

**United Kingdom Holocaust Memorial
and Learning Centre**

Environmental Statement (Volume 1)
Revised Non-Technical Summary
April 2019

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1. Introduction

This Non Technical Summary replaces the Non Technical Summary (December 2018) which accompanied the Secretary of State for Housing, Communities and Local Government's planning application document (Ref:19/00114/FULL submitted to Westminster City Council on 7th December 2018 and formally registered by the Council on 7th December 2018).

Following submission of the planning application, it has been necessary to review the planning application proposals and make a number of design modifications to the Scheme. These amendments have given rise to the need to re-assess the predicted effects of the Scheme and update the ES.

This summary also takes account of consultee comments on the original ES (December 2018) and key changes in planning policy, notably the publication of the National Planning Policy Framework in March 2019.

Summary of amendments to the Scheme

The amendments to the Scheme are summarised as follows:

- Reduction in the overall perimeter of the proposed learning centre which includes change in shape of the northern and western walls.
- Reduction in the footprint area of the learning centre by 213 m² with this area being added to the mezzanine level. The building footprint of the learning centre will still retain the current 3,258 m² area.
- Reduction in materials required for excavation from approximately 30,000 m³ to 27,320 m³.
- Changes to the design of the entrance pavilion to create a lighter, more transparent element which enhances and complements the existing gardens. This includes changes in height (reduced by 1 m) and area.
- Redesign of the memorial courtyard to reflect the changes to the entrance pavilion.
- Redesign and relocation of the skylight, approximately 13 m north.
- Internal developments to the exhibition space in the basement and mezzanine levels within the learning centre. These include, extended mezzanine floor, stair and vertical lift access and ceiling and acoustic improvements.

The amendments to the Scheme have not changed the predicted effects set out in the original ES (December 2018).

Context

In 2014, the Prime Minister's cross-party Holocaust Commission set out to establish what should be done to ensure that the memory of the Holocaust is preserved and that the lessons it teaches are never forgotten. In 2015, a report was subsequently produced by the Commission, outlining four key recommendations; including:

- A striking and prominent new National Memorial;
- A World-Class Learning Centre at the heart of a campus driving a network of national educational activity (to be co-located within the new National Memorial);
- An endowment fund to secure the long-term future of Holocaust Education – including the new Learning Centre and projects across the country; and
- An urgent programme to record and preserve the testimony of British Holocaust survivors and liberators.

Following the publication of the report, the UK Holocaust Memorial Foundation (UKHMF) was set up to take forward these recommendations. Victoria Tower Gardens was selected as the site for the new Memorial and Learning Centre following a site selection process. The gardens are adjacent to the Palace of Westminster in London. An aerial view of the site can be seen in Figure 1-1.



Figure 1-1 - An aerial view of Victoria Tower Gardens.

Following an international design competition, Adjaye Associates, Ron Arad Architects and Gustafson Porter + Bowman were awarded the winning concept design, which has been further developed by the design team in consultation with key stakeholders. Figure 1-2 shows the design submitted as part of the planning application in December 2018 and Figure 1-2 shows the updated version from April 2019.

The UK Holocaust Memorial and Learning Centre (the Scheme) will provide a single place for visitors to reflect on the impact of the Holocaust in the UK and Britain's response to it. The learning centre will challenge visitors to confront hatred and prejudice by addressing the British history of the Holocaust and subsequent genocides.

The Secretary of State for Housing, Communities and Local Government is leading the development of the new Memorial and Learning Centre and is supported in this by United Kingdom Holocaust Memorial Foundation in an advisory capacity.

This Environmental Statement (ES) for the proposed Memorial and Learning Centre (referred to as the Scheme in this document), has been submitted by the Secretary of State for Housing, Communities and Local Government in support of the planning application for the project.

Background

The Scheme requires an Environmental Impact Assessment in line with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 and an Environmental Statement which reports on the predicted significant environmental effects of the Scheme. The full Environmental Statement (ES) for the Scheme comprises four volumes in total, as follows:

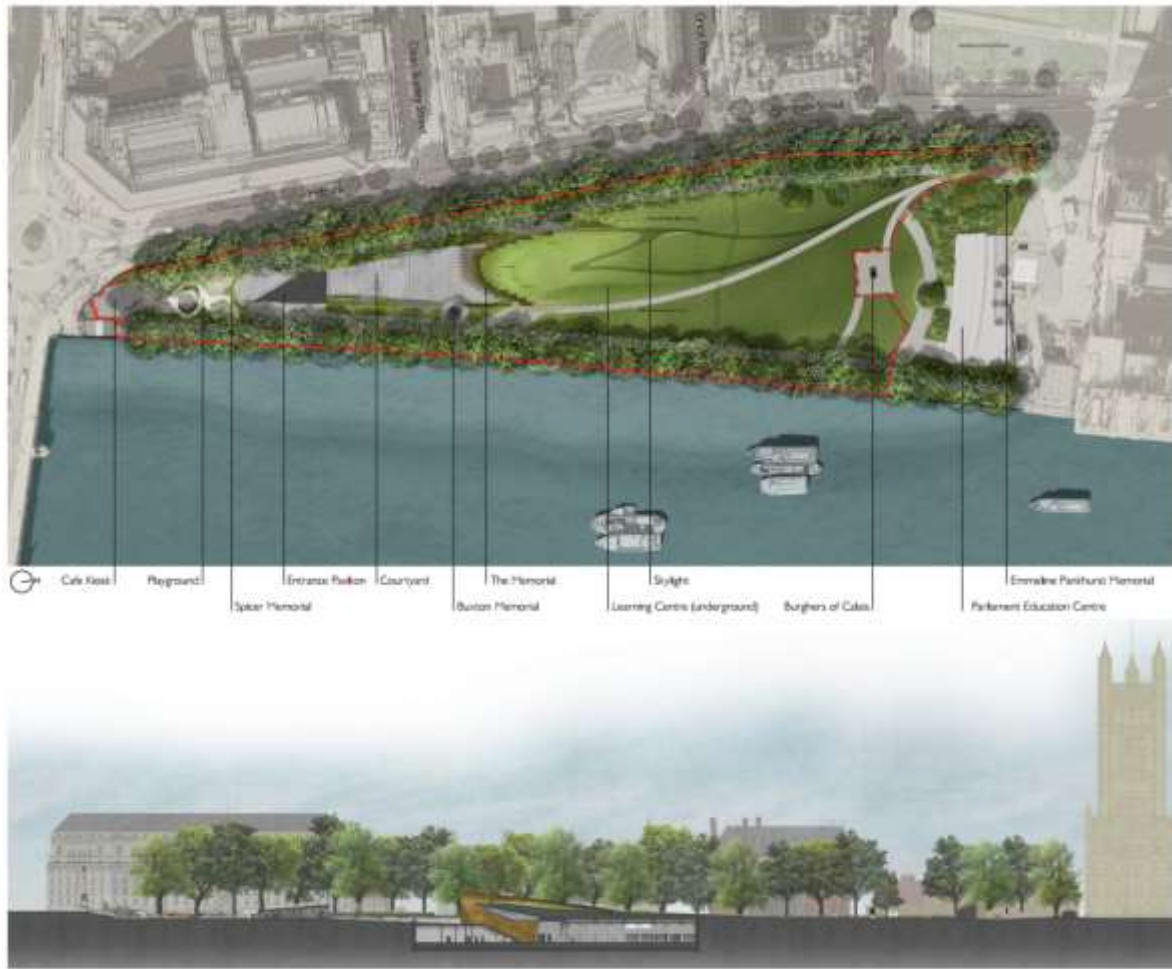
- The Environmental Statement Non-Technical Summary (Volume 1);
- The Environmental Statement Main Text setting out the environmental assessment in chapters (Volume 2);
- The Environmental Statement Built Heritage, Townscape and Visual Assessment (Volume 3);
- The Environmental Statement Figures (Volume 4); and
- The Environmental Statement Appendices (Volume 5).

The ES presents a description of the Scheme, the alternatives considered, the environmental setting of the area and the potential significant effects of the Scheme on the environment and local community. This document provides a summary of the ES in non-technical language. The full Environmental Statement and supporting documents can be viewed online at

<https://idoxpa.westminster.gov.uk/online-applications/applicationDetails.do?keyVal=PL0CVYRP27O00&activeTab=summary>



Figure 1-2 - Planning Application December 2018 (dotted red line indicates planning application Scheme boundary)



Current Masterplan proposal and Site section

Figure 1-3 – Planning Application April 2019 (dotted red line indicates planning application Scheme boundary)

2. Environmental Context

Situated in the heart of central London, the site for the UK Holocaust Memorial and Learning Centre is a significant part of the historic, political and cultural fabric of London and the United Kingdom. The proposed site at Victoria Tower Gardens is strategically located on the north bank of the River Thames in the City of Westminster and is flanked by the Palace of Westminster to the north and Lambeth Bridge Road at the southern end. The location of the Scheme is identified in Figure 2-1.

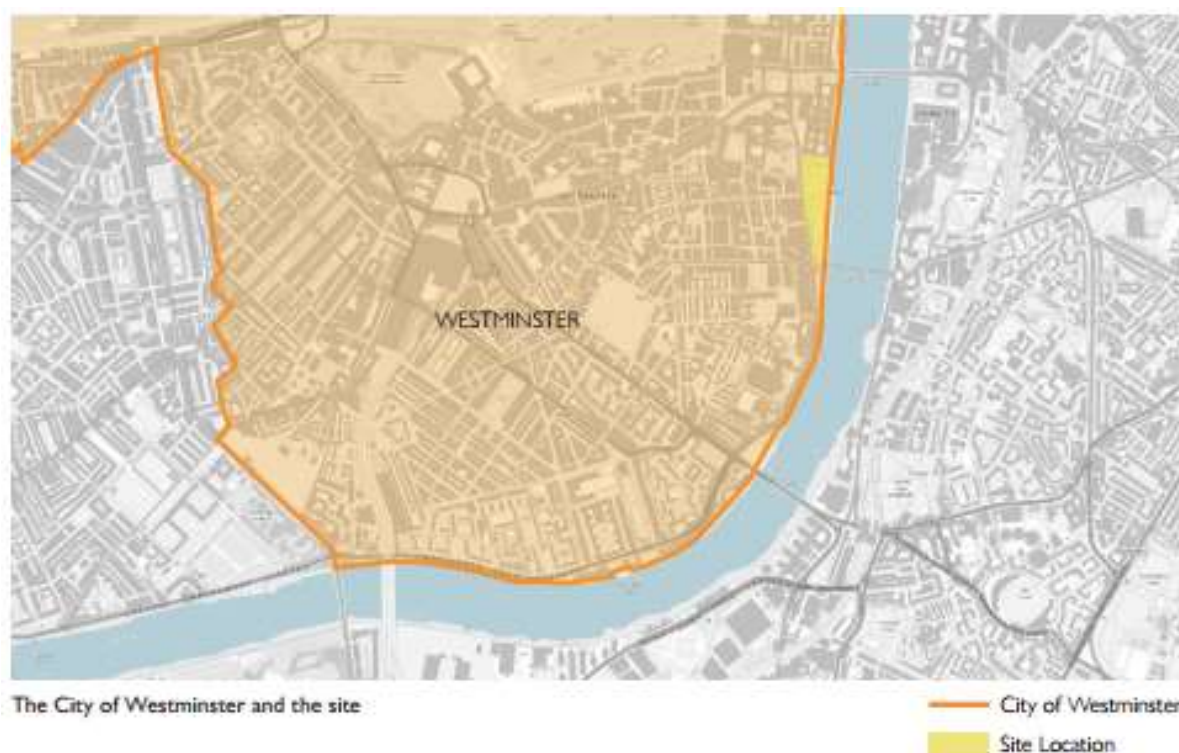


Figure 2-1 - Location of the Scheme

Victoria Tower Gardens is located in the City of Westminster and has been an important public space for over a century, with physical and visual connectivity to important historic and modern monuments, open spaces and key buildings such as Westminster Abbey, Parliament Square, River Thames and the London Eye. The importance of the site's location adjacent to the Palace of Westminster World Heritage Site (WHS) makes it crucial to understand the history of the site, its uses and how its relationship to the Palace of Westminster has evolved over time. Figure 2-2 illustrates the surrounding area.

The Gardens form an elongated triangular space on a North – South axis with the Houses of Parliament. Both long sides of the Garden are lined with a row of majestic London Plane trees. These frame views to the Thames on the east side and screen the presence of buildings and the road on Millbank on the west side. Figure 2-3 illustrates the environmental character of the Gardens.



1 - Westminster Palace



2 - Westminster Abbey



3 - St. Margaret's Church



4 - Embankment



5 - Parliamentary Education Centre



6 - Victoria Tower Lodge and gates to Black Rod's Garden

Figure 2-2 - Surrounding features of the Scheme



View 1 • Towards Emmeline Pankhurst Memorial



View 2 • Towards Burghers of Calais Memorial



View 3 • Towards Buxton Memorial



View 4 • Towards Horseferry Playground



View 5 • Towards North along the riverbank



View 6 • Victoria Tower Gardens space towards Parliament

Figure 2-3 - The Site Today

3. The Project

3.1. Description of Scheme

The design proposal for the Scheme is to create a nationally significant landmark for current and future generations to remember, reflect and learn on the history of the Holocaust in Britain. The design is drawn from extensive research into Victoria Tower Gardens and the subject matter, and seeks to respect its context, honour the weight of its responsibility, and inspire its visitors to strive to draw meaning and purpose out of tragedy.

In terms of the location of the Scheme, the design has been influenced by careful understanding of the diverse use of the Victoria Tower Gardens. The design will ensure the Scheme not only allows the current activities in the Gardens to remain, but also enhances the gardens users' experience. The Scheme design entails a subtle shift in the landscape, which allows for all existing memorials within the gardens to remain visible. The Holocaust Memorial and Learning Centre footprint will only reduce the existing accessible open/green space area of the Gardens by approximately 7%.

The Scheme includes a Memorial, Learning Centre, entrance pavilion, large courtyard area and café. Key elements of the Scheme are shown on the Site Plan below which present the overall layout of the Scheme. A summary of the Scheme is outlined in Figure 1-2 above.

The Memorial itself will comprise of 23 bronze-clad concrete 'fins', set vertically into the ground on a curving alignment. The highest point of the Memorial will be approximately 10m above the existing ground level, as illustrated in Figure 3-1 and Figure 3-2 below.



Figure 3-1 - The 23 proposed bronze-clad concrete 'fins'



Figure 3-2 – Proposed view of the Scheme with Westminster in the background

Within the area encompassed by the curvature of the fins, the flat parkland will be re-landscaped to form a grassed slope that subtly rises, as shown in Figure 3-3. As a result, only the tips of the fins are visible from the northern portion of the Gardens.



Figure 3-3 - View of the sloping grassland looking South

The spaces between the fins of the Memorial will form the entrance to the Learning Centre, which will be located entirely underground over two levels; a mezzanine level and a basement. This will require excavation of the site to a depth of approximately 10m. To the south of the bronze-clad Memorial structure, a sunken (outdoor) courtyard will form the main entrance plaza. Visitors will buy their tickets online and check in at the entrance pavilion and proceed through security check before entering the courtyard.

3.2. Construction

Construction of the Scheme is currently planned to commence in Spring 2020 and is estimated to last up to 30 months. A Construction Management Plan (CMP) has been produced for the Scheme and includes further details on the construction method and programme.

Construction Method

The proposed stages of construction are as follows:

- Archaeological investigation requiring trial pits to the size and requirements of Historic England and enabling works to include diversion of below ground services and re-location of Spicer Memorial;
- Establishment of the construction site, including site access, services diversions, setup of offices and welfare facilities, and installation of tree protection to safeguard retained trees in the Gardens;
- Topsoil will be stripped from the working area and removed for storage off-site. This will be used in the post-construction reinstatement of the Gardens;
- Completion of piling works to form a deep, supporting steel wall in the ground around the perimeter of the footprint of the Learning Centre. Excavation of the space for the new Learning Centre will take place within this pile line;
- On completion of excavations, the underground space will be formed by pouring concrete to create a reinforced base slab and walls, with the internal construction completed once the foundation and walls are complete; and
- Finally, construction of bronze fins forming the Memorial, ancillary building, the entrance pavilion café, completion of courtyard and hard and soft landscaping will be completed.

Construction Logistics

Hoardings around the construction site will be erected to ensure public safety. They will be well maintained, provide relevant informative to the public and serve to minimise construction noise.

It is anticipated that road closures will not be required during construction and all bus stops will be retained. Construction vehicles will access the Gardens through three of the five gardens entrances and will be escorted through these entrances using temporary barriers. Vehicles will be on site for short durations to load and unload materials.

Protection of Trees

Vertical tree barriers will be erected along the edge of the proposed groundworks and development footprint to create a construction exclusion zone to protect the London Plane trees within the Gardens.

Community Engagement

Engagement with local communities, surrounding neighbours and schools will be undertaken throughout the detailed design and consultation phase to identify opportunities to enhance the Scheme and develop joint ventures.

A community liaison officer will be appointed to act as a single point of contact and respond to any issues raised by local communities and other stakeholders. A community liaison forum will be established with other local construction projects to co-ordinate activities and minimise impact in the surrounding area.

4. Alternatives

Site Alternatives

In January 2015, the Prime Minister's Holocaust Commission originally identified three potential sites for the Holocaust Memorial and Learning Centre. The sites were chosen because of their stand-out location that would ensure the importance and resonance of the Memorial and Learning Centre. These were:

- Potters Field, next to the Mayor of London's office;
- Millbank Tower; and
- Imperial War Museum (IWM).

However, after many discussions, the UKHMF Board decided that none of these sites were suitable and all three sites were discounted.

In August 2015, the UKHMF Board appointed CBRE, a property consultants firm, to search for a suitable site within Central London's tourist / museum areas and in January 2016, CBRE identified twenty-four sites which were considered by the UKHMF but none were suitable.

Later in January of 2016, the Victoria Tower Gardens was subsequently selected by the UKHMF board as the outstanding candidate site for the following reasons:

- It provides an iconic location right outside the Houses of Parliament, facing the Thames River front;
- The relevance of the Gardens as a commemoration to Britain's national conscience, already containing significant memorial sculptures, marking momentous historic events, with significance for the struggle for human rights, that remain relevant today and will do so in the future;
- It is visually prominent and located next to one of the most visited parts of London. It also has good transport links with major tube stations and bus routes within easy reach;
- The resonance of being next to Parliament and on the timeless banks of the Thames is exceptional; and
- Under the shadow of Victoria Tower, the Holocaust Memorial and Learning Centre would question the impacts of the Holocaust and subsequent genocides on our own Parliament.

On the 27th of January, the decision to select Victoria Tower Gardens as the United Kingdom Holocaust Memorial and Learning Centre was announced by the then-Prime Minister, David Cameron, at Prime Minister's Questions.

Design Alternatives

In September 2016, a competition was held to design the Holocaust Memorial and Learning Centre. The competition received 92 entries in total. Ten design proposals were then shortlisted and displayed to the public in February 2017.

In October 2017, the winning design by Adjaye Associates was announced. The design was chosen because it reflected extensive research into the site and the objectives of the UKHMF in developing the Holocaust Memorial and Learning Centre. The design also ensures the Memorial and Learning Centre fits within the current surroundings within the gardens. Since the winning design was announced, further improvements to the initial design occurred which include:

- Changes to the footprint and layout of the Memorial and Learning Centre to ensure tree roots and their canopies are protected;
- New pathways within the gardens to ensure connections around the gardens are not fragmented as they currently are;
- Enhancing existing garden furniture that has become degraded over time and considering the options to improve the ponding in the gardens during winter; and
- Enhancing the existing playground.

5. Assessment of Significant Effects

5.1. Introduction

An Environmental Impact Assessment (EIA) is the process for identifying the likely environmental effects (positive and negative) of proposed developments, and their significance, before development consent is granted.

The following environmental topics have been assessed as part of this EIA:

- Air Quality;
- Built Heritage, Townscape and Visual;
- Archaeology;
- Population and Human Health;
- Soils, Geology and Hydrogeology;
- Biodiversity;
- Water Quality and Flood Risk;
- Traffic and Transport;
- Material Assets and Climate Change; and,
- Cumulative Effects.

These topics outline the locations of key environmental features and constraints for this Scheme some of which include:

- The Scheme lies within the Grade II Registered Victoria Tower Gardens that contain four Listed structures and is adjacent to the Westminster World Heritage Site;
- The gardens are within Westminster's borough-wide Air Quality Management Area (AQMA);
- The gardens are within Flood Zone 3;
- There is potential for archaeological remains to arise due to excavation of the new basement;
- There is potential for mobilisation of existing contamination within the Scheme;
- Important ecological features including the River Thames and the Tidal Tributaries, various habitats within the gardens and commuting and foraging bats; and
- The gardens are a public open space that attract many visitors and tourists each day.

The purpose of the ES is to help the decision maker, statutory consultees, other stakeholders and the public to properly understand the predicted environmental effects and the scope for reducing them, before a decision is made as to whether to permit the development. A summary of each topic assessments is provided below.

Significance can be adverse or beneficial and both types of effects have been considered within the assessments. The levels of the relevance of the impacts are categorised as follows:

- Major (adverse / beneficial);
- Moderate (adverse / beneficial);
- Minor (adverse / beneficial); and
- Negligible / no effect.

Major and moderate effects are generally regarded as being significant whereas minor and negligible effects are not significant.

5.2. Air Quality

5.2.1. Baseline

Westminster City Council has declared a borough wide AQMA – areas where national air quality objectives have been breached, which includes Victoria Tower Gardens with the main source of pollution resulting from road emissions. The main source of key air pollutants around the gardens are mainly from emissions from road traffic using Millbank and with minor contributions from traffic using Horseferry Road and Lambeth Bridge.

5.2.2. Construction

Construction activities have the potential to generate dust and emissions, which include site clearance and preparation works, earthworks, movements of vehicles and construction traffic and construction of buildings. It is likely most dust would be deposited in the area immediately surrounding the source which would include the gardens, residential and commercial buildings nearby and construction routes. Mitigation measures including implementation of a dust management plan will be undertaken that outlines best practice dust management including onsite monitoring and inspections, covering vehicles entering and leaving the site and the use of water-assisted dust sweepers will help to reduce impacts on air quality.

Summary of construction assessment:

- With the implementation of mitigation measures, no significant effects are likely from dust and construction emissions.

5.2.3. Operation

During operation of the Scheme, the number of vehicles expected to result from the operations of Holocaust Memorial and Learning Centre are anticipated to be minimal (27 light duty vehicles (LDV) and 14 heavy duty vehicles (HDV)). The number of vehicles do not exceed the air quality thresholds of 100 LDV and 25 HDV per day and therefore no significant effects are expected from vehicle emissions. The onsite energy generation to provide heating and cooling for the Learning Centre will have a capacity of less than 450kW which in accordance with guidance is not considered to cause any noticeable impacts. A green travel plan is proposed to be developed for the Scheme to encourage cycling, promote the use of public transport and low emissions and electric vehicles.

Summary of operation assessment:

- No significant effects to air quality are likely.

5.3. Built Heritage, Townscape and Visual

5.3.1. Baseline

Heritage assets that are located near to the Scheme and have been included in the assessment include:

- The Palace of Westminster and Westminster Abbey including St Margaret's Church World Heritage Site;
- The Houses of Parliament and the Palace of Westminster, itself a Grade I Listed Building;
- Victoria Tower Gardens (Grade II Registered Park and Garden);
- The Statutory Group of the Burghers of Calais (Grade I Listed);
- Buxton Memorial Fountain (Grade II*);
- Lambeth Bridge and attached parapets, light standards, associated walls to approaches and obelisks (Grade II);
- The River Embankment from the Houses of Parliament to Lambeth Bridge (Grade II); and
- The Westminster Abbey and Parliament Square Conservation Area.

The Scheme is situated within an area characterised as urban parkland, with mature trees, areas of open space and a riverside setting. Victoria Tower Gardens is important to the setting of adjacent

character areas, including that of the Westminster World Heritage Site and Parliament Square to the north, which has a contrasting, highly urbanised character.

5.3.2. Construction

During construction, impacts from activities including the erection of hoardings, earthworks, the use of machinery (including cranes) and construction traffic may result in increased noise, dust and vibration which has the potential to affect the heritage assets, townscape and the visual setting of the area. Significant impacts from construction activities and increased noise and dust, although temporary have been identified for the gardens and Buxton Memorial. Mitigation measures, including the use of hoardings to provide information about the Scheme to the public and the implementation of a Construction Management Plan (CMP) which ensures contractors will maintain safe pedestrian access and routes where possible and reinstate all working areas and access points once construction is complete, will help to reduce impacts.

Summary of construction assessment:

- A moderate (significant) effect on Victoria Tower Gardens (Grade II Registered Park and Garden), the setting of the Buxton Memorial Fountain (Grade II*) heritage assets and the townscape character of the gardens is anticipated. However, these effects will only be temporary as once construction is complete all activities will be finished, and the gardens will return to public use.
- With the implementation of mitigation measures no significant impacts are anticipated on all other heritage assets and character areas.

5.3.3. Operation

The creation of the Holocaust Memorial and Learning Centre will change the character and setting of some of the land and heritage assets in the area and the gardens will change from open lawn to a landscaped memorial in some areas. The Scheme will be an attractive, high quality addition to the collection of memorials currently located within the Gardens and careful Scheme design to respond to the sensitivities of the heritage assets within the area as well as protection of trees and improved landscaping of the gardens will complement and enhance the existing use and functioning of the gardens and reduce impacts. Although the appreciation of the Victoria Tower, in particular would be changed in some views from the south of the gardens, the opportunity to appreciate its significance would not be harmed. New views from the elevated area of landscaping will create a destination from which to appreciate the buildings from the south, and the location of a memorial close to the Houses of Parliament is an established and entirely appropriate form of development in the buildings' setting.

A moderate (significant) effect on View 13 from Dean Stanley Street towards the gardens is anticipated to remain as the bronze fins from the Memorial will block the view across the Victoria Tower Gardens and the character of the view will change from open parkland to one focussed on the built form of the memorial. This is one of 23 views assessed, the range of visual effects on relevant views span the category of moderate adverse (View no. 13) to moderate beneficial (View no. 14, 16, 17, 18, 20, 21 and 22). The assessment is included within Volume 3 of the ES.

Summary of operation assessment:

- A moderate (significant effect) on the view from Dean Stanley Street towards the gardens will remain as the bronze fins from the Memorial will interpose the view across the Victoria Tower Gardens.
- With the implementation of mitigation measures no significant impacts are anticipated on all other heritage assets and character areas.

5.4. Archaeology

5.4.1. Baseline

Victoria Tower Gardens are a Grade II Registered Park. Immediately north of the Scheme is the World Heritage Site of the Palace of Westminster and Abbey. The gardens would have historically been within the meeting point of the River Thames and River Tyburn. As a result, the underlying topography of the gardens has been caused by processes dominated by the actions of rivers.

The history of the site shows the area was converted into a public park in the early 20th century and has remained so since. Before the expansion of the gardens in the 20th century to the size it is currently, the east side of the site was within the River Thames, and from the 16th century, the western side of the site was used as wharves and docks.

The site has a high survival potential for archaeological remains. In the west area of the site, it is likely that early archaeological remains will have been partially removed by the development of wharf buildings. However, it must be accepted that these buildings are considered to be assets of historical importance in their own right. Unlike the west side, archaeological remains have remained intact as they will have been protected under the River.

5.4.2. Construction

During construction, the excavation of the new basement will completely remove any archaeological remains that may be present, which will have significant effects on archaeology. Piling as part of the construction, will also remove any archaeological remains within the area of each pile. Dewatering as part of the basement excavation, may also dry-out the surrounding alluvium which will affect the preservation of any organic remains within these deposits, resulting in significant effects. Mitigation measures including the consideration of a programme of preservation by record and ongoing consultation with the City of Westminster's Archaeological Advisor will ensure that any significant effects would be reduced.

Summary of construction assessment:

- With the implementation of mitigation measures no significant impacts on archaeology are anticipated.

5.4.3. Operation

The survival of archaeological remains will continue to be affected by the dewatering that is part of the basement excavation, into the operational phase of the Scheme which will result in significant effects. However, once the recommended mitigation measures are adopted during the construction phase, this will be sufficient in maintaining the nature and character of the archaeological remains within alluvial deposits in the area.

Summary of operation assessment:

- With the implementation of mitigation measures, no significant effects on archaeology are likely.

5.5. Population and Human Health

5.5.1. Baseline

This assessment investigated the potential effects of the Scheme on population and human health comprising socio-economic and demographic characteristics and trends, health and wellbeing characteristics including physical health, mental health and social wellbeing, and details of the natural and built environment, accessibility, and surrounding context for the Scheme.

The City of Westminster in London has a very diverse population of 252,450. The Scheme itself is within the St James Ward of the City of Westminster which reached a population of 11,495 in 2018. Key characteristics include:

- 74% of people are between 18 and 64, 14% are over 65 and 16% of families are lone parents and 26% of children receive free school meals (2011 census);
- English is spoken in 69% of homes;
- Westminster has the highest level of international migration of any place in England;
- St James's local economy hosts 219,035 jobs and 11,560 businesses, in 2011 6% of people were unemployed and 37% were classified as workless; and
- 85% of residents reported their health was good or very good in 2011.

In 2013 a study suggested that 86% of homes in St James had good access to local parks and 69% of people has used the parks in the last 3 months. Victoria Tower Gardens are a popular leisure venue, used equally by people taking advantage of the open green space, benches, play area,

toilets and refreshment kiosk, and by walkers and runners passing through while following a riverside route.

The following vulnerable population groups represent the potential receivers of the impacts the Scheme:

- Children and adolescents;
- Older people;
- People who are disabled and/or with other health problems;
- Low-income groups; and,
- Wider groups who have inactive and unhealthy lifestyles.

5.5.2. Construction

Construction activities have the potential to impact the local population including the disruption to recreational and leisure-time facilities for current users of the gardens and the potential reduction of open space and nuisance in terms of dust. However, the impacts would be temporary and would be partially mitigated through good construction practises such as ongoing communication and dust management measures. During construction, there could be beneficial impacts for low income groups in terms for work and training with employment opportunities that could provide financial security.

Summary of construction assessment:

- During the construction phase, there remains a moderate (significant) population and human health effect on existing users of Victoria Tower Gardens due to a reduction in the useable area of the park. This effect is temporary (only lasting for a portion of the construction works) and reversible: once construction is complete, all gates of the park will return to public use. This temporary residual effect on pedestrian amenity is also reported in the Transport Chapter.

5.5.3. Operation

During operation, there is a 7% reduction of green/open space within the gardens from the pavilion and the courtyard development. This will be mitigated through the establishment of enhanced gardens with significantly more flower and shrub planting, newly laid grass with proper drainage, new and enhanced seating, new paths, additional lighting and an enhanced play area. Apart from the small reduction of open space to the development, the gardens will remain freely accessible to the public, however this open space will accommodate a much higher number of visitors than at present. There will be a moderate (significant) effect experienced by existing park users because of the projected increase in footfall.

The Scheme is anticipated to have significant beneficial effects on population and human health during operation due to the improved footpaths, provision of a high-quality Holocaust Memorial and Learning Centre new and improved landscaping and lighting, potential improvements to current facilities which would improve the current physical and environmental conditions and contribute positively to physical health and social wellbeing.

Summary of operation assessment:

- There will be a moderate (significant) population and human health effect experienced by existing users of the gardens because of the projected increase in footfall. This permanent residual effect on pedestrian amenity is also reported in the Transport Chapter.

5.6. Soils, Geology and Hydrogeology

5.6.1. Baseline

The ground beneath the Scheme is made up of a combination of Made Ground (ground built up by man) and river deposits. Beneath the river deposits the main geology is clay. Groundwater is present in the river deposits.

Potential sources of contamination from historic land uses within 250m of the site include two coal wharves, a cement works, and an oil factory (details unknown), a brewery, distillery, cooperage, graveyard, and an electricity works (to the west of Lambeth Bridge between 1916 and 1940).

Potential sources of contamination from contemporary land use include three active consents for storm water overflow discharges and sewage discharge.

5.6.2. Construction

During construction, there is potential for pollution incidents to occur from site plant, alongside the disturbance of potential existing contamination during the earthworks. Other potential impacts during construction can occur through inappropriate disposal/re-use of excavated soil and encountering unexploded ordnance during excavation. Mitigation measures to reduce the effect of these measures include carrying out an intrusive ground investigation prior to construction commencing to reduce uncertainty in ground conditions and inform the disposal/re-use of excavated soils. A detailed unexploded ordnance risk assessment survey will also be undertaken.

Summary of construction assessment:

- With the implementation of mitigation measures, no significant effects are likely.

5.6.3. Operation

During the operational phase of the Scheme, there is the potential for the accumulation of ground gas in new enclosed spaces. An intrusive ground investigation will inform the appropriate gas protection measures required (if any) in the detailed design.

Summary of operation assessment:

- With the implementation of mitigation measures, no significant effects are likely.

5.7. Biodiversity

5.7.1. Baseline

There are no statutory designated sites present within the site or within the determined Ecological Zones of Influence (EZol). There is no Ancient Woodland within 500m of the site. There are two Sites of Borough Importance for Nature Conservation, three Sites of Metropolitan Importance for Nature Conservation (SMINCs) and five Sites of Local Importance for Nature Conservation.

Priority habitats of importance (HPI) within 500m of the site include intertidal mudflats HPI, Wood Pasture and Parkland, and Lowland Mixed Deciduous Woodland. Protected and notable species within the site and/or the EZol include bats, nesting bats and invertebrates.

Important ecological features have been identified as the River Thames and the Tidal Tributaries SMINC and commuting and foraging bats.

5.7.2. Construction

Potential effects on notable habitats during construction of the Scheme could include degradation of habitat due to pollution, or the disturbance effects of noise and lighting on species. Measures to reduce the construction impacts such as noise, lighting and run-off will be included in the CMP. The construction of the Holocaust Memorial and Learning Centre will cause a temporary reduction of approximately 25% (0.5 ha) of the habitats (amenity grassland and footpaths) within the gardens. The mature London Plane trees will be protected and the amenity grassland to the east and north of the site will be retained and protected. Due to lighting and noise during construction and temporary reduction of bat foraging habitat, there is potential that there may be an impact to bats however this is not anticipated to be significant.

Summary of construction assessment:

- With the implementation of mitigation measures, no significant effects to biodiversity are anticipated.

5.7.3. Operation

During operation, new lighting is to be installed as a part of the Scheme which could impact biodiversity features. The lighting strategy for the Scheme has been designed to utilise the use of ground level and directional lighting. Due to the low level of lighting to be installed, the use of directional lighting and the walls of the Thames acting as a barrier for light spill into the SMINC or

HPI, it is not expected that there will be any significant effects to the River Thames and Tidal Tributaries SMINC. Furthermore, as the lighting design follows specific guidance on lighting for bats no significant effects are anticipated on foraging bats. Due to small area and low conservation value of the habitats being permanently lost, it is not expected that there will be any significant impacts.

Summary of operation assessment:

- With the implementation of mitigation measures, no significant effects to biodiversity are anticipated.

5.8. Water Quality and Flood Risk

5.8.1. Baseline

Victoria Tower Gardens are located immediately adjacent to the River Thames, which is tidal in this location. Due to the extensive flood defences on the River Thames the gardens have a low risk of surface water flooding. In this section of the River Thames the water quality has been assessed as moderate by the Environment Agency.

5.8.2. Construction

During construction, the site establishment, construction activities, storage of materials and waste, excavation and dewatering operations all have the potential to generate impacts on surface water quality through run-off of silt or other pollutants (e.g. spilt fuel or oil from machinery and plant). These construction risks to water quality will be managed through the implementation of appropriate construction working methods, the application of good site layouts and working practices, controls on site plant and pollution response planning.

Summary of construction assessment:

- With the implementation of mitigation measures, no significant effects to water quality and flood risk are likely.

5.8.3. Operation

The risk of flooding to the Scheme from the River Thames once constructed and operational is considered to be low, given the presence of the adjacent flood defences. The development of the Scheme will result in a permanent change in land cover to the site, which is currently greenfield. The Scheme will increase the area of impermeable cover, and this will increase the rate and volume of surface water run-off, increasing the risk of surface water flooding both on the site and potentially in surrounding areas. It is not possible to eliminate flood risk entirely, so in recognition of this, a flood risk evacuation plan will be developed alongside any fire escape plan. To mitigate the increase in impermeable surfacing (and concurrent increase in surface water flood risk), an outline drainage strategy for the Scheme has been developed as part of the assessment.

Summary of operation assessment:

- With the implementation of mitigation measures, no significant effects to water quality and flood risk are likely.

5.9. Traffic and Transport

5.9.1. Baseline

Victoria Tower Gardens has a well-established network of footways and formal and informal pedestrian crossing points and cycle accessibility is also well connected and maintained. The gardens have an “excellent” level of access to public transport. Westminster, St. James’s Park and Pimlico Underground stations are all located within a short walk of the gardens and Charing Cross and Victoria Stations are located within 20 minutes walking distance. Millbank Millennium Pier to the south and Westminster Pier to the north are both within 10 minutes’ walking distance. Victoria Tower Gardens are located on the eastern side of A3212 Millbank, which is a ‘red route’ road and forms part of the Strategic Road Network (SRN) in London. Lambeth Bridge crosses the River Thames immediately to the south of the gardens.

5.9.2. Construction

During construction, there is the potential for disruption to existing transport systems through: an increase in footfall and use of public transport systems by commuting construction workers; an increase in the number of HGVs on local roads; construction traffic entering and leaving the site and disruption to pedestrians use of the gardens. All construction staff will be encouraged to travel to and from the site using public transport and use private vehicles only when necessary to transport equipment. The number of construction staff working at the site will be minimal compared to the existing footfall on the pedestrian network and patronage of the public transport network and therefore have a minimal impact.

There is a southbound bus lane that runs adjacent to the gardens along Millbank. This lane may be disrupted by construction traffic entering and exiting the site, causing potential delays to bus services on Millbank. The enabling works, demolition and construction traffic associated with the construction of the site is expected to generate some disruption to the immediate highway network delay however, this is not considered to be significant.

Summary of construction assessment:

- A moderate (significant) effect on pedestrian amenity to existing users of the gardens due to a reduction in useable area and traffic delays arising from construction activities are anticipated. However, these effects will only be temporary as once construction is complete all activities will be finished, and the gardens will return to public use.
- With the implementation of mitigation measures, no significant effects are anticipated on all other traffic and transport receptors.

5.9.3. Operation

Once operational, the Scheme will generate additional movements on the surrounding highway and public transport networks. An overarching Travel Plan will be developed for the development, as well as individual Travel Plans for the Holocaust Memorial and Café individually. This will advise visitors of the preferred transport and walking routes prior to their arrival. A Delivery and Servicing Plan will also be produced, setting out the management strategy for delivery trips to the gardens and consolidating activity where possible.

The principal effect of the operation of the Scheme on the transport network is the generation of additional pedestrian movements. This is mitigated through the travel plan and the design layout which encourages pedestrians to make full use of all the site entrances, with the result that negative impacts on pedestrian flows are minimised.

Summary of operation assessment:

- A moderate (significant) effect on pedestrian amenity experienced by existing park users because of the projected increase in footfall is anticipated. Whilst the vast majority of the park area will remain freely accessible to the public, the remaining areas will accommodate a much higher number of visitors than at present.
- With the implementation of mitigation measures, no significant effects are anticipated on all other traffic and transport receptors.

5.10. Material Assets and Climate Change

5.10.1. Baseline

Material assets

Material assets within the vicinity of the Victoria Tower Gardens include; utilities, drainage infrastructure, a Combined Water Sewer running parallel to the west side of the site and flood defences by the River Thames.

Climate vulnerability

The temperatures in the London administrative region are the highest regional averages across the UK and long-term average monthly rainfall is the lowest in the UK. In terms of climate change projections, it is widely accepted that, on average, the UK is likely to experience hotter and drier

summers and warmer, wetter winters. Alongside these changes in the average conditions, it is likely that climate change will increase the frequency and severity of extreme weather events, such as heavy rainfall, storms and heatwaves.

Climate emissions

If London meets the UK Government's Carbon Budget reduction target of 37% of 1990 levels by 2020, by the time the Scheme's construction is complete London's annual emissions will be approximately 28 million tonnes. As the site is currently operated as public gardens, it is assumed to have negligible greenhouse gas emissions.

5.10.2. Construction

Material assets

During construction, the limited presence of existing material assets and infrastructure across the site and the development of specific construction methodologies to protect the assets means that the likelihood of significant impacts occurring to assets during construction is low.

Climate vulnerability

Construction of the Scheme is expected to begin in 2020. This date is not sufficiently far into the future for the climate to change so significantly that construction related impacts would be different to those expected in the current climate. Climate change would therefore not intensify construction related impacts and accordingly the Scheme construction is not vulnerable to climate change. As a result, mitigation actions will not be required.

Climate emissions

The construction of the Scheme will generate an additional 5,610 tCO₂e. This represents approximately 0.1% of the City of Westminster's 2015 annual emissions and 0.006% of London's total annual emissions. Mitigation measures will be implemented to reduce the carbon emissions of the Scheme, including; limiting the quantity of materials used, sourcing the materials from local sites, use of energy and water efficient construction processes and deploy waste reduction targets.

Summary of construction assessment:

- With the implementation of mitigation measures, no significant effects are likely.

5.10.3. Operation

Material assets

Once constructed, the new Learning Centre will not impact on any existing material assets.

Climate vulnerability

Hotter dryer summers have the potential to affect the design lives of materials, decrease air quality, affect the welfare of visitors through high temperatures, increase the demand on water supply and put added stress on vegetation. The detailed design of the Scheme will ensure that temperatures are kept comfortable within the Learning Centre, water efficient fittings will be installed where possible and appropriate material quality standards will be followed to ensure the design lives specified can be met.

Climate emissions

The Scheme could potentially produce 1,895 tCO₂e per year in operation. This represents 0.09% of the City of Westminster's annual emissions (2015) and is therefore not considered to be significant. Almost 90% of emissions are expected to be generated not by the Scheme itself, but by visitor travel to the museum, particularly those that are expected to travel by coach rather than other available public transport options. Mitigation measures to reduce emissions further shall include energy efficient systems, promotion of sustainable transport options and limiting water use.

Summary of operation assessment:

- With the implementation of mitigation measures, no significant effects are likely.

5.11. Cumulative Effects

5.11.1. Baseline

The cumulative effects assessment considers both the in-combination effects (effects that occur between different environmental topics within the same proposal and as a result of the development's direct effects) and cumulative effects (effects occur as a result of the combined action of a number of different projects cumulatively with the project being assessed and on a single resource or receptor).

The baseline for each environmental topic is described above in the previous sections. The following proposed developments have been shortlisted in the cumulative effects assessment:

- One Nationally Significant Infrastructure Project (NSIP) – Thames Tideway;
- Seventeen developments which include alterations or construction of new mixed use residential, commercial, leisure, shopping and education facilities; and
- Two proposals to illuminate the River at Westminster and Lambeth Bridges.

5.11.2. Construction

During construction, in-combination effects are anticipated to occur on human receptors (residents) from the reduction of visual and pedestrian amenity due to construction activities. No in-combination effects are anticipated to affect any ecological receptors, the water environment, geology and soils, or heritage, landscape and townscape.

During construction, the geology and soils assessment has concluded that there is potential for cumulative effects between the Scheme and the construction of a residential building near to the Scheme (9 Ergon House) as the Scheme has the potential to mobilise contaminants in the groundwater and soils below the site. However, these effects are not anticipated to be significant.

No further mitigation measures are proposed during construction as no significant in-combination or cumulative effects are anticipated.

Summary of construction assessment:

- With the implementation of mitigation measures outlined in each of the topic chapters above, no significant effects are anticipated.

5.11.3. Operation

During operation, ecological receptors, the water environment, heritage assets, geology and soils, and landscape and townscape are not anticipated to experience in-combination effects. Residents may experience beneficial in-combination effects as the Scheme is likely to encourage activity in the area and the landscaping and architectural value would enhance the character of the area, whilst being in-keeping with the current function and uses of the gardens. People travelling to the park would also benefit from improvements to foot paths and the design has considered safety, security and health, with additional opportunities for social interaction, learning and employment.

During operation, no significant effects are anticipated as a result of cumulative effects arising from any cumulative development and this Scheme. Overall, the cumulative schemes lead to a net reduction in traffic flow around the Scheme, therefore, local residents, road users and visitors are likely to experience a beneficial cumulative effect once the Scheme and other developments are operational due to the reduced traffic and improvements to access to open space, nature, cultural activities, work and training. These will provide improved opportunities for social cohesion and lifetime neighbourhoods within 500m of the Scheme. Effects from climate change in the future may occur from hotter summers and wetter and warmer winters which may reduce the operational lifetime of the Scheme due to extreme weather conditions and worsening of air quality associated with climate change.

No further mitigation measures are proposed during operation as no significant in-combination or cumulative effects are anticipated.

Summary of operation assessment:

- With the implementation of mitigation measures outlined in each of the topic chapters above, no significant effects are anticipated. There will be significant beneficial effects on health receptors.

6. Summary

This non-technical summary provides a summary of the Environmental Statement (ES). It includes a summary of the Scheme description, the alternatives considered, the environmental setting of the area and the potential significant effects of the Scheme on the environment and local community. The ES will accompany the planning application for the UK Holocaust Memorial and Learning Centre.

The ES reports on the outcome of the Environmental Impact Assessment and predicts the significant environmental effects of the Scheme. Based on the information obtained and reviewed, the ES has found there are a few residual significant effects (i.e. after mitigation has been implemented) that are likely to result from the Scheme.

During construction of the Scheme *temporary* moderate (significant) adverse effects are anticipated on the: setting of Victoria Tower Gardens (Grade II Registered Park and Garden) Buxton Memorial Fountain (Grade II*) heritage assets and the townscape of the gardens; on regular users of the gardens due to a reduction in useable area; and traffic delays arising from construction activities.

During operation of the Scheme, *permanent* moderate (significant) adverse effects are anticipated in relation to: View 13 from Dean Stanley Street towards the gardens as the bronze fins from the Memorial will block the view to the River Thames and the character of the view will change from open parkland to one focussed on the built form of the memorial; and on regular existing users of the gardens because of the projected increase in footfall.

However, the Holocaust Memorial and Learning Centre will result in significant *beneficial* effects on heritage assets within and surrounding the gardens once completed as it will attract new visitors and create new views and visual character within and surrounding the gardens towards Westminster. The Scheme will provide enhanced landscaping, new and enhanced seating and paths, additional lighting and an enhanced play area. It will also provide benefits to the local community in the form of social, educational and cultural activities and potentially employment opportunities.

The significant adverse effects of the Scheme will be prioritised to ensure that they are considered as the design develops further. The design will be developed to take into consideration further assessments that may be required and mitigation measures and enhancements to be implemented to ensure that the overall impact of the Scheme is reduced as far as possible.

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