a Minor Adverse effect. For Winter PSH, all rooms assessed would meet BRE's criteria and so are considered to experience a negligible effect. Overall, as only three rooms experiences a minor alteration to Annual PSH and winter PSH is unaffected, the effect to this building is considered Negligible.	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
2 Blomfield Villas	32	28	0	1	2	0	1	2	For Annual PSH, 28 of the 32 (87.5%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. Of the remaining three rooms, one would experience an alteration between 30-39.9% which is considered a moderate adverse effect, and two see losses greater than 40% which is considered a Major Adverse effect. For Winter PSH, 28 of the 32 (87.5%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.	Minor Adverse	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2

DAYLIGHT, SUNLIGHT, OVERSHADOWING & SOLAR GLARE

RECEPTORS ASSESSED	TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	TOTAL APSH BELOW BRE GUIDELINES			WINTER PSH BELOW BRE GUIDELINES			DESCRIPTION OF SUNLIGHT EFFECTS OF THE JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH ORIGINAL 2019 SCHEME EFFECT	FURTHER INFORMATION
			20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION	20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION				
									Of the three rooms affected in the winter, one would experience an alteration in Winter PSH between 30-39.9% which is considered a Moderate Adverse effect whilst two would experience an alteration in excess of 40% which is considered a Major Adverse effect. It should be noted that all three of the rooms experiencing an adverse effects in Winter PSH would retain 4 Winter PSH which is marginally below the BRE recommended 5 Winter PSH. It should be noted that all the affected rooms are located below balconies which would reduce sunlight availability. Rooms that are not under a balcony are fully BRE compliant and therefore the effects are largely attributed to this building's architectural features. Overall, due to the architectural features of this building reducing sunlight availability, the effect to this building is considered minor adverse. Overall, due to the high level of BRE compliance, the effect to this building is considered Minor Adverse.			
20 Blomfield Villas	16	16	0	0	0	0	0	0	Fully BRE compliant	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
18 Blomfield Villas	8	8	0	0	0	0	0	0	Fully BRE compliant	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
16 Blomfield Villas	8	8	0	0	0	0	0	0	Fully BRE compliant	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
14 Blomfield Villas	8	8	0	0	0	0	0	0	Fully BRE compliant	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
12 Blomfield Villas	8	8	0	0	0	0	0	0	Fully BRE compliant	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
10 Blomfield Villas	8	8	0	0	0	0	0	0	Fully BRE compliant	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
8 Blomfield Villas	8	8	0	0	0	0	0	0	Fully BRE compliant	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
6 Blomfield Villas	8	8	0	0	0	0	0	0	Fully BRE compliant	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
4 Blomfield Villas	8	7	0	0	0	0	0	1	For Annual PSH, all rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect.	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2

DAYLIGHT, SUNLIGHT, OVERSHADOWING & SOLAR GLARE

DAYLIGHT, SUNLIGHT, OVERSHADOWING & SOLAR GLARE

RECEPTORS ASSESSED	TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	TOTAL APSH BELOW BRE GUIDELINES			WINTER PSH BELOW BRE GUIDELINES			DESCRIPTION OF SUNLIGHT EFFECTS OF THE JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH ORIGINAL 2019 SCHEME EFFECT	FURTHER INFORMATION
			20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION	20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION				
									For Winter PSH, seven of the eight (87.5%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. The remaining room sees a loss greater than 40% which is considered a Major Adverse effect. However, it is important to note that this affected room still retained 25% Annual PSH which meets the BRE Guidelines and is considered very good for a city centre location. Overall, given the full BRE compliance for Annual PSH, and high levels of retained Winter PSH, the effect to this building is considered Negligible.			
1-96 Westbourne Court	8	8	0	0	0	0	0	0	Fully BRE compliant	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
1A Westbourne Terrace Road	17	12	1	1	3	0	0	5	For Annual PSH, 12 of the 17 (70.6%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. Of the five rooms affected annually, one would experience an alteration in Annual PSH between 20-29.9% which is considered a Minor Adverse effect and one would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect. The remaining three rooms would experience an alteration in excess of 40% which is considered a Major Adverse effect. For Winter PSH, 12 of the 17 (70.6%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. The remaining five see losses greater than 40% which is considered a Major Adverse effect. Overall, as the effects are spread across each floor of this building and the unaffected rooms have very high levels of APSH, the effect to this building is considered Moderate Adverse.	Moderate Adverse	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
1 Westbourne Terrace Road	9	8	0	1	0	0	0	1	For Annual PSH, eight of the nine (88.8%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. The remaining room sees a loss between 30-39.9% which is considered a Moderate Adverse effect. For Winter PSH, eight of the nine (88.8%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. The remaining room sees a loss greater than 40% which is considered a Major Adverse effect. Overall, given the high level of BRE compliance, and high levels of retained Total PSH, the effect to this building is considered Negligible.	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
2 Westbourne Terrace Road	9	8	0	0	0	0	0	1	For Annual PSH, all rooms assessed would meet BRE's criteria and so are considered to experience a negligible effect.	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2

DAYLIGHT, SUNLIGHT, OVERSHADOWING & SOLAR GLARE

RECEPTORS ASSESSED	TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	TOTAL APSH BELOW BRE GUIDELINES			WINTER PSH BELOW BRE GUIDELINES			DESCRIPTION OF SUNLIGHT EFFECTS OF THE JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH ORIGINAL 2019 SCHEME EFFECT	FURTHER INFORMATION
			20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION	20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION				
									For Winter PSH, eight of the nine (88.8%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. The remaining room sees a loss greater than 40% which is considered a Major Adverse effect. Overall, given the high level of BRE compliance, and high levels of retained Total PSH, the effect to this building is considered Negligible.			
3 Westbourne Terrace Road	9	9	0	0	0	0	0	0	Fully BRE compliant	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
4 Westbourne Terrace Road	9	8	0	0	0	0	0	1	For Annual PSH, all rooms assessed would meet BRE's criteria and so are considered to experience a negligible effect. For Winter PSH, eight of the nine (88.8%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. The remaining room sees a loss greater than 40% which is considered a Major Adverse effect. Overall, given the high level of BRE compliance, and high levels of retained Total PSH, the effect to this building is considered Negligible.	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
5 Westbourne Terrace Road	9	9	0	0	0	0	0	0	Fully BRE compliant	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
6 Westbourne Terrace Road	9	9	0	0	0	0	0	0	Fully BRE compliant	Negligible	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
22 Westbourne Terrace Road	5	2	0	0	0	0	0	3	For Annual PSH, all rooms assessed would meet BRE's criteria and so are considered to experience a negligible effect. For Winter PSH, two of the five (40%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. The remaining three see losses greater than 40% which is considered a Major Adverse effect. Overall, due to the very good retained levels of Total PSH, the effect to this building is considered Moderate Adverse.	Moderate Adverse	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
23 Westbourne Terrace Road	10	8	0	0	0	0	0	2	For Annual PSH, all rooms assessed would meet BRE's criteria and so are considered to experience a negligible effect. For Winter PSH, eight of the 10 (80%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. The remaining two see losses greater than 40% which is considered a Major Adverse effect.	Minor Adverse	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2

DAYLIGHT, SUNLIGHT, OVERSHADOWING & SOLAR GLARE

RECEPTORS ASSESSED	TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	TOTAL APSH BELOW BRE GUIDELINES			WINTER PSH BELOW BRE GUIDELINES			DESCRIPTION OF SUNLIGHT EFFECTS OF THE JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH ORIGINAL 2019 SCHEME EFFECT	FURTHER INFORMATION
			20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION	20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION				
									Overall, given the high level of BRE compliance for Total PSH, high levels of retained Total PSH, and marginal breach of guidance for one the affected rooms for Winter PSH, the effect to this building is considered <i>Minor Adverse</i> .			
24 Westbourne Terrace Road	10	7	0	1	0	0	0	3	For Annual PSH, nine of the 10 (90%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. The remaining room sees a loss between 30-39.9% which is considered a <i>Moderate Adverse</i> effect. For Winter PSH, seven of the 10 (70%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. The remaining three see losses greater than 40% which is considered a <i>Major Adverse</i> effect. Overall, due to the good retained levels of Total PSH, the effect to this building is considered <i>Moderate Adverse</i> .	Moderate Adverse	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
25 Westbourne Terrace Road	10	7	0	1	1	0	0	3	For Annual PSH, eight of the 10 (90%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. Of the affected rooms, one would experience an alteration between 30-39.9% which is considered a <i>Moderate Adverse</i> effect. The remaining room sees a loss in excess of 40% which is considered a <i>Major Adverse</i> effect. For Winter PSH, seven of the 10 (70%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. The remaining three see losses greater than 40% which is considered a <i>Major Adverse</i> effect. Overall, due to the good retained levels of Total PSH, the effect to this building is considered <i>Moderate Adverse</i> .	Moderate Adverse	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2
26 Westbourne Terrace Road	10	5	0	3	2	0	0	1	For Annual PSH, five of the 10 (50%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. Of the five rooms affected annually, three would experience an alteration in Annual PSH between 30-39.9% which is considered a <i>Moderate Adverse</i> effect whilst two would experience an alteration in excess of 40% which is considered a <i>Major Adverse</i> effect. For Winter PSH, nine of the 10 (90%) rooms assessed would meet BRE's criteria and are therefore considered to experience a negligible effect. The remaining room sees a loss greater than 40% which is considered a <i>Major Adverse</i> effect. Overall, due to the good retained levels of Total PSH for both rooms that experience a <i>Major Adverse</i> effect, the effect to this building is considered <i>Moderate Adverse</i> .	Moderate Adverse	The sunlight effect to this building does not differ from what was reported in the original 2019 ES.	Appendix 5.2

DAYLIGHT, SUNLIGHT, OVERSHADOWING & SOLAR GLARE

RECEPTORS ASSESSED	TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	TOTAL APSH BELOW BRE GUIDELINES			WINTER PSH BELOW BRE GUIDELINES			DESCRIPTION OF SUNLIGHT EFFECTS OF THE JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH ORIGINAL 2019 SCHEME EFFECT	FURTHER INFORMATION
			20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION	20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION				
Total	280	248	4	8	8	0	1	23				

Daylight & Sunlight: Comparison of 2020 Amended Scheme Against 2010 Implemented Scheme

Given that the massing of the July 2020 amended scheme has not materially changed from that of the original 2019 scheme in relation to daylight and sunlight effects to neighbouring properties, Therefore, with reference to the results provided in Appendix 5.2 (ES Addendum Volume IV) and using professional judgement that the daylight and sunlight effects of the comparison of the 2020 amended scheme with the 2010 implemented scheme, as reported in the original ES, remain valid.

Overshadowing: 2020 Amended Scheme Scenario

The following amenity areas would experience a negligible effect as a result of the July 2020 amended scheme. This conclusion was presented in the original 2019 ES chapter and remains valid.

- Westbourne Green Open Space;
- Little Venice Canal;
- Amenity area to the rear of Warwick Crescent;
- Private gardens associated with:
- Properties on Bourne Terrace;
- Lapworth Court;
- Properties on Blomfield Villas;
- Properties on Blomfield Mews;
- 26 Westbourne Terrace Road
- Properties on Delamere Street; and
- Properties on Delamere Terrace.

All amenity areas assessed that would experience significant effects from overshadowing have been assessed using sun hours on ground and are discussed in greater detail within Table 5.3 below.

DAYLIGHT, SUNLIGHT, OVERSHADOWING & SOLAR GLARE

Table 5.3
Summary of overshadowing effects

RECEPTOR AFFECTED	DESCRIPTION OF SUN HOURS ON GROUND EFFECTS OF ORIGINAL 2019 SCHEME (ORIGINAL ES CHAPTER RESULTS)	DESCRIPTION OF SUN HOURS ON GROUND EFFECTS OF JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON TO 2010 IMPLEMENTED SCHEME	FURTHER INFORMATION
22 Westbourne Terrace Road	<p>47.5% of the rear garden of this property receives direct sunlight for two hours or more on the equinox in the baseline. This is below the threshold set out within the BRE guidance for an outdoor amenity area to be well sunlit throughout the year, therefore this garden falls short of the recommendation in the baseline. This is further reduced to 4.2% of the space receiving direct sunlight for two hours or more on the equinox with the proposed development in place, which represents a loss of 91%.</p> <p>In the consented scenario, 45.3% of the rear garden of this property receives direct sunlight for two hours or more on the equinox. The proposed massing would cause a 91% reduction compared to the consented.</p> <p>Although the BRE recommendations are not met on March 21st, it is important to note that on the summer solstice (June 21st) this garden would receive in excess of 4 hours of direct sunlight. This is important as it could be argued that amenity areas are generally used to a greater extent in the summer months.</p> <p>Overall, this amenity area was considered to experience a Major Adverse effect as a result of the original 2019 scheme.</p>	<p>The assessment of the July 2020 amended scheme finds that there would be a 92% reduction from the baseline of the total area receiving direct sunlight for two or more hours on the equinox.</p> <p>The overall effect of overshadowing is unchanged from the original ES and remains Major Adverse.</p>	Major Adverse	The July 2020 amended scheme would cause a 91% reduction compared to the 2010 implemented scheme (no change from effect reported in original ES chapter)	Appendix 5.3
23 Westbourne Terrace Road	<p>56.8% of the rear garden of this property receives direct sunlight for two hours or more on the equinox in the baseline. This value is reduced to 16.8% with the proposed development in place, which represents a loss of 70%.</p> <p>In the consented scenario, 45% of the rear garden of this property receives direct sunlight for two hours or more on the equinox. The proposed massing would cause a 63% reduction compared to the consented.</p> <p>Although the BRE recommendations are not met on March 21st, it is important to note that on the summer solstice (June 21st) this garden would receive in excess of 5 hours of direct sunlight. This is important as it could be argued that amenity areas are generally used to a greater extent in the summer months.</p> <p>Overall, this amenity area was considered to experience a Major Adverse effect.</p>	<p>The assessment of the July 2020 amendments scheme finds that there would be a 70% reduction from the baseline of the total area receiving direct sunlight for two or more hours on the equinox.</p> <p>The overall effect of overshadowing is unchanged from the original ES and remains Major Adverse.</p>	Major Adverse	The July 2020 amended scheme would cause a 63% reduction compared to the 2010 implemented scheme (no change from effect reported in original ES chapter).	Appendix 5.3
24 Westbourne Terrace Road	<p>50.2% of the rear garden of this property receives direct sunlight for two hours or more on the equinox in the baseline. This is just above the threshold set out within the BRE guidelines for an outdoor amenity space to be well sunlit throughout the year. This value is reduced to 24.1% with the proposed development in place, which represents a loss of 52%.</p> <p>In the consented scenario, 34.7% of the rear garden of this property receives direct sunlight for two hours or more on the equinox. The proposed massing would cause a 31% reduction compared to the consented.</p> <p>Although the BRE recommendations are not met on March 21st, it is important to note that on the summer solstice (June 21st) this garden would receive in excess of 5 hours of direct sunlight. This is important as it could be argued that amenity areas are generally used to a greater extent in the summer months.</p> <p>Overall, this amenity area was considered to experience a Major Adverse effect.</p>	<p>The assessment of the July 2020 amended scheme finds that there would be a 52% reduction from the baseline of the total area receiving direct sunlight for two or more hours on the equinox.</p> <p>The overall effect of overshadowing is unchanged from the original ES and remains Major Adverse.</p>	Major Adverse	The July 2020 amended scheme would cause a 31% reduction compared to the 2010 implemented scheme (no change from effect reported in original ES chapter).	Appendix 5.3
25 Westbourne Terrace Road	<p>65.6% of the rear garden of this property receives direct sunlight for two hours or more on the equinox in the baseline. This value is reduced to 41.9% with the proposed development in place, which represents a loss of 23.7%.</p> <p>In the consented scenario, 44.2% of the rear garden of this property receives direct sunlight for two hours or more on the equinox. Therefore, the overshadowing impact caused by the proposed development would not be materially different to that caused by the consented scheme.</p> <p>It is important to note that on the summer solstice (June 21st) this garden would receive in excess of 5 hours of direct sunlight. This is important as it could be argued that amenity areas are generally used to a greater extent in the summer months.</p> <p>Overall, this amenity area was considered to experience a Minor Adverse effect.</p>	<p>The assessment of the July 2020 amended scheme finds that there would be a 36% reduction from the baseline of the total area receiving direct sunlight for two or more hours on the equinox.</p> <p>Therefore, the effect at this private garden has changed from Minor Adverse to Moderate Adverse</p>	Moderate Adverse	The overshadowing impact caused by the July 2020 amended scheme would not be materially different to that caused by the 2010 implemented scheme (no change from effect reported in original ES chapter).	Appendix 5.3

DAYLIGHT, SUNLIGHT, OVERSHADOWING & SOLAR GLARE

Solar Glare: 2020 Amended Scheme Scenario

Table 5.4
Summary of solar glare effects

PHASE	RECEPTORS	DESCRIPTION OF SOLAR GLARE EFFECTS OF ORIGINAL 2019 SCHEME (ORIGINAL ES CHAPTER RESULTS)	DESCRIPTION OF SOLAR GLARE EFFECT OF JULY 2020 AMENDED SCHEME	SIGNIFICANCE	FURTHER INFORMATION
Operation	Locations E1; and N1.	In accordance with the solar glare significance criteria highlighted in the methodology section, solar reflections occurring at angles greater than 30° from the driver’s line of sight will not affect the driver’s responsiveness and therefore can be considered negligible. In addition, viewpoints where the portion of the façade of the Proposed Amendments visible is very small and the distance is greater than 15° of a driver’s line of sight are also considered to give rise to a negligible effect. These two locations from where this approach is applicable and therefore are considered to have negligible effects.	No change from the original 2019 scheme.	Negligible	Appendix 5.4
Operation	Locations SE1; SE2; SW1; W2; TW1; TW2; and TW3.	These seven locations were considered to have a Minor Adverse effect. This is because solar reflections occur within 30° to 10° or between 10° to 5° of the driver’s line of sight for a short period of time, due to the broken-up nature of the façade which will further reduce the amount of time when the solar reflections can be visible. In addition, the minor adverse significance is due to mitigating factors such as reflections occurring from a small section of façade, potential reflections occurring over a short period of time, unaffected traffic signals and being able to deploy a car’s visors which would shield the majority or all of the reflections, and the direct view of the sun in the sky if the building is not built.	<p>W2</p> <p>There is potential for instances of solar reflection visible on the façade of the July 2020 amended scheme from the centre of a driver’s line of sight. The reflections closest to the driver’s line of sight would occur between 15o and 20o at 16:00 to 17:00 GMT from mid-February to mid-April and Mid-August to Mid-October.</p> <p>Owing to the modified design of the bridge, reflective sections of the façade which were previously visible are now blocked, thereby blocking the potential effects at this viewpoint.</p> <p>However, the overall effect of solar glare at this junction is unchanged from the original ES chapter and remains Minor Adverse.</p> <p>TW3</p> <p>There is potential for instances of solar reflection visible on the façade of the July 2020 Proposed Amendments from the centre of a driver’s line of sight. An additional reflection would occur between 12o and 15o of a driver’s line of sight at 07:00 to 08:00 GMT from mid-February to mid-April and Mid-September to Mid-October.</p> <p>This additional impact is a result of the modified podium level design.</p> <p>However, the overall effect of solar glare at this junction is unchanged from the original ES chapter and remains Minor Adverse.</p> <p>No change in the impacts reported for the remaining five viewpoints in the original ES chapter is expected.</p>	Minor Adverse	Appendix 5.4
Operation	Location W1	Further discussion is needed for location W1 as instances of solar reflection may be visible on the façade of the Development from the centre of a driver’s line of sight. The reflections closest to the driver’s line of sight would occur between 17:00 to 18:00 GMT from mid-February to mid-April and Mid-August to Mid-October.	<p>There is potential for instances of solar reflection visible on the façade of the July 2020 amended scheme from the centre of a driver’s line of sight. The reflections closest to the driver’s line of sight would occur between 15o and 20o at 16:00 to 17:00 GMT from mid-February to mid-April and Mid-August to Mid-October.</p> <p>Owing to the modified design of bridge, reflective sections of the façade which were previously visible are now blocked, thereby blocking the potential effects at this viewpoint.</p> <p>However, the overall effect of solar glare at this junction is unchanged from the original ES chapter and remains Minor Adverse.</p>	Minor Adverse	Appendix 5.4

DAYLIGHT, SUNLIGHT, OVERSHADOWING & SOLAR GLARE

PHASE	RECEPTORS	DESCRIPTION OF SOLAR GLARE EFFECTS OF ORIGINAL 2019 SCHEME (ORIGINAL ES CHAPTER RESULTS)	DESCRIPTION OF SOLAR GLARE EFFECT OF JULY 2020 AMENDED SCHEME	SIGNIFICANCE	FURTHER INFORMATION
		<p>Although the solar reflections from this viewpoint W1 occur from the centre of a driver’s line of sight at times, it is important to note that these specific solar reflections would occur on thin sections of the façade. As the reflections would occur on a very small section of façade, any reflections would only occur for only a few minutes throughout the year. In addition, this assessment assumes clear skies, at the precise moment that the sun is at the correct angle to cause reflections. Therefore, the likelihood, of driver’s being compromised by reflections, given at the very small period of time that reflections could occur, considering clear skies are also essential, is very unlikely. Any potential solar reflections occurring on slightly larger sections of the façade occur at approximately 15° of the driver’s line of sight, reducing the effect.</p> <p>Overall, owing to the very brief periods of solar reflections occurring on thin sections of façade closest to the driver’s line of site, the effect of solar glare at this junction was considered to be Minor Adverse.</p>			
Operation	Location W3	<p>From location W3 instances of solar reflection may be visible on the façade of the Development from 12° of a driver’s line of sight. The reflections closest to the driver’s line of sight would occur between 16:00 to 18:00 GMT from mid-January to mid-May and Mid-July to Mid-November.</p> <p>Although the solar reflections from this viewpoint W1 occur from 12° of a driver’s line of sight at times, the facade is largely broken up by solid elements which would break up any potential reflections and reduce each instance of reflective glare. In addition, the vast majority of solar reflections would occur above the driver’s visor cut off line and therefore if any instances of solar glare occur, the driver can deploy their visor which would help mitigate any potential glare.</p> <p>Overall, owing to the broken-up nature of the façade reducing the length of each solar glare instance, and the majority of solar reflections potentially occurring at the driver’s line of site, the effect of solar glare at this junction was considered to be Moderate Adverse.</p>	No change from the original ES chapter.	Moderate Adverse	Appendix 5.4

5.6 MITIGATION & ENHANCEMENT MEASURES

No mitigation or enhancement measures are proposed in regard to the assessments reported in this ES addendum chapter. This is consistent with the original ES chapter.

5.7 ASSESSMENT POST-MITIGATION

PHASE	RECEPTOR	RESIDUAL IMPACT	RESIDUAL EFFECT SIGNIFICANCE						
			LOCAL LEVEL	DISTRICT LEVEL	ADV/BEN	ST/MT/LT	D/IND	P/T	R/IRR
Operation	All residential receptors	The residual impact remains the same as outlined in the July 2020 amended scheme scenario set out in Section 5.6 above as no mitigation is proposed or possible for daylight and sunlight.	Negligible to Moderate	Local	Adverse	LT	D	P	IR
Operation	All amenity areas	The residual impact remains the same as outlined in the July 2020 amended scheme scenario set out in Section 5.6 above as no mitigation is proposed or possible for overshadowing.	Negligible to Moderate	Local	Adverse	LT	D	P	IR
Operation	All road and rail receptors	The residual impact remains the same as outlined in the July 2020 amended scheme scenario set out in Section 5.6 of this chapter as no mitigation is proposed for solar glare.	Negligible to Moderate	Local	Adverse	LT	D	P	IR

Key: ADV/BEN= Adverse/Beneficial; ST/MT/LT = Short-term/Medium-term/Long-term; D/IND = Direct/Indirect; P/T = Permanent/Temporary; R/IRR = Reversible/Irreversible. ** Post mitigation magnitude of impacts is negligible and neither beneficial nor adverse.

DAYLIGHT, SUNLIGHT, OVERSHADOWING & SOLAR GLARE

5.8 INTER-DEVELOPMENT CUMULATIVE EFFECTS

Daylight

Table 5.5

RECEPTOR	VSC						NSL						DESCRIPTION OF CUMULATIVE DAYLIGHT EFFECT OF JULY 2020 AMENDED SCHEME IN COMBINATION WITH BLOMFELD MEWS AND 1A SHELDON SQUARE	SIGNIFICANCE	COMPARISON WITH THE JANUARY 2020 CUMULATIVE LETTER RESULTS	FURTHER INFORMATION
	TOTAL NO. OF WINDOWS	NO. WINDOWS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES			TOTAL	TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	BELOW BRE GUIDELINES			TOTAL				
140 Gloucester Terrace	13	11	2	0	0	2	8	5	1	1	1	3	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Minor Adverse	The cumulative effect to this building does not differ from what was reported in the January 2020 letter (Appendix 5.5).	Appendix 5.2
172 Gloucester Terrace	13	9	4	0	0	4	13	13	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Minor Adverse	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
174 Gloucester Terrace	11	11	0	0	0	0	11	11	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
176 Gloucester Terrace	9	9	0	0	0	0	9	9	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
178 Gloucester Terrace	15	15	0	0	0	0	11	11	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
180 Gloucester Terrace	14	14	0	0	0	0	9	8	1	0	0	1	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
182 Gloucester Terrace	10	8	2	0	0	2	9	8	1	0	0	1	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Minor Adverse	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
184 Gloucester Terrace	12	12	0	0	0	0	11	8	3	0	0	3	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Minor Adverse	The cumulative impact to this building would improve as a result of the July 2020 amended scheme, with one less minor adverse alteration in terms of the VSC to one window. The overall significance of effect does not change.	Appendix 5.2
186 Gloucester Terrace	10	9	1	0	0	1	9	6	3	0	0	3	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Minor Adverse	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
188 Gloucester Terrace	10	9	1	0	0	1	9	7	1	1	0	2	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Minor Adverse	The cumulative impact to this building would improve as a result of the July 2020 amended scheme, with one less minor adverse alteration in terms of the NSL to one room. The overall significance of effect does not change.	Appendix 5.2
190 Gloucester Terrace	14	12	2	0	0	2	11	11	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Minor Adverse	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2

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192 Gloucester Terrace	14	12	2	0	0	2	9	9	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Minor Adverse	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
194 Gloucester Terrace	15	13	2	0	0	2	12	12	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
2-6 Orsett Terrace	42	42	0	0	0	0	37	37	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
8 Orsett Terrace	14	5	8	1	0	9	14	10	4	0	0	4	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Minor Adverse	The cumulative impact to this building would improve as a result of the July 2020 amended scheme, with one room seeing a reduction from a moderate adverse effect in terms of NSL to minor adverse. The overall significance of effect does not change.	Appendix 5.2
10-14 Orsett Terrace	36	31	1	3	1	5	36	33	3	0	0	3	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Minor Adverse	The cumulative impact to this building would improve as a result of the July 2020 with one fewer room affected in terms of NSL. The overall significance of effect does not change.	Appendix 5.2
16 Orsett Terrace	12	12	0	0	0	0	12	12	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
Battleship Building	1	1	0	0	0	0	1	1	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
3-65 Warwick Crescent	43	27	10	5	1	16	26	23	2	1	0	3	<p>A total of 43 windows serving 26 rooms were assessed for daylight within this building.</p> <p>For VSC, 27 of the 43 (62.8%) windows assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.</p> <p>Of the 16 affected windows, 10 would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect and five would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect. The remaining window would experience an alteration in excess of 40% which is considered a Major Adverse effect.</p> <p>For NSL, 23 of the 26 (88.5%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.</p> <p>Of the three affected rooms, two would experience an alteration in NSL between 20-29.9% which is considered a Minor Adverse effect whilst one would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect.</p> <p>It should be noted that the affected windows and rooms are located directly below balconies. The availability of daylight and sky visibility to these windows and rooms would therefore be reduced as a result of this architectural feature. In addition, the absolute losses for all of the affected windows are small and unlikely to be noticeable.</p> <p>Overall, due to the architectural features of this building reducing daylight availability to all the affected windows and rooms, the effect to this building is considered Minor Adverse.</p>	Minor Adverse	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2

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1-80 Brewers Court	152	94	22	8	28	58	127	126	1	0	0	1	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Minor Adverse	The cumulative impact to this building would improve as a result of the July 2020 amended scheme, with two less windows affected in terms of VSC, and window seeing a reduction from a major adverse to moderate adverse. The overall significance of effect does not change.	Appendix 5.2
2 Blomfield Villas	37	33	2	2	0	4	32	26	5	1	0	6	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Minor Adverse	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
20 Blomfield Villas	16	16	0	0	0	0	16	16	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
18 Blomfield Villas	8	8	0	0	0	0	8	8	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
16 Blomfield Villas	8	8	0	0	0	0	8	8	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
14 Blomfield Villas	8	8	0	0	0	0	8	8	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
12 Blomfield Villas	8	8	0	0	0	0	8	8	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
10 Blomfield Villas	8	8	0	0	0	0	8	8	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
8 Blomfield Villas	8	8	0	0	0	0	8	8	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
6 Blomfield Villas	8	8	0	0	0	0	8	8	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
4 Blomfield Villas	9	9	0	0	0	0	8	8	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
1-96 Westbourne Court	62	33	26	3	0	29	46	33	10	3	0	13	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Minor Adverse	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
1a Westbourne Terrace Road	26	16	6	4	0	10	21	12	8	1	0	9	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Moderate Adverse	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
1 Westbourne Terrace Road	15	10	5	0	0	5	9	8	1	0	0	1	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Minor Adverse	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
2 Westbourne Terrace Road	15	15	0	0	0	0	9	9	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
3 Westbourne Terrace Road	15	15	0	0	0	0	9	9	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
4 Westbourne Terrace Road	15	15	0	0	0	0	9	9	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
5 Westbourne Terrace Road	15	15	0	0	0	0	9	9	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
6 Westbourne Terrace Road	15	15	0	0	0	0	9	9	0	0	0	0	The cumulative daylight effect at this property does not differ from the July 2020 amended development scenario reported in section 5.6 above.	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2

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22 Westbourne Terrace Road	6	5	1	0	0	1	5	4	0	1	0	1	<p>A total of six windows serving five rooms were assessed for daylight within this building.</p> <p>For VSC, five of the six (83.3%) windows assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.</p> <p>The affected window would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect.</p> <p>For NSL, four of the five (80%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.</p> <p>The affected room would experience an alteration in NSL between 30-39.9% which is considered a Moderate Adverse effect.</p>	Negligible	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
23 Westbourne Terrace Road	11	8	3	0	0	3	10	8	0	2	0	2	<p>A total of 11 windows serving 10 rooms were assessed for daylight within this building.</p> <p>For VSC, eight of the 11 (72.7%) windows assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.</p> <p>Of the three affected windows, all would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect.</p> <p>For NSL, eight of the 10 (80%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.</p> <p>Of the two affected rooms, both would experience an alteration in NSL between 30-39.9% which is considered a Moderate Adverse effect.</p> <p>The overall effect is considered Minor Adverse.</p>	Minor Adverse	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
24 Westbourne Terrace Road	18	9	4	4	1	9	10	9	0	0	1	1	<p>A total of 18 windows serving 10 rooms were assessed for daylight within this building.</p> <p>For VSC, nine of the 18 (50%) windows assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.</p> <p>Of the nine affected windows, four would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect and four would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect. The remaining window would experience an alteration in excess of 40% which is considered a Major Adverse effect.</p> <p>For NSL, nine of the 10 (90%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.</p> <p>The affected room would experience an alteration in NSL greater than 40% which is considered a Major Adverse effect.</p>	Moderate Adverse	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
25 Westbourne Terrace Road	11	4	6	1	0	7	10	9	1	0	0	1	<p>A total of 11 windows serving 10 rooms were assessed for daylight within this building.</p> <p>For VSC, four of the 11 (36.4%) windows assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.</p> <p>Of the seven affected windows, six would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect whilst one would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect.</p> <p>For NSL, nine of the 10 (90%) rooms assessed would meet BRE's criteria</p>	Moderate Adverse	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2

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													and are therefore considered to experience a Negligible effect. The affected room would experience an alteration in NSL between 20-29.9% which is considered a Minor Adverse effect.			
													A total of 10 windows serving 10 rooms were assessed for daylight within this building. For VSC, one of the 10 (10%) windows assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect. Of the nine affected windows, six would experience an alteration in VSC between 20-29.9% which is considered a Minor Adverse effect and one would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect. The remaining two windows would experience an alteration in excess of 40% which is considered a Major Adverse effect. For NSL, nine of the 10 (90%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect. The affected room would experience an alteration in NSL between 20-29.9% which is considered a Minor Adverse effect. The overall effect is considered Moderate Adverse.			
26 Westbourne Terrace Road	10	1	6	1	2	9	10	9	1	0	0	1		Moderate Adverse	The cumulative effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
Total	812	631	116	32	33	181	662	603	46	11	2	59				

Sunlight

Table 5.6
Summary of cumulative sunlight effects

RECEPTORS ASSESSED	TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	TOTAL APSH BELOW BRE GUIDELINES			WINTER PSH BELOW BRE GUIDELINES			DESCRIPTION OF CUMULATIVE SUNLIGHT EFFECT OF JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH THE JANUARY 2020 CUMULATIVE LETTER	FURTHER INFORMATION
			20-29.9% REDUCTION	30-39.9% REDUCTION	>40% REDUCTION	20-29.9% REDUCTION	30-39.9% REDUCTION	>40% REDUCTION				
140 Gloucester Terrace	1	1	0	0	0	0	0	0	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
180 Gloucester Terrace	1	1	0	0	0	0	0	0	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
184 Gloucester Terrace	1	1	0	0	0	0	0	0	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2

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RECEPTORS ASSESSED	TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	TOTAL APSH BELOW BRE GUIDELINES			WINTER PSH BELOW BRE GUIDELINES			DESCRIPTION OF CUMULATIVE SUNLIGHT EFFECT OF JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH THE JANUARY 2020 CUMULATIVE LETTER	FURTHER INFORMATION
			20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION	20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION				
2-6 Orsett Terrace	7	7	0	0	0	0	0	0	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
10-14 Orsett Terrace	7	7	0	0	0	0	0	0	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
Battleship Building	1	1	0	0	0	0	0	0	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
3-65 Warwick Crescent	26	22	2	1	1	0	0	0	<p>A total of 26 rooms were assessed for sunlight within this building of which 22 (84.6%) would meet the BRE's criteria for both Annual and Winter PSH.</p> <p>For Annual PSH, 22 of the 26 (84.6%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.</p> <p>Of the four rooms affected annually, two would experience an alteration in Annual PSH between 20-29.9% which is considered a Minor Adverse effect and one would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect. The remaining room would experience an alteration in excess of 40% which is considered a Major Adverse effect.</p> <p>For Winter PSH, all rooms assessed would meet BRE's criteria and so are considered to experience a Negligible effect.</p>	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
2 Blomfield Villas	32	28	0	1	2	0	1	2	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Minor Adverse	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
20 Blomfield Villas	16	16	0	0	0	0	0	0	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
18 Blomfield Villas	8	8	0	0	0	0	0	0	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
16 Blomfield Villas	8	8	0	0	0	0	0	0	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2

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RECEPTORS ASSESSED	TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	TOTAL APSH BELOW BRE GUIDELINES			WINTER PSH BELOW BRE GUIDELINES			DESCRIPTION OF CUMULATIVE SUNLIGHT EFFECT OF JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH THE JANUARY 2020 CUMULATIVE LETTER	FURTHER INFORMATION
			20-29.9% REDUCTION	30-39.9% REDUCTION	>40% REDUCTION	20-29.9% REDUCTION	30-39.9% REDUCTION	>40% REDUCTION				
14 Blomfield Villas	8	8	0	0	0	0	0	0	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
12 Blomfield Villas	8	8	0	0	0	0	0	0	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
10 Blomfield Villas	8	8	0	0	0	0	0	0	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
8 Blomfield Villas	8	8	0	0	0	0	0	0	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
6 Blomfield Villas	8	8	0	0	0	0	0	0	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
4 Blomfield Villas	8	7	0	0	0	0	0	1	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
1-96 Westbourne Court	8	8	0	0	0	0	0	0	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
1A Westbourne Terrace Road	17	12	1	1	3	0	0	5	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Moderate Adverse	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
1 Westbourne Terrace Road	9	8	0	1	0	0	0	1	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
2 Westbourne Terrace Road	9	8	0	0	0	0	0	1	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
3 Westbourne Terrace Road	9	9	0	0	0	0	0	0	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2

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RECEPTORS ASSESSED	TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	TOTAL APSH BELOW BRE GUIDELINES			WINTER PSH BELOW BRE GUIDELINES			DESCRIPTION OF CUMULATIVE SUNLIGHT EFFECT OF JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH THE JANUARY 2020 CUMULATIVE LETTER	FURTHER INFORMATION
			20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION	20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION				
4 Westbourne Terrace Road	9	8	0	0	0	0	0	1	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
5 Westbourne Terrace Road	9	9	0	0	0	0	0	0	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
6 Westbourne Terrace Road	9	9	0	0	0	0	0	0	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Negligible	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
22 Westbourne Terrace Road	5	1	0	1	0	0	0	4	A total of five rooms were assessed for sunlight within this building of which 1 (20%) would meet the BRE's criteria for both Annual and Winter PSH. For Annual PSH, four of the five (80%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect. The remaining room sees a loss between 30-39.9% which is considered a Moderate Adverse effect. For Winter PSH, one of the five (20%) rooms assessed would meet BRE's criteria and is therefore considered to experience a Negligible effect. The remaining four see losses greater than 40% which is considered a Major Adverse effect.	Moderate Adverse	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
23 Westbourne Terrace Road	10	8	0	0	0	0	0	2	The cumulative sunlight effect at this property does not differ from the July 2020 amended scheme scenario reported in section 5.6 above.	Minor Adverse	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
24 Westbourne Terrace Road	10	5	1	1	0	0	0	4	A total of 10 rooms were assessed for sunlight within this building of which 5 (50%) would meet the BRE's criteria for both Annual and Winter PSH. For Annual PSH, eight of the 10 (80%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect. Of the two rooms affected annually, one would experience an alteration in Annual PSH between 20-29.9% which is considered a Minor Adverse effect whilst one would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect. For Winter PSH, six of the 10 (60%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect. The remaining four see losses greater than 40% which is considered a Major Adverse effect.	Moderate Adverse	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
25 Westbourne Terrace Road	10	7	0	0	3	0	0	3	A total of 10 rooms were assessed for sunlight within this building of which 7 (70%) would meet the BRE's criteria for both Annual and Winter PSH.	Moderate Adverse	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2

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RECEPTORS ASSESSED	TOTAL NO. OF ROOMS	NO. ROOMS THAT MEET BRE CRITERIA	TOTAL APSH BELOW BRE GUIDELINES			WINTER PSH BELOW BRE GUIDELINES			DESCRIPTION OF CUMULATIVE SUNLIGHT EFFECT OF JULY 2020 AMENDED SCHEME	SIGNIFICANCE	COMPARISON WITH THE JANUARY 2020 CUMULATIVE LETTER	FURTHER INFORMATION
			20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION	20-29.9% REDUCTION	30-39.9% REDUCTION	> 40% REDUCTION				
26 Westbourne Terrace Road	10	5	0	1	4	0	0	1	For Annual PSH, seven of the 10 (70%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect. The remaining three see losses greater than 40% which is considered a Major Adverse effect. For Winter PSH, seven of the 10 (70%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect. The remaining three see losses greater than 40% which is considered a Major Adverse effect.	Moderate Adverse	The cumulative sunlight effect to this building does not differ from what was reported in the January 2020 letter.	Appendix 5.2
									A total of 10 rooms were assessed for sunlight within this building of which 5 (50%) would meet the BRE's criteria for both Annual and Winter PSH. For Annual PSH, five of the 10 (50%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect. Of the five rooms affected annually, one would experience an alteration in Annual PSH between 30-39.9% which is considered a Moderate Adverse effect whilst four would experience an alteration in excess of 40% which is considered a Major Adverse effect. For Winter PSH, nine of the 10 (90%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect. The remaining room sees a loss greater than 40% which is considered a Major Adverse effect.			
Total	280	244	4	7	13	0	1	25				

6 WIND MICROCLIMATE

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Chapter Purpose

The assessment reported in this ES Addendum chapter focuses on the likely significant wind microclimate effects associated with the amended scheme and how they vary from the effects reported in the original Wind Microclimate ES chapter (Chapter 8, ES Volume II).

Specifically, this chapter of the ES Addendum reports:

- a review of any change in relevant legislation, policy or guidance;
- changes in the assessment methodology since the original ES chapter was prepared;
- the design interventions that were implemented as part of the original ES scheme, and the additional design interventions that are included in the amended scheme;
- the likely significant wind microclimate effects of the amended scheme in terms of pedestrian comfort and safety, with design interventions in place;
- the mitigation measures that were recommended as part of the original ES scheme to prevent, reduce or offset any adverse effects, and the additional mitigation measures that are recommended for the amended scheme; and
- the likely residual effects after these mitigation measures have been employed.

Baseline condition as reported within the ES are for the existing site with permanent existing buildings, and existing landscaping. As no changes to the existing site have occurred since the ES submission, this is not assessed further in the addendum.

Figures

No new figures are provided

Appendices

No new appendices are provided

6.1 METHODOLOGY

Legislation, Policy & Guidance

The following paragraphs set out legislation, policy and guidance that has been updated since the date of the original ES (April 2019). Relevant legislation, policy and guidance preceding that date is set out in the original ES chapter (Chapter 8, ES Volume II).

A minor update was made to the National Planning Policy Framework (NPPF) in June 2019 which is not relevant to this assessment. Relevant parts of the NPPF remain the same as the version of the NPPF published on 19 February 2019 and described in the original ES chapter.

The Draft London Plan: Intend to Publish Version was published in December 2019. The Examination in Public (EiP) on the London Plan was held between 15 January and 22 May 2019. The Panel of Inspectors appointed by the Secretary of State issued their report and recommendations to the Mayor on 8 October 2019. The Mayor has considered the Inspectors' recommendations and, on the 9 December 2019, issued to the Secretary of State his intention to publish the London Plan. Once adopted the new London Plan will run from 2019 to 2041.

The Draft Local Plan for Westminster City Council (WCC) is undergoing an examination process. The proposed submission City Plan was submitted to the Secretary of State on 19 November 2019, following consideration by the Full Council. This is the final stage of the examination process before it can be adopted as part of Westminster's Development Plan.

The policy and guidance set out in these new and revised documents has been reviewed in relation to this assessment of the proposed development. They do not introduce any considerations beyond those factored into the original ES chapter. The assessment in this ES Addendum chapter has been made with reference to all relevant current policy and guidance.

Consultees

No specific consultation with stakeholders has been undertaken in regard to this ES Addendum chapter.

Technical Methodology

Given that the scheme amendments are generally minor in the context of the scheme as a whole, this assessment of the likely significant effects of the amended scheme has been undertaken using a qualitative, desk-based approach, based on Arup's professional experience of assessing the interaction of the wind with the urban environment.

The assessment is based on a review of the amended scheme architectural drawings provided by Allies and Morrisons Architects dated 21st of July 2020 (drawing references 606_07_001 to 606_07_004; 606_07_010 to 606_07_013; 606_07_100 to 606_07_005; 606_07_111; 606_07_119; 606_07_123; 606_07_124; 606_07_200 to 606_07_216; 606_07_300

to 606_07_302; 606_07_400 to 606_07_408) aerial views of the site and surroundings, and Arup's previous experience of wind tunnel testing for the scheme, as described in the original ES chapter.

As was the case for the original ES chapter, the criteria used to describe windiness are those of T.V. Lawson [1], which describe acceptability for particular activities in terms of 'comfort' and 'distress' (or safety). This assessment uses the same significance of effect criteria as were used in the original ES chapter.

EIA Regulations 2017 – New Technical Topics

Consideration of Climate Change

Wind metrics projections over the UK are published in the UKC18 Factsheet: Wind Climate, [2]. This indicates that "there are no compelling trends in storminess as determined by the gust wind speeds from the UK network over the last four decades. Global projections show:

- An increase in near surface wind speeds over the UK for the second half of the 21st century for the winter season when more significant impacts of wind are experienced. This is accompanied by an increase in frequency of winter storms over the UK. However, the increase in wind speeds is modest compared to interannual variability for the PPE-15.
- No trend in wind speed over the UK for the mean of the CMIP5-13"

Although these trends can be seen on a broad geographical scale over decades, it is much more difficult to identify how site-specific wind conditions would be affected over shorter timescales. It should also be noted that the acceptability of environmental wind conditions varies to some extent depending on the general climate – small changes are not significant. As such, the effects of climate change have not been considered within the scope of this ES Addendum chapter.

Consideration of Human Health

One of the objectives of this pedestrian wind comfort assessment is to assess whether the spaces intended for pedestrian activities meet both the safety targets and the comfort targets that are appropriate for the intended use of the spaces. The comfort and safety of pedestrians is therefore considered within this ES Addendum chapter.

Consideration of Risk of Major Accidents and Disasters

'Storms' have been considered in the wind microclimate assessment. Storm conditions have been taken into account via the range of wind speeds that have informed the various Lawson Comfort grades, as well as in the assessment of pedestrian safety at the site and the immediate surrounding area. As reported later in this ES Addendum chapter, the

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residual impacts of the scheme indicate that the pedestrian safety targets will be met at all locations.

Alternatives

No additional alternative scenarios beyond those considered in the original ES have been considered.

Relevant Associated Development

The changes to the proposed associated development from that set out in the original ES are not considered to affect the outcome of this assessment.

Assumptions/Limitations

The results presented within this ES Addendum chapter are for the scenarios and mitigation measures assessed. Variations to these may affect windiness levels reported.

The assumptions and limitations of the original assessment reported in the ES, are set out in Section 8.2 of the original ES chapter. They included the consideration of design changes that were made to the scheme following the completion of wind tunnel testing, namely:

- Conversion of unused roof area at mezzanine level on the western side of the building to an outdoor amenity area/terrace for use by office workers;
- Addition of louvers along the full perimeter of the mezzanine terrace (while only three louvers were tested in the wind tunnel, located on part of the north perimeter of the terrace); reduction in width of each louver as compared to the tested value; and
- Conversion of the running track around the perimeter BMU area at level 19 to a green roof with very infrequent maintenance access. Reduction in height of the balustrade along the west and south west perimeter of the terrace at level 19 (from 2.5m to 1.1m) (this was added following consultations with Westminster City Council during the planning determination period (see document provided in Appendix #.#, ES Addendum Volume IV).

It was concluded in the ES chapter that the wind tunnel results were considered to remain reliable in the context of these minor changes to the scheme design.

After the ES submission, the following additional changes have been made to the scheme, which together constitute the amended scheme that has been assessed in this ES Addendum chapter:

- Reconfiguration of the passage between 4 and 5 Kingdom Street, where: a) the passage width has been reduced; b) the extent of landscaping within the narrow section of the passage has been reduced; c) a bicycle parking space has been introduced;
- Reconfiguration of the eastern entrances at ground level;
- Introduction of an office terrace on the eastern pavilion at level 1 for outdoor use by office workers; and

- Reconfiguration of the upper level terrace at level 19, where a reduced extent of the terrace is proposed and outdoor seating use by office workers is proposed.

Whilst the results presented within this ES Addendum chapter are considered to remain reliable in the context of these changes to the scheme design, it is proposed that additional wind tunnel testing is undertaken in due course to formally test the scheme in the context of such changes. This would include testing conditions on the new and amended outdoor terrace areas. It is considered that this additional testing could be secured by condition to any future consent.

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6.2 CONCLUSIONS FROM ORIGINAL ES

The assessment reported in the original ES chapter concluded that, with mitigation in place, all wind microclimate effects were considered to be negligible. Table 4.1 sets out the likely residual effects at the receptors subject to proposed mitigation measures reported in the original ES chapter. Wind conditions at all other receptors were found to be negligible pre-mitigation.

Table 6.1
Wind Microclimate Residual Effects Summary

PHASE	RECEPTOR	RESIDUAL IMPACT	RESIDUAL EFFECT					
			SIGNIFICANCE	ADV/BEN	ST/MT/LT	D/IND	P/T	R/IRR
Operation	81 Within the undercroft, along the south side of 3 Kingdom Street	With the proposed mitigation (as described in Table 6.2) it is anticipated that the distress limit for ‘General Public Access’ would be met within the undercroft. This is required for safe pedestrian and cyclists access	Negligible	BEN	LT	D	P	IRR
Operation	94 Main entrance to 3 Kingdom Street	With the proposed mitigation (as described in Table 6.2) it is anticipated that the local windiness would be reduced to acceptable ‘Standing’ levels for entrance use.	Negligible	BEN	LT	D	P	IRR
Operation	92 Middle entrance to 4 Kingdom Street	With the proposed mitigation (as described in Table 6.2) it is anticipated that the local windiness would be reduced to acceptable ‘Standing’ levels for entrance use	Negligible	BEN	LT	D	P	IRR
Operation	93 Eastern entrance to 4 Kingdom Street	With the proposed mitigation (as described in Table 6.2) it is anticipated that the local windiness would be reduced to acceptable ‘Standing’ levels for entrance use	Negligible	BEN	LT	D	P	IRR
Key: ADV/BEN = Adverse/Beneficial; ST/MT/LT = Short-term/Medium-term/Long-term; D/IND = Direct/Indirect; P/T = Permanent/Temporary; R/IRR = Reversible/Irreversible								

Previous ES Mitigation Measures

The full complement of mitigation measures set out in the ES chapter, which apply to the receptor locations described in Table 4.1 above, set out in Table 4.2 below.

Table 6.2
Original ES Mitigation Measures

PHASE	POSSIBLE EFFECT BEING MITIGATED	MITIGATION MEASURE	HOW SECURED / TRIGGER	LIKELY CONDITIONS POST - MITIGATION	ADVERSE/BENEFICIAL
Operation	Exceedance of distress limit for ‘General Public Access’ in the undercroft located on the south side of 3 Kingdom Street (receptor no. 81). This is not suitable for intended cycling use.	Louvered wall on the perimeter of the undercroft to the south of 3 Kingdom Street. The individual louvers are to be oriented perpendicular to the prevailing south west winds (e.g. NW to SE).	Planning condition	“General Public Access”	Negligible
Operation	‘Strolling’ conditions at the main entrance to 3 Kingdom Street (receptor no. 94). Local windiness is in excess of the ‘Standing’ limit for entrance use.	Addition of hedges or trees in pots the western side of the entrance	Offered improvement	Likely “Standing”	Beneficial
Operation	“Strolling” conditions at the middle and eastern entrances to 4 Kingdom Street (receptors no. 92, 93). Local windiness is in excess of the ‘Standing’ limit for entrance use.	Addition of (denser) planting in pots	Offered improvement	Likely “Standing”	Beneficial

This ES Addendum chapter assessment reconsiders the appropriateness of the above mitigation and makes relevant recommendations as to that which should be conditioned as part of the application.

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6.3 BASELINE CONDITIONS

The baseline conditions are reported in section 8.3 of the original ES chapter. These conditions are unaffected by the proposed scheme amendments assessed in this ES Addendum chapter.

6.4 POTENTIAL SIGNIFICANT IMPACTS

The potential significant impacts of the original scheme, as identified in the original ES chapter, are considered to remain accurate in the context of the current scheme amendments, and are repeated in Table 6.3 below.

Table 6.3
Potential significant impacts

PHASE	DESCRIPTION	ADVERSE/BENEFICIAL
Construction	Temporary plant and machinery do not give rise to adverse windiness at street level. Hoardings and temporary crash decks around the perimeter of the site would provide temporary shelter for pedestrians. As the building gets taller and cladding is installed, wind effects would become more pronounced. However, the full extent of wind effects would only be experienced as the development is completed. Given that effects will be temporary and short-term and will not exceed the operational phase effects assessed in this chapter, the construction phase effects have not been assessed further in this chapter.	Negligible
Operation	The proposed development, once complete and operational, has the potential to cause adverse wind conditions that could result in unsafe conditions for pedestrians or make the pedestrian environment on site and in the surrounding area unsuitable for its intended use.	Adverse / Beneficial

6.5 DESIGN INTERVENTIONS

Design interventions that were identified for the original ES scheme and that remain relevant for the amended proposal are described below. Additional design interventions that were identified as part of the amended proposal are also described. Reasons for interventions and references to supporting data are also provided.

DESIGN INTERVENTION	DESCRIPTION	REASON FOR INTERVENTION	SUPPORTING DATA
Design Interventions Identified for the Original ES Scheme (and still Relevant for the Amended Scheme)			
(Min.) 3 No. louvers on the mezzanine roof terrace on the western side of 5 Kingdom Street	The size of the individual louvers original tested in the wind tunnel was W x H (width x height) = 2m x 4m. This has been subsequently reduced to W x H = 0.75m x 3.5m. Individual louvers are spaced at 2.25m from centre to centre. The louvers are to be oriented perpendicular to the prevailing south west wind direction (e.g. NW to SE).	Initial wind tunnel testing highlighted exceedance of the ‘Able-bodied Access’ distress criteria on the westbound lane of the Westway immediately adjacent to the proposed development. This could affect safe operation of road vehicles (particularly unloaded goods vehicles). With the proposed louvers, the ‘Able-bodied Access’ distress criteria, similar to Baseline conditions, are met at all locations on the Westway.	Drawing no. 606_07_104 Proposed Mezzanine Plan
Trees at the middle and eastern entrance locations to 4 Kingdom Street	4 No. 3m planting in 1.5m tall pots (2 No. trees per entrance)	Initial wind tunnel testing highlighted that the local windiness at the entrances to 4 Kingdom Street is above the ‘Standing’ limit for intended entrance use. Local windiness at such entrances is also marginally increased compared to the Baseline scenario. The described trees help to reduce the local windiness to levels which are similar to the Baseline scenario. Additional mitigation (as described above) would be required to reduce the local conditions to ‘Standing’.	Drawing no. 606_07_103 Proposed Ground Level Plan
Hedges or equivalent landscaping along the western perimeter of 5 Kingdom Street on the West Link	Hedging or equivalent landscaping feature	Initial testing highlighted exceedance of the ‘General Public Access’ distress criteria along the western perimeter of 5 Kingdom Street on the West Link. These conditions would not be acceptable for the intended general public access. In presence of the described landscaping, the local windiness is improved to ‘Standing’ or ‘Strolling’ which is acceptable for the intended access use.	Drawing no. 606_07_103 Proposed Ground Level Plan
Solid parapet along the cycling route on the north perimeter of 5 Kingdom Street	Minimum height H = 2.5m	Initial wind tunnel testing highlighted that the local windiness along the cycling route on the north perimeter of 5 Kingdom Street marginally exceeds the ‘General Public Access’ distress criterion with a shorter parapet. The proposed parapet helps to meet ‘General Public Access’ distress criterion locally.	Drawing no. 606_7_102 Proposed Lower Ground Level Plan
Additional Design Interventions Identified for the Amended Scheme			
Landscaping features on the mezzanine roof terrace on the western side of 5 Kingdom Street	Low level planting and trees along the perimeter of the terrace	It is proposed to allow access to the western mezzanine terrace and to include outdoor seating spaces. Landscaping features are likely to have a beneficial impact on the local windiness. However, comfort limits for regular outdoor seating (‘Sitting’) or for short term seating (‘Standing’) are likely to be exceeded on the terrace, and additional mitigation may be required to help extend usability if found desirable.	Drawing no. 606_07_104 Proposed Mezzanine Plan;

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			Drawing no. 606_07_405 Bay Study – West Link Pavillion
Landscaping features within the eastern pavilion roof terrace (level 1) and a louvered parapet on the perimeter of the same terrace	Individual louvers are 0.75m wide and 3.5m high and are spaced at 2.25m from centre to centre Low level planting and trees along the perimeter of the terrace	Landscaping features and the louvered parapet are likely to have a beneficial impact on the local windiness. However, comfort limits for regular outdoor seating ('Sitting') or for short term seating ('Standing') are likely to be exceeded on the terrace, and additional mitigation may be required to help extend usability if found desirable.	Drawing no. 606_07_105 Proposed Level 01 Plan; Drawing no. 606_07_404 Bay Study – Kingdom Square Pavillion
Landscaping within the upper terrace at level 19 with a glazed balustrade along the perimeter of the same terrace	Minimum height of the glazed balustrade = 2m. Trees in pots along the south western perimeter of the terrace	Landscaping features with the glazed balustrade are likely to have a beneficial impact on the local windiness. However, comfort limits for regular outdoor seating ('Sitting') or for short term seating ('Standing') are likely to be exceeded on the terrace, and additional mitigation may be required to help extend usability in some areas if found desirable.	Drawing no. 606_07_123 Proposed Level 19 Plan; Drawing no. 606_07_402 Bay Study – Upper Levels South

6.6 ASSESSMENT PRE-MITIGATION (INCLUDING DESIGN INTERVENTION)

'Worst' Season

'Worst season' wind conditions in key areas are summarised below:

- **Primary and Secondary Entrances:** Wind tunnel testing as carried out for the original ES scheme demonstrated that the levels of windiness along the eastern side of the proposed development at ground floor level facing Kingdom Square are in the 'Standing' range. As the amended scheme massing remains similar to the original scheme massing in this location, 'Standing' conditions are anticipated at the currently proposed eastern office entrances facing the Square under the amended scheme. These conditions are acceptable for entrance use. These entrances feature revolving doors which are needed to control cold air infiltration, particularly in the spring. 'Standing' conditions are also anticipated at the adjacent eastern entrance to the public route, which is also acceptable for the intended use.

Wind tunnel testing undertaken for the original scheme in the ES also demonstrated that wind conditions at lower ground floor level (where the western entrance to the public route is proposed) are suitable for 'Standing'. The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness at this entrance. 'Standing' conditions are therefore still anticipated at this location under the amended scheme. These conditions would be acceptable for the intended entrance use.

Wind conditions at the western and eastern entrances of the 4 Kingdom Street building were found to remain in line with the baseline condition in the wind tunnel testing reported in the original ES, i.e. 'Standing' and 'Strolling' respectively. However, windiness at the middle entrance of 4 Kingdom Street was measured to increase from 'Standing' (baseline) to 'Strolling' (with the proposed development and the inclusion of design interventions in the form of 3m trees in 1.5m tall pots). The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness at the entrances to 4 Kingdom Street. Therefore, as was the case for the original scheme assessed in the ES chapter, additional localised mitigation has been recommended later in this ES Addendum chapter to reduce the local windiness to acceptable 'Standing' levels at the middle and eastern entrances of 4 Kingdom Street.

Wind tunnel testing undertaken for the original scheme in the ES demonstrated that windiness at the main entrance of 3 Kingdom Street was greater than desired, i.e. upper 'Strolling', which is similar to the baseline. Similarly, the amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness at the entrances to 3 Kingdom Street. The results for this location are therefore expected to remain consistent with that reported in the original ES and local mitigation will therefore continue to be recommended at this entrance to reduce the local windiness to acceptable 'Standing' conditions.

Wind tunnel testing undertaken for the original scheme in the ES also demonstrated that conditions at the main and secondary entrances of other plots on Kingdom Street meet the desired 'Standing' limit for entrance use. These conditions are not likely to be influenced by the scheme amendments and therefore the amended scheme results are considered to remain consistent with the original ES chapter results.

- **Passage between 4 and 5 Kingdom Street:** Wind tunnel testing undertaken for the original scheme in the ES demonstrated that levels of windiness within the passage between 4 and 5 Kingdom Street exceeded the 'General Public Access' distress criterion. Design interventions in the form of localised landscaping were found to be necessary to reduce windiness to acceptable levels for general public access. Under the amended scheme, the width of the passage is reduced and landscaping design interventions are reduced within the narrow section of the passage, where the largest levels of windiness are anticipated. Bicycle parking is also now proposed within the passage with dense landscaping immediately to the north, and isolated landscaping to the south. Under the amended scheme, it is expected that the 'General Public Access' criterion would to be exceeded at this location. Additional mitigation may be required within the passage to reduce windiness to acceptable levels. Mitigation measures are discussed later in this ES Addendum chapter.
- **General Public Access:** Wind tunnel testing undertaken for the original scheme in the ES demonstrated that windiness in areas of general public access (Kingdom Street, Kingdom Square, the pavement along Harrow Road and the Westbourne Bridge) met the 'General Public Access' criterion. Marginal exceedance of the 'General public access' distress criterion was measured at one location on Kingdom Street (receptor no. 30). However, this result was similar to the baseline scenario and hence the impact of the development was found to be negligible. The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness in these areas previously assessed and therefore conditions here are considered to remain consistent with the results reported in the ES.
- **Cycling Routes:** The cycling route on the north side of 5 Kingdom Street is exposed to the prevailing winds. Design intervention in the form of a solid parapet with minimum height of 2.5m was initially recommended for the original ES scheme to help meet the necessary 'General Public Access' criterion. The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness in this area. Therefore, the results from the original ES are considered to remain valid and the 2.5m high parapet is still considered to be required to meet the 'General Public Access' criterion.

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- **Southern undercroft of 3 Kingdom Street:** Wind tunnel testing undertaken for the original scheme in the ES demonstrated that the distress limit for ‘General Public Access’ was exceeded at one location within the southern undercroft of 3 Kingdom Street. This area is intended to be used by cyclists. As set out in the ES chapter, mitigation measures (for example in the form of a louvered wall, as described in section 6.5) would be required to achieve acceptable ‘General Public Access’ conditions. Similar levels of windiness are expected to be achieved at this location under the amended scheme. Therefore, the results from the original ES are considered to remain valid and the proposed mitigation is still considered to be required.
- **Eastern pavilion terrace:** Under the amended proposals, a new office terrace has been introduced on the East pavilion roof at level 01, adjacent to 3 Kingdom Street, and is intended to include outdoor seating spaces for use by office workers. This area will be exposed to the prevailing winds, and its usability for outdoor seating is expected to be limited to good weather days. The significance of effects at this location have therefore only been assessed for the ‘Summer’ season, the results of which are reported later in this ES Addendum chapter. Design interventions in the form of a louvered parapet (where the width of each louver is 0.75m and the height is 3.5m, and individual louvers are spaced at 2.25m), and landscaping features along the perimeter of the terrace may help to provide localised sheltering to the seating areas.
- **Mezzanine terrace:** Under the amended scheme, a new western mezzanine terrace is proposed, including outdoor seating spaces. This area was previously intended as an unused roof space, and wind speeds were therefore not measured at this location in the original wind tunnel study. The terrace is directly exposed to prevailing winds which are downdrafted by the western façade, and its usability for outdoor seating is expected to be limited to good weather days. The significance of effects at this location have therefore only been assessed for the ‘Summer’ season, the results of which are reported later in this ES Addendum chapter.

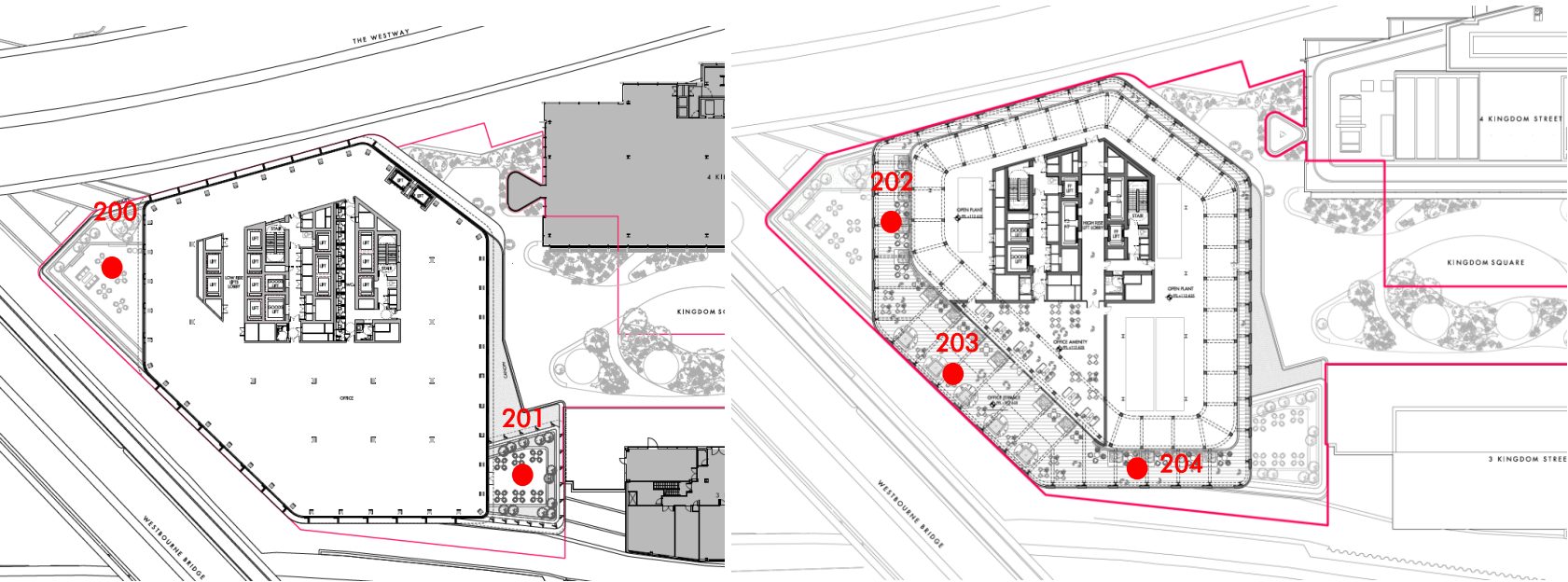
Windiness levels at the proposed entrance to the terrace may also be in excess of ‘Standing’ limits (as acceptable for entrance use). A careful choice of door system to manage operational issues, is recommended.

- **Upper terraces (level 18 and 19):** Amendments have been made to the upper level terraces since the wind tunnel studies were undertaken and ES chapter completed and a reduced area of terrace is now proposed. As such, receptors 109-111, 118-122 and 150-151, which were assessed in the original ES chapter, are no longer included within the scheme and have been excluded from the assessment. A glazed balustrade with total height of 2m above finished terrace level is proposed. Landscaping features are included along the south-western perimeter of the terrace. It is expected that in presence of such measures, windiness levels on the terrace will remain acceptable for general access; the usability of the terrace for outdoor seating use may be limited to good weather days only. The significance of effects at this location have therefore only been assessed for the ‘Summer’ season, the results of which are reported later in this ES Addendum chapter.
- **Occasional Access:** Wind tunnel testing undertaken for the original scheme in the ES demonstrated that windiness in areas of occasional access met the applicable ‘Able-bodied Access’ distress criteria. ‘Sitting’ to ‘Standing’ was measured along the north perimeter of 2 and 4 Kingdom Street at lower box level. ‘Standing’ was experienced within the greenspace immediately to the north of the railway line, and within the pavement area immediately to the south of the A40. Conditions around the perimeter of 5 Kingdom Street at lower box level ranged from ‘Sitting’ to ‘Business Walking’, with localised exceedances of the ‘General Public Access’ distress criteria. As this area is not intended to be open to the general public, the significance of measured effects was considered to be negligible. Similar levels of windiness are expected under the amended scheme.
- **Roads:** Wind tunnel testing undertaken for the original scheme in the ES demonstrated that with design interventions in the form of three solid louvers along the north edge of the mezzanine roof (with test dimensions of width x height = 2.5m x 4m), wind conditions along the Westway met the required ‘Able Bodied’ distress limit. The tested louvers were oriented perpendicular to the prevailing south west wind direction (e.g. NW to SE). Following wind tunnel testing, the distribution of louvers has been extended along the full perimeter of the mezzanine terrace. Under the amended scheme, the louvers are still distributed along the full perimeter of the terrace; the width of each louver is 0.75m while the height is 3.5m; louvers are spaced at 2.25m from centre to centre. The effects of the amended scheme at these locations are expected to align with the results reported in the original ES chapter and the effectiveness of currently proposed louvers will also to be verified through future wind tunnel testing.

‘Worst’ season conditions at each receptor are reported in the table below. The receptor locations are shown in Figures 8.1 to 8.3 and 8.5 to 8.14 in the original ES chapter. New receptor locations have been included for the new terrace areas included under the amended scheme. These locations are shown in Figure 6.1.

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Figure 6.1
Location of additional receptors



PHASE	RECEPTOR	LEVEL	ORIGINAL LOCATION/USE (ORIGINAL ES)	ORIGINAL MEASURED CONDITIONS (ORIGINAL ES)	UPDATED LOCATION/USE (UNDER AMENDED SCHEME)	QUALITATIVE JUDGEMENT ON UPDATED WIND CONDITION (UNDER AMENDED SCHEME)	DESIRED CRITERION	SIGNIFICANCE PRE-MITIGATION	MITIGATION PROPOSED?
Primary Entrances									
Operation	100	Ground floor	Escalator entrances on eastern side of 5 Kingdom Street	‘Standing’	Office space entrances on eastern side of 5 Kingdom Street are currently proposed at the position of the original escalator entrances which have been removed.	Office entrances were proposed at the location of the escalator entrances in the original ES scheme. As details of the amended scheme massing remain similar locally, windiness is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘Standing’ or better	Negligible and unchanged from the original ES	No
Operation	101	Ground floor	Public route entrance on eastern side of 5 Kingdom Street	‘Standing’	The eastern entrance to public remains (approximately) within the same location as in the original ES scheme but has been reconfigured.	The eastern entrance to the public route remains in a similar location. As details of the amended scheme massing remain similar locally, windiness is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘Standing’ or better	Negligible and unchanged from the original ES	No
Operation	91	Ground floor	Western entrance to 4 Kingdom Street	‘Standing’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness at the entrances to 4 Kingdom Street. With the proposed design interventions in place, windiness is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘Standing’ or better	Negligible and unchanged from the original ES	No

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PHASE	RECEPTOR	LEVEL	ORIGINAL LOCATION/USE (ORIGINAL ES)	ORIGINAL MEASURED CONDITIONS (ORIGINAL ES)	UPDATED LOCATION/USE (UNDER AMENDED SCHEME)	QUALITATIVE JUDGEMENT ON UPDATED WIND CONDITION (UNDER AMENDED SCHEME)	DESIRED CRITERION	SIGNIFICANCE PRE-MITIGATION	MITIGATION PROPOSED?
Operation	92	Ground floor	Middle entrance to 4 Kingdom Street	'Strolling' Marginal exceedance of 'Standing'	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness at the entrances to 4 Kingdom Street. With the proposed design interventions in place, the local windiness is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	'Standing' or better	Minor Adverse and unchanged from the original ES	Yes
Operation	93	Ground floor	Eastern entrance to 4 Kingdom Street	'Strolling'	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness at the entrances to 4 Kingdom Street. With the proposed design interventions in place, the local windiness is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	'Standing' or better	Negligible and unchanged from the original ES	Yes
Operation	94	Ground floor	Main Entrance to 3 Kingdom Street	'Strolling' Marginal exceedance of 'Standing'	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness at the entrances to 3 KINGDOM STREET. The local windiness is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	'Standing' or better	Negligible and unchanged from the original ES	Yes
Operation	99	Ground floor	Retail entrance to 5 Kingdom Street (facing Kingdom Square from the south)	'Sitting'	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness at the retail entrance to 5 KINGDOM STREET. Therefore, the local windiness is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	'Standing' or better	Negligible and unchanged from the original ES	No
Operation	35	Ground floor	Main entrance to 2 Kingdom Street	'Standing'	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness around 2 KINGDOM STREET. Therefore, the local windiness is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	'Standing' or better	Negligible and unchanged from the original ES	No
Operation	37	Ground floor	Main entrance to 1 Kingdom Street	'Sitting'	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness around 1 KINGDOM STREET. Therefore, the local windiness is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	'Standing' or better	Negligible and unchanged from the original ES	No
Operation	137	Lower ground	Western entrance to the public route	'Standing'	No change from original location/use	The location of the western entrance to the public route remains as in the original ES scheme; details of the amended scheme massing also remain similar locally. Therefore, the local windiness is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	'Standing'	Negligible and unchanged from the original ES	No

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PHASE	RECEPTOR	LEVEL	ORIGINAL LOCATION/USE (ORIGINAL ES)	ORIGINAL MEASURED CONDITIONS (ORIGINAL ES)	UPDATED LOCATION/USE (UNDER AMENDED SCHEME)	QUALITATIVE JUDGEMENT ON UPDATED WIND CONDITION (UNDER AMENDED SCHEME)	DESIRED CRITERION	SIGNIFICANCE PRE-MITIGATION	MITIGATION PROPOSED?
Operation	60	Lower box	Taxi drop-off on the south side of 5 Kingdom Street at lower box level	‘Standing’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness along the service road and taxi drop-off area at lower box level. Therefore, the local windiness is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘Standing’ or better	Negligible and unchanged from the original ES	No
Secondary Entrances									
Operation	96	Ground floor	Service entrance to 3 Kingdom Street (facing north)	‘Standing’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness around 3 KINGDOM STREET. Therefore, the local windiness is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘Strolling’ or better	Negligible and unchanged from the original ES	No
Operation	98	Ground floor	Service entrance to 3 Kingdom Street (facing north)	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 96 above.	‘Strolling’ or better	Negligible and unchanged from the original ES	No
General Public Access									
Operation	65	Lower ground floor	West Link	‘Strolling’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness on the West Link. Therefore, the local windiness is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	66	Lower ground floor	West Link	‘Strolling’	No change from original location/use	As per qualitative judgement made for Receptor 65 above.	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	67	Lower ground floor	West Link	‘Strolling’	No change from original location/use	As per qualitative judgement made for Receptor 65 above.	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	68	Lower ground floor	West Link	‘Strolling’	No change from original location/use	As per qualitative judgement made for Receptor 65 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	69	Lower ground floor	West Link	‘Strolling’	No change from original location/use	As per qualitative judgement made for Receptor 65 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	86	Lower ground floor	West Link	‘Strolling’	No change from original location/use	As per qualitative judgement made for Receptor 65 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	130	Lower ground floor	West Link	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 65 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	132	Lower ground floor	Western frontage of 5 Kingdom Street at Lower Ground Floor	‘Standing’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness which is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘General Public Access’	Negligible and unchanged from the original ES	No

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PHASE	RECEPTOR	LEVEL	ORIGINAL LOCATION/USE (ORIGINAL ES)	ORIGINAL MEASURED CONDITIONS (ORIGINAL ES)	UPDATED LOCATION/USE (UNDER AMENDED SCHEME)	QUALITATIVE JUDGEMENT ON UPDATED WIND CONDITION (UNDER AMENDED SCHEME)	DESIRED CRITERION	SIGNIFICANCE PRE-MITIGATION	MITIGATION PROPOSED?
Operation	146	Ground floor	Passage between 4 and 5 Kingdom Street	‘Standing’	A bicycle parking is proposed within this area as part of the amended scheme. The width of the passage is also reduced, and previous design interventions in the form of landscaping features within the narrow section of the passage have been reduced.	As the width of the passage has been reduced, and previous design interventions in the form of landscaping features within the narrow section of the passage have also been reduced, it is expected that the ‘General Public Access’ criterion would be exceeded at this location under the amended scheme.	‘General Public Access’	Moderate adverse (change from Negligible reported in original ES)	Yes
Operation	90	Ground floor	Passage between 4 and 5 Kingdom Street	‘Strolling’	As above	As per qualitative judgement made for Receptor 146 above	‘General Public Access’	Moderate adverse (change from Negligible reported in original ES)	Yes
Operation	89	Ground floor	Passage between 4 and 5 Kingdom Street	‘Standing’	No change from original location/use	The northern portion of the passage between 4 and 5 Kingdom Street is densely landscaped. The local windiness is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	95	Ground floor	Kingdom Square	‘Standing’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness within Kingdom Square which is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	97	Ground floor	Kingdom Square	‘Strolling’	No change from original location/use	As per qualitative judgement made for Receptor 95 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	28	Ground floor	Passage between 4 Kingdom Street and 2 Kingdom Street	‘Standing’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness within 2 and 4 Kingdom Street which is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	29	Ground floor	South west corner of 2 Kingdom Street	‘Standing’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness around 2 KINGDOM STREET which is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	30	Ground floor	Kingdom Street	Marginal exceedance of ‘General Public access’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness on Kingdom Street which is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	31	Ground floor	North west corner of 1 Kingdom Street	‘Strolling’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness around 1 KINGDOM STREET which is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘General Public Access’	Negligible and unchanged from the original ES	No

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PHASE	RECEPTOR	LEVEL	ORIGINAL LOCATION/USE (ORIGINAL ES)	ORIGINAL MEASURED CONDITIONS (ORIGINAL ES)	UPDATED LOCATION/USE (UNDER AMENDED SCHEME)	QUALITATIVE JUDGEMENT ON UPDATED WIND CONDITION (UNDER AMENDED SCHEME)	DESIRED CRITERION	SIGNIFICANCE PRE-MITIGATION	MITIGATION PROPOSED?
Operation	32	Ground floor	Passage between 3 Kingdom Street and 1 Kingdom Street	‘Strolling’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness within the passage between 1 KINGDOM STREET and 3 KINGDOM STREET which is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	33	Ground floor	Passage between 3 Kingdom Street and 1 Kingdom Street	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 32 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	34	Ground floor	Kingdom Street	‘Strolling’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed not likely to influence the local windiness on Kingdom Street which is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	36	Ground floor	Kingdom Street	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 34 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	38	Ground floor	Kingdom Street	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 34 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	39	Ground floor	Kingdom Street	‘Sitting’	No change from original location/use	As per qualitative judgement made for Receptor 34 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	40	Ground floor	Kingdom Street	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 34 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	12	Harrow Road	Pavement along Harrow Road	‘Sitting’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness on Harrow Road which is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	13	Harrow Road	Pedestrian island on Harrow Road	‘Strolling’	No change from original location/use	As per qualitative judgement made for Receptor 12 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	14	Harrow Road	Pedestrian island on Harrow Road	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 12 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	15	Harrow Road	Pavement along Harrow Road	‘Strolling’	No change from original location/use	As per qualitative judgement made for Receptor 12 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	20	Harrow Road	Pavement along Harrow Road	‘Strolling’	No change from original location/use	As per qualitative judgement made for Receptor 12 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	21	Harrow Road	Pavement along Harrow Road	‘Strolling’	No change from original location/use	As per qualitative judgement made for Receptor 12 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	22	Harrow Road	Pavement along Harrow Road	‘Sitting’	No change from original location/use	As per qualitative judgement made for Receptor 12 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	25	Harrow Road	Pavement along Harrow Road	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 12 above	‘General Public Access’	Negligible and unchanged from the original ES	No

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Operation	4	Westbourne Bridge	Pavement along the Westbourne Bridge	‘Standing’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness on Westbourne Bridge which is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	5	Westbourne Bridge	Pavement along the Westbourne Bridge	‘Strolling’	No change from original location/use	As per qualitative judgement made for Receptor 4 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	6	Westbourne Bridge	Pavement along the Westbourne Bridge	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 4 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	7	Westbourne Bridge	Pavement along the Westbourne Bridge	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 4 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	8	Westbourne Bridge	Pavement along the Westbourne Bridge	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 4 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	9	Westbourne Bridge	Pavement along the Westbourne Bridge	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 4 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Cycling Routes									
Operation	70	Lower ground floor	Along the north side of the Proposed Development	‘Business Walking’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness on the cycling route along the north side of the Development which is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	133	Lower ground floor	Along the north side of the Proposed Development	‘General Public Access’	No change from original location/use	As per qualitative judgement made for Receptor 70 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	72	Lower ground floor	Along the north side of the Proposed Development	‘General Public Access’	No change from original location/use	As per qualitative judgement made for Receptor 70 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	74	Lower ground floor	Along the north side of the Proposed Development	‘Strolling’	No change from original location/use	As per qualitative judgement made for Receptor 70 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	75	Lower ground floor	Along the north side of the Proposed Development	‘Sitting’	No change from original location/use	As per qualitative judgement made for Receptor 70 above	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	80	Lower ground floor	Along the south side of 3 Kingdom Street	‘Sitting’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness on the cycling route along the south side of the 3 KINGDOM STREET which is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘General Public Access’	Negligible and unchanged from the original ES	No
Operation	81	Lower ground floor	Along the south side of 3 Kingdom Street	Exceeds ‘General Public Access’	No change from original location/use	As per qualitative judgement made for Receptor 80 above	‘General Public Access’	Moderate Adverse and unchanged from the original ES	Yes
Operation	134	Lower ground floor	Along the south side of 3 Kingdom Street	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 80 above	‘General Public Access’	Negligible and unchanged from the original ES	No

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Outdoor Terraces									
Operation	200 (new receptor)	Mezzanine	Unused roof space on mezzanine level along the western side of 5 Kingdom Street.	N/A (Wind speeds were not measured locally as part of the wind tunnel studies which were carried out in support of the ES as the space was proposed to be unused.)	Under the amended scheme, this area at mezzanine level is proposed for use as a roof terrace. It is intended to be used by office workers and will include outdoor seating spaces.	The usability of the mezzanine terrace is expected to be limited to good weather days, and may naturally limited by other environmental variables, e.g. temperature, sun exposure, precipitation. Windiness levels at the proposed entrance to the terrace may also be in excess of ‘Standing’ limits for entrance use	N/A for outdoor seating in winter ‘Standing’ for entrance	N/A for outdoor seating in winter The significance pre-mitigation at entrances is expected to be Moderate Adverse and unchanged from the original ES	Yes
Operation	201 (new receptor)	Level 01	Unused roof space on Level 01 on the eastern pavilion	N/A (Wind speeds were not measured locally as part of the wind tunnel studies which were carried out in support of the ES as the space was proposed to be unused.)	In the amended scheme, this area on the eastern pavilion is proposed for use as a roof terrace. It is intended to be used by office workers and to include outdoor seating spaces.	The usability of the mezzanine terrace is expected to be limited to good weather days, and may naturally limited by other environmental variable, e.g. temperature, sun exposure, precipitation.	N/A for outdoor seating in winter	N/A for outdoor seating in winter	Yes
Operation	202-204 (new receptors)	Level 19	Office terrace at Level 19	‘Sitting’ to ‘Strolling’	The upper level terraces have undergone some design amendments since the wind tunnel studies were undertaken, and a reduced extent of the terrace is currently proposed. The terrace is intended to be accessed by office workers and outdoor seating spaces facing south and west are currently proposed.	The usability of the mezzanine terrace is expected to be limited to good weather days, and may naturally limited by other environmental variables, e.g. temperature, sun exposure, precipitation. As such, the assessment of these receptors has been undertaken for the summer season only and is reported in the subsequent section of this chapter.	N/A for outdoor seating in winter	N/A for outdoor seating in winter	Yes
Operation	106-111, 112-122, 150-151	Level 18 and 19	Office terrace at Level 18 and 19	‘Sitting’ to ‘Business Walking’	The upper level terraces have undergone some design amendments since the wind tunnel studies were undertaken, and a reduced area of terrace is now proposed. These receptors are no longer included within the scheme.	N/A	N/A	N/A	N/A
Occasional Access									
Operation	1	Railway level	Green space immediately to the north of the railway	‘Standing’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness at railway level which is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	2	Railway level	Green space immediately to the north of the railway	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 1 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	3	Railway level	Green space immediately to the north of the railway	‘Sitting’	No change from original location/use	As per qualitative judgement made for Receptor 1 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	10	Harrow Road level	Pavement immediately to the south of the A40	‘Standing’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness on Harrow Road which is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	11	Harrow Road level	Pavement immediately to the south of the A40	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 10 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No

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Operation	83	Lower ground floor level	Southwest corner of 5 Kingdom Street at lower ground floor level	‘Able-bodied Access’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness at ground floor level which is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	84	Lower ground floor level	Walkway on the south west perimeter of 5 Kingdom Street at lower ground floor level	‘Strolling’	No change from original location/use	As per qualitative judgement made for Receptor 83 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	85	Lower ground floor level	Walkway on the south west perimeter of 5 Kingdom Street at Basement 1 level	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 83 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	44	Railway level	Railway level, immediately to the west of 5 Kingdom Street	‘Standing’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness at railway level which is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	45	Railway level	Railway level, immediately to the west of 5 Kingdom Street	‘Strolling’	No change from original location/use	As per qualitative judgement made for Receptor 44 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	46	Lower box level	West perimeter of 5 Kingdom Street at Lower box level	‘Able-bodied Access’	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness at lower box level which is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	47	Lower box level	West perimeter of 5 Kingdom Street at Lower box level	‘Sitting’	No change from original location/use	As per qualitative judgement made for Receptor 46 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	48	Lower box level	West perimeter of 5 Kingdom Street at Lower box level	‘Able-bodied Access’	No change from original location/use	As per qualitative judgement made for Receptor 46 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	49	Lower box level	West perimeter of 5 Kingdom Street at Lower box level	‘Able-bodied Access’	No change from original location/use	As per qualitative judgement made for Receptor 46 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	50	Lower box level	North perimeter of 5 Kingdom Street at lower box level	‘Sitting’	No change from original location/use	As per qualitative judgement made for Receptor 46 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	51	Lower box level	North perimeter of 5 Kingdom Street at lower box level	‘Sitting’	No change from original location/use	As per qualitative judgement made for Receptor 46 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No

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Operation	52	Lower box level	North perimeter of 5 Kingdom Street at lower box level	‘Sitting’	No change from original location/use	As per qualitative judgement made for Receptor 46 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	53	Lower box level	North perimeter of 5 Kingdom Street at lower box level	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 46 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	54	Lower box level	North perimeter of 5 Kingdom Street at lower box level	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 46 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	55	Lower box level	North perimeter of 5 Kingdom Street at lower box level	‘Sitting’	No change from original location/use	As per qualitative judgement made for Receptor 46 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	56	Lower box level	East perimeter of 5 Kingdom Street at lower box level	‘Sitting’	No change from original location/use	As per qualitative judgement made for Receptor 46 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	57	Lower box level	East perimeter of 5 Kingdom Street at lower box level	‘Sitting’	No change from original location/use	As per qualitative judgement made for Receptor 46 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	58	Lower box level	South perimeter of 5 Kingdom Street at lower box level	‘Strolling’	No change from original location/use	As per qualitative judgement made for Receptor 46 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	59	Lower box level	South perimeter of 5 Kingdom Street at lower box level	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 46 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	61	Lower box level	South perimeter of 5 Kingdom Street at lower box level	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 46 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	62	Lower box level	South west perimeter of 5 Kingdom Street at lower box level	‘Able-bodied Access’	No change from original location/use	As per qualitative judgement made for Receptor 46 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	63	Lower box level	South west perimeter of 5 Kingdom Street at lower box level	‘Strolling’	No change from original location/use	As per qualitative judgement made for Receptor 46 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	64	Lower box level	South west perimeter of 5 Kingdom Street at lower box level	‘Standing’	No change from original location/use	As per qualitative judgement made for Receptor 46 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No
Operation	131	Lower box level	North perimeter of 5 Kingdom Street at lower box level	‘Sitting’	No change from original location/use	As per qualitative judgement made for Receptor 46 above	‘Able-bodied Access’	Negligible and unchanged from the original ES	No

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PHASE	RECEPTOR	LEVEL	ORIGINAL LOCATION/USE (ORIGINAL ES)	ORIGINAL MEASURED CONDITIONS (ORIGINAL ES)	UPDATED LOCATION/USE (UNDER AMENDED SCHEME)	QUALITATIVE JUDGEMENT ON UPDATED WIND CONDITION (UNDER AMENDED SCHEME)	DESIRED CRITERION	SIGNIFICANCE PRE-MITIGATION	MITIGATION PROPOSED?
Roads									
Operation	16	Westway level	Westway (eastbound lane)	'Business Walking'	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness on the Westway which is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme.	'Able-bodied Access'	Negligible and unchanged from the original ES.	No
Operation	19	Westway level	Westway (eastbound lane)	'Able-bodied Access'	No change from original location/use	As per qualitative judgement made for Receptor 16 above	'Able-bodied Access'	Negligible and unchanged from the original ES.	No
Operation	23	Westway level	Westway (eastbound lane)	'Strolling'	No change from original location/use	As per qualitative judgement made for Receptor 16 above	'Able-bodied Access'	Negligible and unchanged from the original ES.	No
Operation	24	Westway level	Westway (westbound lane)	'Strolling'	No change from original location/use	The amendments made to the scheme since the ES chapter was completed are not likely to influence the local windiness on the westbound lane of the Westway (as adjacent to the Development) which is likely to remain within a similar range as measured in the wind tunnel for the original ES scheme. However, the effectiveness of currently proposed design interventions (e.g. the louvers on the mezzanine terrace) which are intended to help meet the 'Able-bodied Access' criteria on the westbound lane of the Westway is recommended to be verified through future wind tunnel testing.	Able-bodied Access'	Negligible and unchanged from the original ES.	No
Operation	129	Westway level	Westway (west bound lane)	'Able-bodied Access'	No change from original location/use	As per qualitative judgement made for Receptor 4 above	As above	Negligible and unchanged from the original ES.	No
Operation	18	Westway level	Westway (westbound lane)	'Able-bodied Access'	No change from original location/use	As per qualitative judgement made for Receptor 4 above	As above	Negligible and unchanged from the original ES.	No
Operation	17	Westway level	Westway (westbound lane)	'Able-bodied Access'	No change from original location/use	As per qualitative judgement made for Receptor 4 above	As above	Negligible and unchanged from the original ES.	No

Summer Season

'Summer' season results on the proposed outdoor terraces are reported in the text and table below. As other areas are intended to be used on all-year basis, the assessment of significance at receptors within these areas is based on the 'worst season' only (as reported in the previous section).

- Eastern pavilion terrace:** Under the amended proposals, a new terrace for use by office workers has been introduced on the East pavilion roof at Level 01, adjacent to 3 Kingdom Street, and is intended to include outdoor seating spaces. This area will be exposed to the prevailing winds, and its usability for outdoor seating is expected to be limited to good weather days. Design interventions in the form of a louvered parapet (where the width of each louver is 0.75m and the height is 3.5m, and individual louvers are spaced at 2.25m), and landscaping features along the perimeter of the terrace may help to provide localised sheltering to the seating areas. However, without mitigation, the local windiness on the terrace may exceed the applicable criteria for outdoor seating use. Additional mitigation, such as a roof pergola, has therefore been recommended in the section that follows to provide protection from the upper level winds as downdrafted by the building façade and to help extend usability of the terrace in good weather days if found desirable. It shall be noted though that the usability of outdoor seating areas are expected to be naturally limited by other environmental variables than wind, e.g. temperature, sun exposure, precipitation. It is proposed that details of such mitigation will be verified through wind tunnel testing, which is recommended to be secured by planning condition. These mitigation measures are discussed in more detail later in this ES Addendum chapter.
- Mezzanine terrace:** Under the amended scheme, a new western mezzanine terrace is proposed for use by office workers, including outdoor seating spaces. This area was previously intended as an unused roof space, and wind speeds were therefore not measured in the original wind tunnel study. The terrace is directly exposed to prevailing winds which are downdrafted by the western façade, and its usability for outdoor seating is expected to be limited to good weather days. Without mitigation, the local windiness on the terrace may exceed limits the applicable criteria for outdoor seating use. Additional mitigation has therefore been recommended later in this chapter to help extend usability for outdoor seating on good weather days if found desirable, for example a roof pergola or denser landscaping.

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Windiness levels at the proposed entrance to the terrace may also be in excess of ‘Standing’ limits (as acceptable for entrance use). As set out in the mitigation section later in this chapter, a careful choice of door system to manage operational issues is recommended.

- **Upper terraces (level 18 and 19):** Amendments have been made to the upper level terraces since the wind tunnel studies were undertaken and ES chapter completed. A reduced extent of the terrace is currently proposed. A glazed balustrade with total height of 2m above finished terrace level is proposed. Landscaping features are included along the south-western perimeter of the terrace. It is expected that in presence of such measures, windiness levels on the terrace will remain acceptable for general access; the usability of the terrace for outdoor seating use may be limited to good weather days only. Without mitigation, the local windiness on the terrace may exceed the applicable criteria for outdoor seating use. Additional mitigation has therefore been recommended later in this chapter to help extend usability for outdoor seating in good weather days if found desirable, for example landscaping or hedging to shelter seating areas. It should be noted that the usability of outdoor seating areas may naturally be limited by other environmental variables than wind, e.g. temperature, sun exposure, precipitation.

PHASE	RECEPTOR	LEVEL	ORIGINAL LOCATION/USE (ORIGINAL ES)	ORIGINAL MEASURED CONDITIONS (ORIGINAL ES)	UPDATED LOCATION/USE (UNDER AMENDED SCHEME)	QUALITATIVE JUDGEMENT ON UPDATED WIND CONDITION (UNDER AMENDED SCHEME)	DESIRED CRITERION	SIGNIFICANCE PRE-MITIGATION	MITIGATION PROPOSED?
Outdoor Terraces									
Operation	200	Mezzanine	Unused roof space on mezzanine level along the western side of 5 Kingdom Street.	N/A (Wind speeds were not measured locally as part of the wind tunnel studies which were carried out in support of the ES as the space was proposed to be unused.)	Under the amended scheme, this area at mezzanine level is proposed for use as a roof terrace. It is intended to be used by office workers and will include outdoor seating spaces.	Without mitigation, the local windiness on the terrace may exceed the applicable criteria for outdoor seating use. Windiness levels at the proposed entrance to the terrace may also be in excess of ‘Standing’ limits for entrance use	‘Standing’ for short term outdoor seating ‘Standing’ for entrance	Likely Minor or Moderate adverse at outdoor seating areas Likely Minor or Moderate Adverse at entrance	Yes
Operation	201	Level 01	Unused roof space on Level 01 on the eastern pavilion	N/A (Wind speeds were not measured locally as part of the wind tunnel studies which were carried out in support of the ES as the space was proposed to be unused.)	In the amended scheme, this area on the eastern pavilion is proposed for use as a roof terrace. It is intended to be accessed by office workers and to include outdoor seating spaces.	Without mitigation, the local windiness on the terrace may exceed the applicable criteria for outdoor seating use	‘Standing’ for short term outdoor seating	Likely Minor or Moderate adverse at outdoor seating areas	Yes
Operation	202-204	Level 19	Office terrace at Level 19	‘Sitting’ to ‘Standing’	The upper level terraces have undergone some design development since the wind tunnel studies, and a reduced extent of the terrace is currently proposed.	Without mitigation, the local windiness on the terrace may exceed the applicable criteria for outdoor seating use	‘Standing’ for short term outdoor seating	Likely Minor or Moderate adverse at outdoor seating areas	Yes
Operation	106-111, 112-122, 150-151	Level 18 and 19	Office terrace at Level 18 and 19	‘Sitting’ to ‘Business Walking’	The upper level terraces have undergone some design amendments since the wind tunnel studies were undertaken, and a reduced area of terrace is now proposed. These receptors are no longer included within the scheme.	N/A	N/A	N/A	N/A

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6.7 MITIGATION & ENHANCEMENT MEASURES

Both the original mitigation measures that were identified for the original ES scheme and that remain relevant and additional mitigation measures that is recommended as part of the amended scheme are set out in the tale below.. Possible effects being mitigated and the expected wind conditions post mitigation are described.

PHASE	POSSIBLE EFFECT BEING MITIGATED	MITIGATION MEASURE	HOW SECURED / TRIGGER	LIKELY CONDITIONS POST - MITIGATION	ADVERSE/BENEFICIAL
Identified for the original ES scheme (and remain relevant under the amended scheme)					
Operation	Exceedance of distress limit for ‘General Public Access’ in the undercroft located on the south side of 3 Kingdom Street (receptor no. 81). This is not suitable for intended cycling use.	Louvered wall on the perimeter of the undercroft to the south of 3 Kingdom Street. The individual louvers are to be oriented perpendicular to the prevailing south west winds (e.g. NW to SE).	Development of mitigation via wind tunnel testing to be secured by planning condition	“General Public Access”	Negligible
Operation	‘Strolling’ conditions at the main entrance to 3 Kingdom Street (receptor no. 94). Local windiness is in excess of the ‘Standing’ limit for entrance use.	Addition of hedges or trees in pots the western side of the entrance	Development of mitigation via wind tunnel testing to be secured by planning condition	Likely “Standing”	Beneficial
Operation	‘Strolling’ conditions at the middle and eastern entrances to 4 Kingdom Street (receptors no. 92, 93). Local windiness is in excess of the ‘Standing’ limit for entrance use.	Addition of denser planting in pots than the planting tested at this location in the wind tunnel (see Section 8.5). Rectangular planting boxes with bushes are proposed at this stage.	Development of mitigation via wind tunnel testing to be secured by planning condition	Likely “Standing”	Beneficial
Operation	Likely exceedance of distress limit for ‘General Public Access’ within the passage between 4 and 5 Kingdom Street where a bicycle parking is currently proposed (receptor no. 146).	Addition of denser landscaping to the south of the bicycle parking space or enclosure to the parking space.	Development of mitigation via wind tunnel testing to be secured by planning condition	“General Public Access”	Negligible
Identified for the amended scheme					
Operation	Windiness levels in excess of acceptable limits for outdoor seating on the eastern roof pavilion roof terrace (receptor no. 201).	Denser landscaping or a roof pergola is recommended to extend usability of the terrace for outdoor seating in good weather days if found desirable.	Development of mitigation via wind tunnel testing to be secured by planning condition	‘Standing’	Negligible
Operation	Windiness levels in excess of acceptable limits for outdoor seating and entrance use on the western mezzanine terrace (receptor no. 200).	Denser landscaping or a roof pergola is recommended to extend usability of the terrace for outdoor seating in good weather days if found desirable. Careful choice of door system to manage operational issues	Development of mitigation via wind tunnel testing to be secured by planning condition	‘Standing’	Negligible
Operation	Windiness levels in excess of acceptable limits for outdoor seating on the upper terrace at level 19.	Denser landscaping or a roof pergola is recommended to extend usability of the terrace for outdoor seating in good weather days, if found desirable.	Development of mitigation via wind tunnel testing to be secured by planning condition	‘Standing’	Negligible

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6.8 ASSESSMENT POST-MITIGATION

PHASE	RECEPTOR	RESIDUAL IMPACT	RESIDUAL EFFECT					
			SIGNIFICANCE	ADV/BEN	ST/MT/LT	D/IND	P/T	R/IRR
Operation	92 Middle entrance to 4 Kingdom Street	With the proposed mitigation it is anticipated that the local windiness would be reduced to acceptable 'Standing' levels for entrance use	Negligible	BEN	LT	D	P	IRR
Operation	93 Middle entrance to 4 Kingdom Street	With the proposed mitigation it is anticipated that the local windiness would be reduced to acceptable 'Standing' levels for entrance use	Negligible	BEN	LT	D	P	IRR
Operation	94 Main entrance to 3 Kingdom Street	With the proposed mitigation it is anticipated that the local windiness would be reduced to acceptable 'Standing' levels for entrance use	Negligible	BEN	LT	D	P	IRR
Operation	Within the undercroft, along the south side of 3 Kingdom Street (receptor no. 81)	With the proposed mitigation it is anticipated that the distress limit for 'General Public Access' would be met within the undercroft. This is required for safe pedestrian and cyclist access	Negligible	BEN	LT	D	P	IRR
Operation	Cyclists and pedestrians within the passage between 4 and 5 Kingdom Street at ground level (receptor no. 146)	With the proposed mitigation it is anticipated that the distress limit for 'General Public Access' would be met locally. This is required for safe pedestrian and cyclists access	Negligible	BEN	LT	D	P	IRR
Operation	Outdoor seating within the eastern pavilion roof terrace (receptor no. 201)	With the proposed mitigation it is anticipated that comfort limits for outdoor seating may be met in good weather days.	Negligible	BEN	LT	D	P	IRR
Operation	Outdoor seating within the western mezzanine roof terrace (receptor no. 200)	With the proposed mitigation it is anticipated that comfort limits for outdoor seating may be met in good weather days.	Negligible	BEN	LT	D	P	IRR
Operation	Outdoor seating within the upper terrace at level 19 (receptors no. 202-204)	With the proposed mitigation it is anticipated that comfort limits for outdoor seating may be met in good weather days.	Negligible	BEN	LT	D	P	IRR

Key: ADV/BEN = Adverse/Beneficial; ST/MT/LT = Short-term/Medium-term/Long-term; D/IND = Direct/Indirect; P/T = Permanent/Temporary; R/IRR = Reversible/Irreversible

6.9 INTER-PROJECT CUMULATIVE SCHEME IMPACTS

The cumulative schemes considered in the EIA, as agreed with WCC as part of the scoping process, were listed in Table 2.3 in Chapter 2 of the ES. 1A Sheldon Square, 280m to the east of the site, was the only cumulative building within the modelled test radius. This cumulative scheme was included within the assessments reported in the ES. Given its distance from the proposed building, at Ground Floor Level and above, it was considered unlikely to affect windiness in and around the application site. The assessment results reported in the ES were therefore considered to be representative of both the proposed development scenario and the proposed development + cumulative scheme scenario.

The updated list of cumulative schemes as relevant for the amended ES scheme is provided in Table 3.1, Chapter 3 of this ES Addendum. Except for 1A Sheldon Square which (as noted above) has been modelled within the wind tunnel test radius as part of the ES assessment, other cumulative schemes remain outside such radius, and are deemed to have no impact on the local windiness around the amended ES scheme. As such, the cumulative scheme impacts as reported in the original ES remain valid for the amended ES scheme.

7 SUMMARY & CONCLUSIONS

7.1 INTRA-DEVELOPMENT CUMULATIVE EFFECTS

The only residual effects reported in the original ES, the significance of which is expected to change as a result of the scheme amendments, are the following operational phase effects set out below.

- Overshadowing effects on the private garden at the rear of 25 Westbourne Terrace Road – effect significance has increased from **Minor Adverse** to **Moderate Adverse**;
- New office outdoor amenity terrace locations introduced under the amended scheme (Receptor 200 (Mezzanine terrace), Receptor 201 (Level 1 terrace), Receptors 202-204 (Level 19 terrace) – effect significance **Negligible**; and
- Office outdoor amenity terrace locations included under original 2019 proposals, which have been removed under the amended scheme (Receptors 106-111, 112-122, and 150-151 (previous Level 18 & 19 terrace) – **effect significance previously reported as Negligible. Now removed from assessment results.**

The intra-development cumulative effects of the original 2019 scheme are set out in Tables 9.1 and 9.2 in Chapter 9 in Volume II of the original ES. All intra-development cumulative effects reported in these tables remain valid, with the exception of effects on one receptor that have changed as a result of the changes to the residual effects of the amended scheme, set out in the bullet points above. The intra-development cumulative effect that has changed are set out in Table 7.1 below.

Table 7.1
Update to Operational Phase Intra-Development Effects Assessment
Reported in Table 9.2, Chapter 9, ES Volume II

SENSITIVE RECEPTOR / RECEPTOR GROUP	OPERATIONAL RESIDUAL EFFECTS	INTRA-DEVELOPMENT CUMULATIVE EFFECT POTENTIAL?	POTENTIAL FOR INTRA-DEVELOPMENT CUMULATIVE EFFECT INTERACTION?
25 Westbourne Terrace Road, including private garden	<u>Daylight, Sunlight & Overshadowing</u> Reduction in daylight amenity – Minor Adverse Reduction in sunlight amenity – Moderate Adverse Overshadowing – Moderate Adverse	Yes	These effects are considered to have the potential to interact to produce an intra-development cumulative effect. Considering the collective weight of the effects’ significance and nature, a Minor to Moderate Adverse effect is anticipated. <u>Note - this is an increase in the intra-development effect of the scheme on this receptor from Minor Adverse for the original 2019 scheme to Minor to Moderate Adverse for the amended scheme.</u>

7.2 MITIGATION MEASURES

All mitigation measures previously identified in the original ES remain valid. Additional mitigation measures have also been recommended within this ES Addendum, which are shown in Table 7.2 below.

Table 7.2
Summary of Additional Mitigation Measures

POSSIBLE EFFECT BEING MITIGATED/ENHANCED	MITIGATION MEASURE	HOW SECURED / TRIGGER
Windiness levels in excess of acceptable limits for outdoor seating on the eastern roof pavilion Level 1 terrace (receptor no. 201).	Denser landscaping or a roof pergola is recommended to extend usability of the terrace for outdoor seating in good weather days if found desirable.	Development of mitigation via wind tunnel testing to be secured by planning condition
Windiness levels in excess of acceptable limits for outdoor seating and entrance use on the western mezzanine terrace (receptor no. 200).	Denser landscaping or a roof pergola is recommended to extend usability of the terrace for outdoor seating in good weather days if found desirable. Careful choice of door system to manage operational issues	Development of mitigation via wind tunnel testing to be secured by planning condition
Windiness levels in excess of acceptable limits for outdoor seating on the upper terrace at level 19.	Denser landscaping or a roof pergola is recommended to extend usability of the terrace for outdoor seating in good weather days, if found desirable.	Development of mitigation via wind tunnel testing to be secured by planning condition

7.3 RESIDUAL EFFECTS

The only residual effects reported in the original ES, the significance of which is expected to change as a result of the scheme amendments, are the following effects during the operational phase:

- Contributions towards the delivery of affordable housing and social and community infrastructure – effect significance has increased from **Moderate Beneficial** to **Major Beneficial**;
- The inter-cumulative effect of economic regeneration benefits to the wider area has been added to take account of the transboundary effects and would result in a **Major Beneficial** effect;
- Overshadowing effects on the rear garden of 25 Westbourne Terrace Road – effect significance has increased from **Minor Adverse** to **Moderate Adverse**;
- New office outdoor amenity terrace locations introduced under the amended scheme (Receptor 200 (Mezzanine terrace), Receptor 201 (Level 1 terrace), Receptors 202-204 (Level 19 terrace) – effect significance **Negligible**; and

- Office outdoor amenity terrace locations included under original 2019 proposals, which have been removed under the amended scheme (Receptors 106-111, 112-122, and 150-151 (previous Level 18 & 19 terrace) – effect significance previously reported as Negligible. **Now removed from assessment results.**

The significance of all other residual effects of the original 2019 scheme reported in the original ES remains unchanged.

8 CITATIONS

1. **HM Government.** The Town and Country Planning (Environmental Impact Assessment) Regulations 2017. London : s.n., 2017. SI 2017/571.

2. **Institute of Environmental Management and Assessment.** Special Report – The State of Environmental Impact Assessment Practice in the UK. s.l. : IEMA, 2011.