

Buro Happold

St Giles Circus

Environmental Statement: Non Technical Summary

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Buro Happold Limited

author **Katherine Sydney**

date **14 December 2012**

approved **Sinead McMahon**

signature



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Glossary

Term	Definition
APA	Archaeological Priority Area
BRE	Building Research Establishment
BREEAM	Building Research Establishment Environmental Assessment Method
CMP	Construction Management Plan
EIA	Environmental Impact Assessment
GLA	Greater London Authority
HGV	Heavy Goods Vehicles

1 Introduction

This document is a summary of the Environmental Statement submitted with a planning application for the proposed development of a site known as St Giles Circus, in the London Borough of Camden. The Environmental Statement reports on the findings of the Environmental Impact Assessment (EIA) process, which involves the identification of significant effects on the environment that the proposed development is likely to cause and appropriate measures to mitigate these effects.

A brief summary of the EIA process is provided below, with an introduction to the development proposals in Chapter 2, a topic by topic summary of the environmental conditions and potential effects in Chapter 3, and conclusions and mitigation measures summarised in Chapter 4.

1.1 Why an Environmental Impact Assessment was carried out

The need for EIA is determined by the nature and scale of a development, and the sensitivity of the site and its surrounds; these criteria are set out in legislation. As an urban development greater than half a hectare in size, the St Giles Circus development is of a scale which could potentially require EIA. Typically, a request is submitted to the local planning authority for their opinion on whether EIA is needed; however, in this case the developer has decided to prepare a full EIA regardless of whether one was compulsory or not, in order to minimise the environmental effects of the project.

An initial study considered the type of development and location, and identified a number of potentially significant environmental effects. For each topic, the scope of further assessment required was identified. The study and scopes were written up and submitted to Camden Council in the form of an EIA Scoping Report, in March 2012. Camden Council consulted with a number of other organisations and groups and provided comments on the report. As a result, it was agreed that the following topics would be assessed as part of the EIA:

- Built heritage;
- Archaeology;
- Townscape and visual amenity;
- Artificial lighting;
- Sunlight and daylight;
- Wind microclimate;
- Air quality;
- Noise and vibration;
- Transport and movement;
- Socio-economics;
- Waste management;
- Ground conditions and contamination;

- Water resources and flood risk; and
- Ecology.

1.2 Environmental Impact Assessment approach

There is a standard approach to undertaking EIA, although there is some variation between assessment topics, as to the specific methodology. All assessments involve the following stages:

- Determination of the environmental baseline: what are the conditions now and how might these be expected to change over time if the development did not occur?;
- Consultation: contact with relevant organisations to gather information on the baseline conditions, likely environmental effects, and to discuss potential mitigation options;
- Identification of environmental effects and their significance: each topic has a standard approach, which could include modelling to predict effects. Most topics consider the sensitivity of any environmental features, people or property ('receptors') which could be affected and the potential magnitude of the impacts when determining the significance of the effect;
- Cumulative effects: consideration of the effects of the proposed development in combination with other nearby developments (see list below) and the potential for interactions between effects, for example construction noise occurring at the same time as dust from demolition produces a more significant effect overall;
- Mitigation: development of measures which will be required to reduce the significance of environmental effects, if the development gets planning permission; and
- Residual effects: highlighting any significant effects which will remain even after mitigation measures have been implemented; these can be positive as well as negative.

The EIA process means that issues can be identified while the development proposals are still being finalised and can result in design improvements to minimise environmental effects; the assessments are then updated to reflect these changes. Design improvements have been made to the St Giles Circus proposals, as described in Chapter 2.

1.2.1 Cumulative and interactive effects

A list of other developments (Figure 1-1) to take into consideration within the assessment of cumulative effects was agreed with Camden Council; as follows:

- Odeon West End, Leicester Square;
- 80 Charlotte Street and 65 Whitfield Street;
- Noho Square (former Middlesex Hospital), Mortimer Street;
- British Museum, Great Russell Street;
- Tottenham Court Road station upgrade, plaza ticket hall and over-site developments (several applications);

- Regent Palace Hotel, Glasshouse Street (two applications including works at 4-90 Regent Street; 1-19 Quadrant Arcade; 9, 19 and 27-19 Glasshouse Street);
- Centre Point, New Oxford Street;
- 1-23 Oxford Street and 157-165 Charing Cross Road and 1-6 Falconberg Mews;
- 135-155 Charing Cross road and 12 Sutton Row; and
- Windeyer Building, 46 Cleveland Street.



Figure 1-1 Other schemes considered for their potential to have effects in combination with the St Giles Circus proposals

2 The Site and Development Proposals

2.1 Site description

The St Giles Circus site lies either side of Denmark Street, in Central London, with a block of residential properties proposed nearby on Endell Street (Figure 2-1).

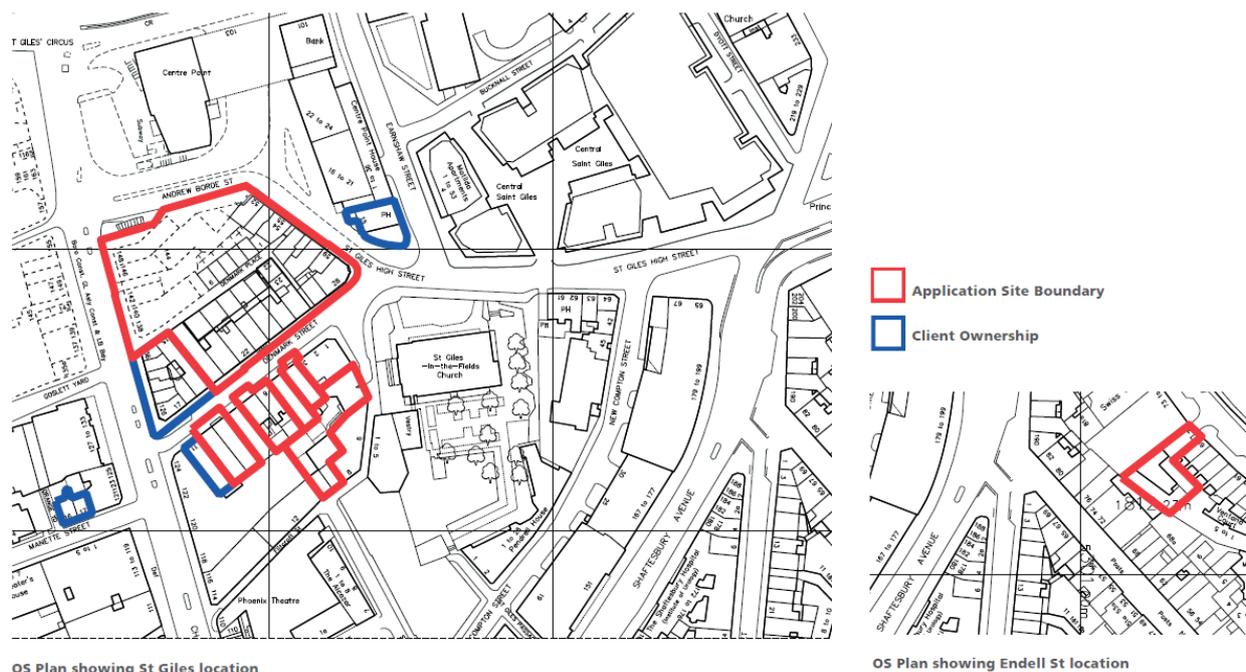


Figure 2-1 Planning boundary of the site and other properties within the client's ownership

The site is in a busy urban area, currently occupied by a mix of uses including offices, shops and other businesses, residences, and cultural and civic buildings. The site itself contains a concentration of music shops and businesses, with an important music industry-related cultural history. Vehicles, people and construction activities from the adjacent site mean that the site is busy, although the gardens around St Giles in the Fields church are quieter. Several of the buildings within the site boundary and in the surrounding area are listed or of local importance, and the whole site falls within a Conservation Area.

In the north-east corner of the site, buildings have been demolished as part of the Crossrail / London Underground station construction works. The rest of the site is largely occupied by four-six storey Victorian buildings, although taller and more modern buildings surround the site to the north, including the Centre Point tower.

There are a number of other construction schemes in the surrounding area, at various stages of planning approval and construction. The development being undertaken locally means that the future environmental baseline will change; for example new sensitive receptors may be introduced to the surrounding area.

2.1.1 Masterplan proposals

The proposals treat the main part of site as having two distinct halves: the block to the north of Denmark Place has been disturbed by the demolition works relating to Crossrail; while the buildings to the south, either side of Denmark Street, are largely intact and are of significant heritage value. The St Giles Circus development seeks to create a publically accessible building for a range of uses on the northern part of the site, whilst repairing and improving the heritage assets to the south. Endell Street, a separate area of the site to the east, provides an opportunity to provide affordable housing. Figure 2-2 illustrates the proposed strategy.

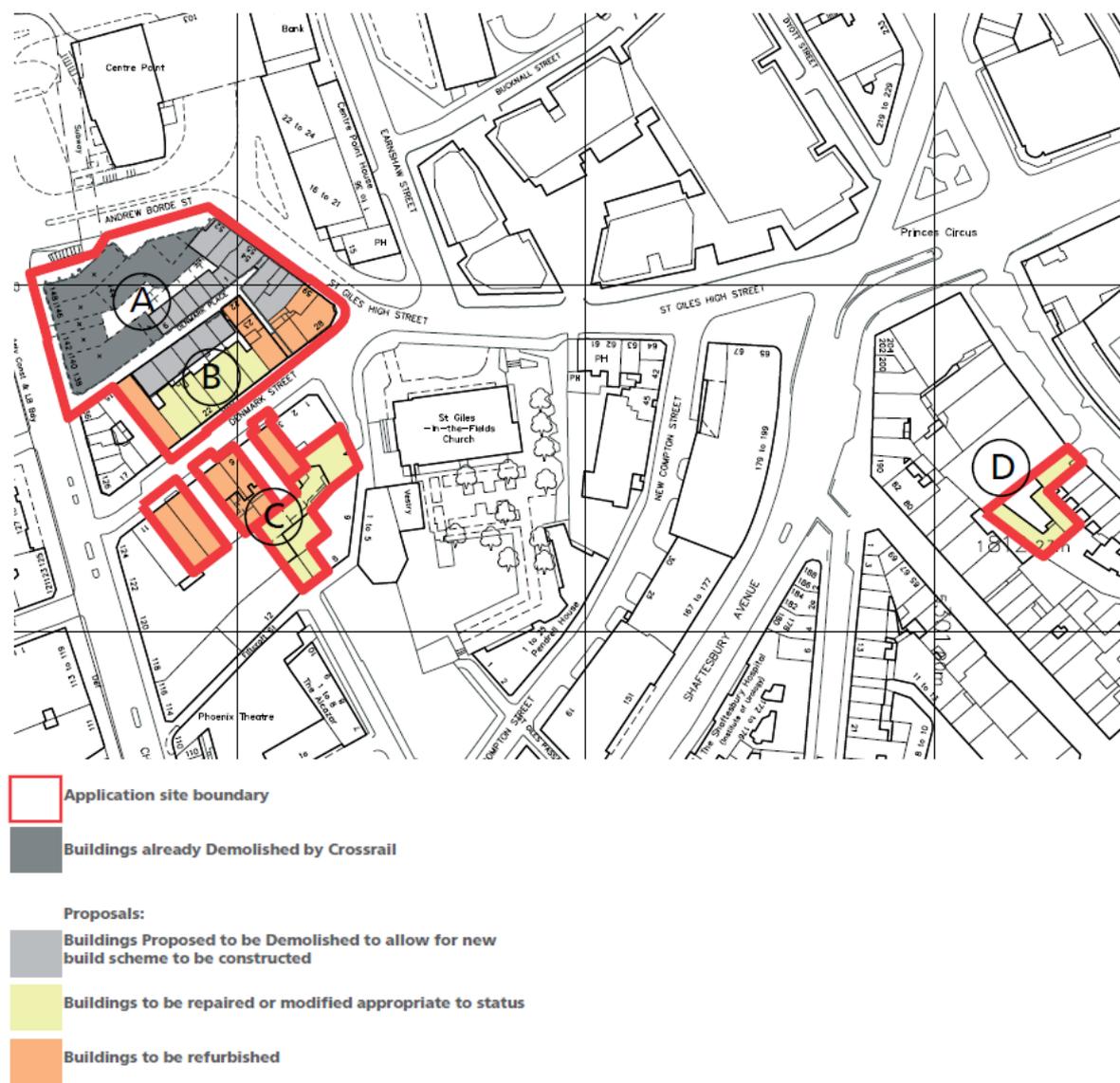


Figure 2-2 masterplan strategy

The development proposals include new buildings on the land that is currently in use as the Crossrail construction site, the refurbishment and conversion of a number of existing buildings to the north and south of Denmark Street and the provision of new development behind a retained building façade on St Giles High Street. In general, the new buildings centred around Denmark Place will largely provide for retail, food and drink, entertainment, hospitality and public amenity; while the refurbished buildings around Denmark Street and at Endell Street will continue to provide a mix of business and residential uses.

The proposals include the provision of two new buildings on St Giles High Street, Andrew Borde Street and Charing Cross Road (Figure 2-3 and Figure 2-4), plus two smaller buildings on Denmark Place to provide a mix of retail, hotel and restaurant/bar use. Tapping into the music heritage of the area, the proposals include a basement event space; central to the development proposals is the new 'urban gallery', a digital exhibition and retail space. Routes through the site will be provided to connect with the surrounding area (Figure 2-5).

The development will provide an additional 2016 sqm (Gross External Area) of residential space of which 1059 sqm (52%) will be affordable housing. Most of the affordable housing will be at Endell Street, with some shared ownership properties at 10 Denmark Street.

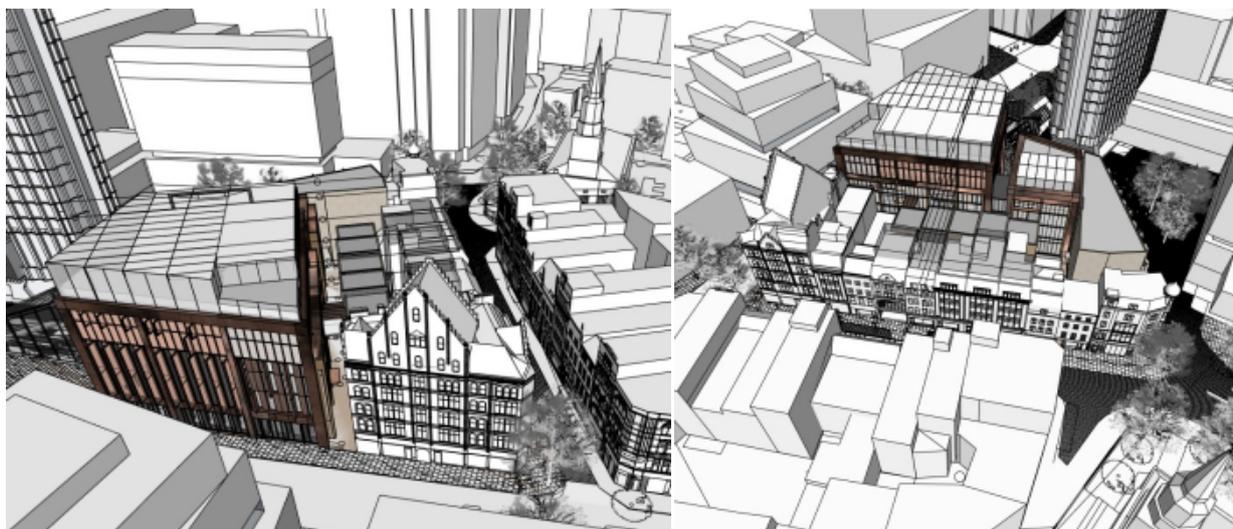


Figure 2-3 Aerial images showing massing and relationship between new and refurbished buildings (Endell Street not shown)



Figure 2-4 Appearance of new buildings (birds eye views)

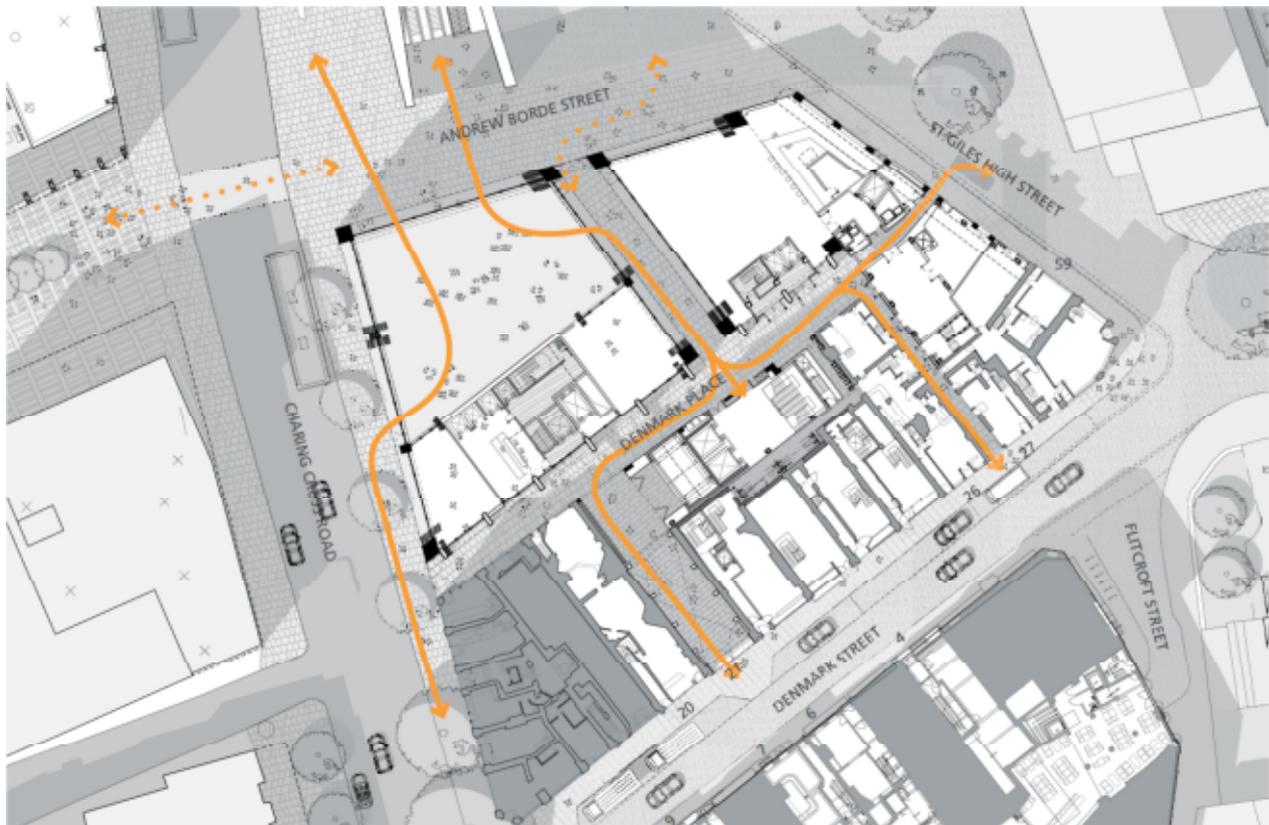


Figure 2-5 Key routes through the site

2.2 Design improvements

An earlier version of the current scheme was considered in early 2010 but, following discussions with Camden Council, was not taken forward as a planning application. A summary response was received from the Camden Council raising a number of points for clarification and requesting that further scheme development be undertaken. It was also suggested by the Council that development of the scheme should be brought forward in tandem with the public realm proposals being developed for the wider St Giles area by Gillespies. A number of potential massing options were considered (Figure 2-6); and the form agreed in principle with Camden.

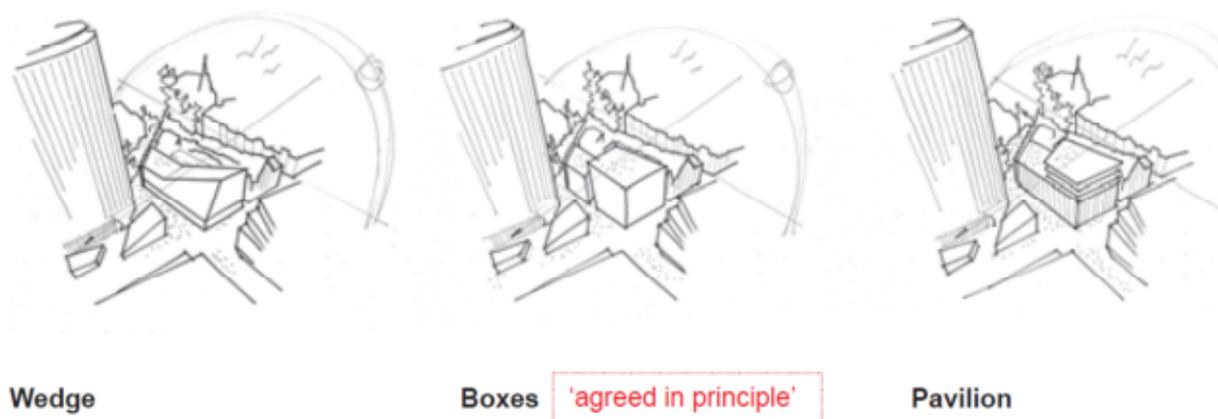


Figure 2-6 Massing options considered

In response to the feedback received from the Council and subsequent discussions held with Gillespies and other adjoining landowners, the design team worked to refine the scheme. This was done within the general parameters of the proposals previously presented to Camden, in order to respond to the issues raised by the Council. The scheme was considered to be too tall and close to Centre Point, with ill-defined public open space and media screens that were too large. Some aspects of the scheme were received positively and were taken forward as part of the current proposals, including the principle of a basement auditorium, the retention of York and Clifton Mansions' facade, and the provision of a large public space.

Through ongoing discussions with the Council and comments from the Greater London Authority (GLA), and as design studies have progressed, the scheme has evolved. The following key changes have been incorporated, in response to environmental constraints and opportunities:

- Land use: provision of residential space to meet policy requirements, and development of a licensing strategy;
- Height, bulk and mass: reduction in scale and height of the new buildings to improve appearance in relation to Centre Point House and Tower;
- Digital screens: reduction in size and brightness to reduce effects of light spill on the character of the area;
- Public spaces: changes to the building footprint to improve the definition of the public realm and incorporation of a pedestrian alleyway to improve access;
- Rooftop restaurant: has been covered over and made more thermally efficient in response to wind microclimate conditions and energy efficiency requirements;
- Green roofs: to provide benefits for surface water attenuation and ecological enhancement; and
- Combined heat and power (CHP) system: to provide efficient energy.

3 Environmental Conditions and Potential Effects

The following sections provide a summary of each of the technical assessments carried out as part of the EIA. For each topic, there is a description of the current environmental conditions, along with an outline of the potential significant effects during the construction and demolition phase, and once the development has been completed.

3.1 Built heritage

There are a number of listed buildings in the area surrounding the site (Figure 3-1), the setting of which will be affected by the application proposals, including the Grade I listed St Giles in the Fields Church, which has already been affected by nearby modern development. The site is part of the Denmark Street Conservation Area, and features Listed Buildings and 'Positive Contributors' identified by Camden Council. There are also a number of heritage assets, outside of the site boundary, which have the potential to be affected by the development proposals.

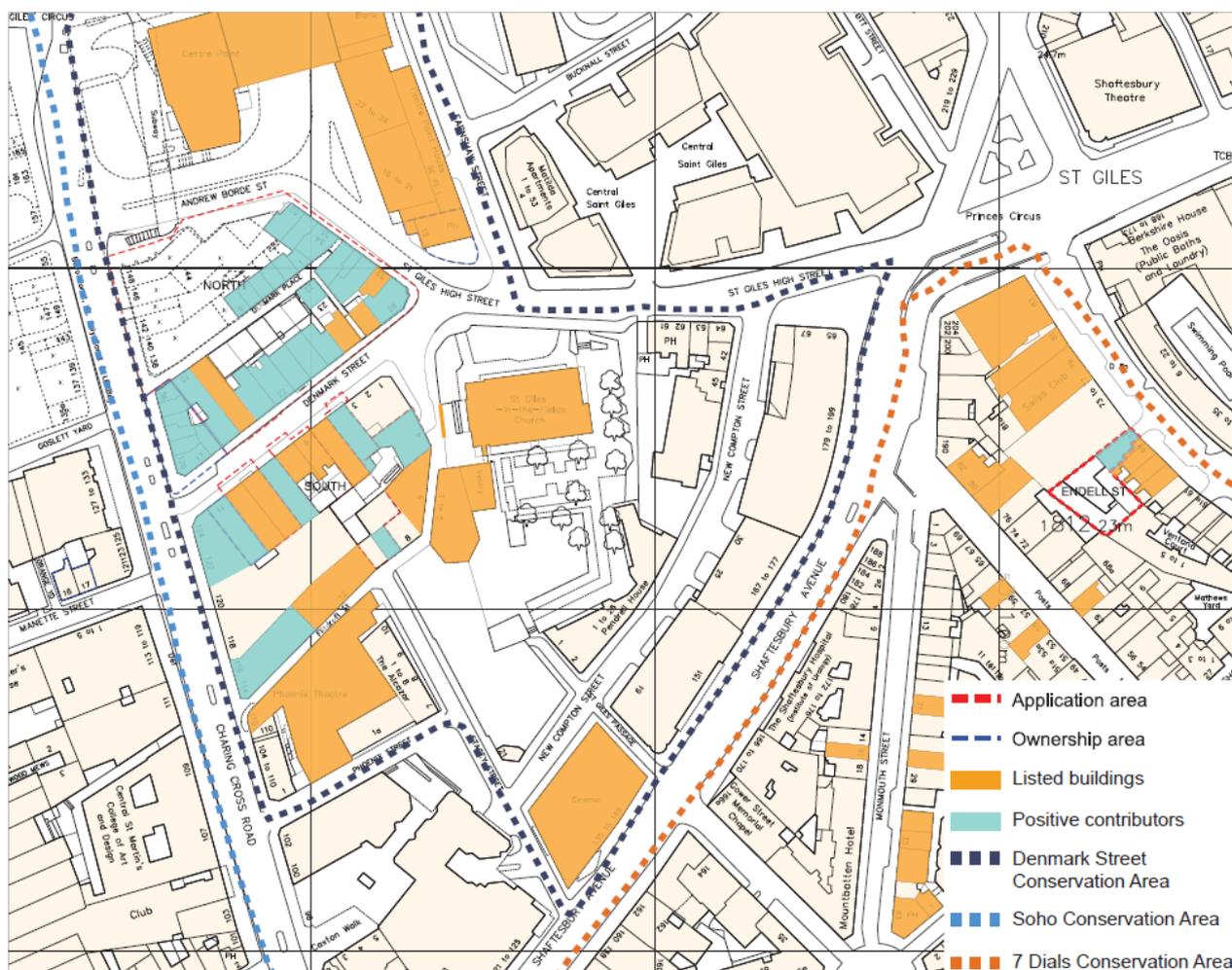


Figure 3-1 Heritage features in the St Giles Circus area

Demolition and construction effects

The construction effects do not give rise to any significant issues as they are temporary and in the short term. This is a necessary stage in the redevelopment of the site.

Operational effects

There will be a beneficial effect on the listed buildings within the application site as a result of the refurbishment of the heritage assets. These works will enhance the heritage value of these assets. The demolition of 1 to 6 Denmark Street will have a moderate adverse effect although the mitigation for this is the replacement building, the design of which has been influenced by the historic surrounds.

The proposals will restore the urban block to the north of Denmark Street that was lost with the Crossrail, London Underground and Over Site Developments. This will be a significant improvement to the character and appearance of the Denmark Street Conservation Area. Overall, the proposals preserve and, in some cases, enhance the significance of the identified heritage assets.

3.2 Archaeology

In addition to the listed buildings and Conservation Areas identified in Section 3.1, above, all areas of the site lie within the London Suburbs Archaeological Priority Area (APA) defined by Camden Council. The potential for archaeological features to survive across the site (Figure 3-2) was determined through desk study; for example, archaeological features are not likely to survive where basements have already disturbed the ground.

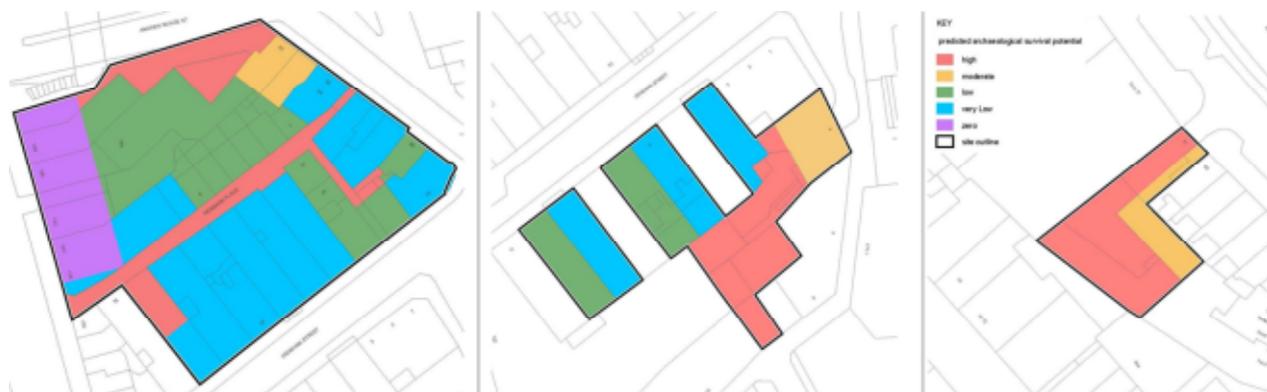


Figure 3-2 Potential for survival of archaeological features

Demolition and construction effects

Identified construction effects on buried features include:

- In the area of new buildings north of Denmark Street the proposed basement venue would entirely remove any surviving archaeological remains with its footprint;
- The piled foundations would be beneath the basement concert venue apart from in the north-west corner of the site, which is outside the basement's footprint. Piles in this area would remove any surviving archaeological remains within the footprint of the pile;

- In the area the south of Denmark Street the proposed extended basement would entirely remove any surviving archaeological remains within its footprint. Much of this extended basement would be in a yard area that has not apparently been built on. Consequently, it is possible that archaeological remains survive in this area; and
- At 71 Endell Street the proposed development would have no effect on any surviving below ground archaeological remains.

At 71 Endell Street the below-ground effect of the proposed development is negligible and it is unlikely that further archaeological investigations would be required. In the areas north and south of Denmark Street targeted archaeological evaluation by means of trial trenches may be required to fully assess the extent of archaeological survival, and the nature, date and significance of any remains. Of particular interest are the areas apparently not previously built on at Denmark Place and the yard of 4 Flitcroft Street. Both these areas will be affected by the construction of new basements. Mitigation could comprise archaeological excavation and recording, and / or a watching brief during site preparation and ground works, to ensure that any significant archaeological remains are not removed without being recorded.

Operational effects

There are no operational effects upon buried heritage assets, so no mitigation measures are required.

3.3 Townscape and visual amenity

The assessment of effects on townscape and views involved a combination of desktop and field studies, including the preparation of photo images showing the current and proposed views, from 12 key viewpoints which were agreed with Camden Council. The surrounding area can be divided into eight townscape character areas, with moderate to high sensitivity to change.

Demolition and construction effects

During construction, the St Giles Circus development will have a moderate effect on the character area defined by Denmark Street Conservation Area, but only a minor adverse effect on the other townscape character areas. It will also have a major adverse effect on viewpoints from St Giles High Street east and west, St Giles in the Fields churchyard, and Earnshaw Street; a moderate adverse effect will be noticed from Tottenham Court Road, Oxford Street, and Charing Cross Road (opposite Denmark Street).

Operational effects

Once completed the development will have a moderate beneficial effect on the St Giles Conservation Area character area, and minor beneficial or indiscernible effects on the other character areas. It will also have a moderate to indiscernible beneficial effect on views from Tottenham Court Road, Oxford Street, St Giles High Street east and west, and Charing Cross Road (opposite Denmark Street).



Figure 3-3 Visualisation of proposed development from St Giles High Street

3.4 Artificial lighting

Existing and proposed conditions were modelled using computer software in order to assess light spill from the development, against standards set by the Institute of Lighting Engineers. The assessment took into account the effect of neighbouring developments in the model. In the baseline condition, there are no issues with artificial light spill.

Demolition and construction effects

The neighbouring residential properties will have the potential to be affected by temporary lighting during the construction phase, where they have unrestricted views into the site. Site hoardings will help to reduce this temporary effect; the requirement for these will be written into a Construction Environmental Management Plan, which will be used to ensure that construction activities operate to best practice.

Operational effects

The modelling results have demonstrated that, once completed, the proposed St Giles Circus development could have adverse effects due to light spill relating to the following:

- The arcade and passageways on the east and south side of the new building;
- Internal media screens (Figure 3-4); and
- Apartments on the south façade.

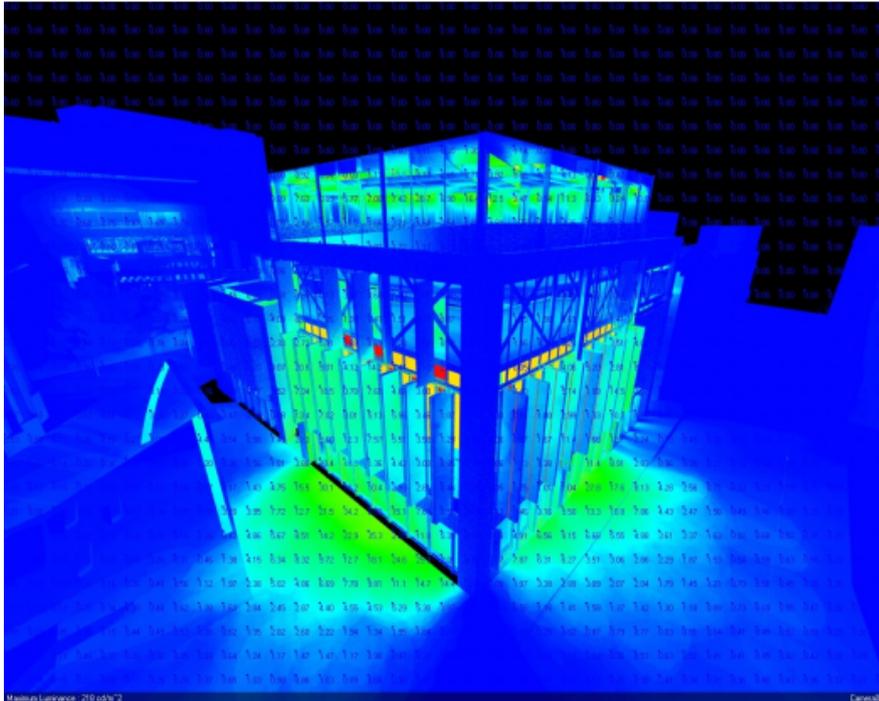


Figure 3-4 Light spill from the urban gallery

The following mitigation measures should be implemented in order for the light design of St Giles Circus development to comply with best practice standards:

- A curfew should be incorporated into the lighting control scheme to reduce the levels of excessive light after 11pm;
- Lights should be dimmable;
- It should be possible to separately control lighting used for different purposes and in different areas; and
- The proposed louvers on the northwest facade of the new building should be controllable in accordance with the lighting strategy, for example to observe a curfew.

With these mitigation measures in place, no significant adverse effects are anticipated.

3.5 Sunlight and daylight

In line with guidance from the Building Research Establishment (BRE), the levels of daylight and sunlight received to rooms overlooking the proposed development have been assessed.

Denmark Place is a very narrow pedestrian alleyway. The consequence of this is that windows overlooking Denmark Place presently receive relatively low levels of natural light under existing conditions and are particularly sensitive to relatively small changes in the height and massing of the buildings on the north side of Denmark Place.

Demolition and construction effects

With a cleared site following demolition, the availability of daylight and sunlight will improve temporarily with the removal of the obstruction directly in front of the various windows. During the course of construction, and as the structure of the new buildings increase, the availability of daylight and sunlight will progressively decrease.

Operational effects

The proposed development will have an indiscernible effect on the vast majority of the rooms overlooking the site. There will be no noticeable or material effect on the dwellings within Centre Point House, and out of the 72 windows measured for daylight and sunlight, all will comfortably be within the recommendations of the BRE guidelines.

However, three bedroom windows within 136 Charing Cross Road will experience a significant loss of daylight, and it will not be possible to mitigation this effect.

3.6 Wind microclimate

The assessment of wind microclimate effects was included within the EIA due to an existing issue with high ground-level wind speeds around the base of the Centre Point Tower. The current and future wind conditions were modelled using wind data from the Met Office and ‘computational fluid dynamics’ software. The results of the modelling were used to guide the design of the development, to ensure that the St Giles Circus proposals do not make the existing condition worse.

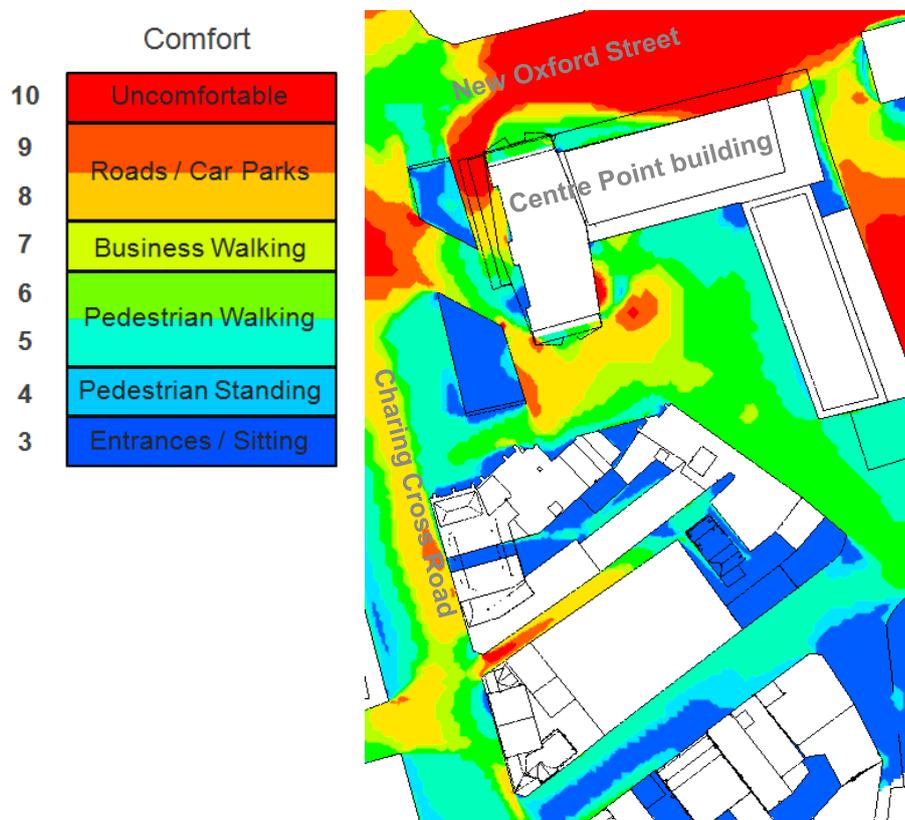


Figure 3-5 Existing wind conditions in winter, due to Centre Point tower

Demolition and construction effects

During the course of construction, there is the potential for the local wind environment to be affected. Parts of the St Giles Circus site have already been demolished, with some additional demolition still to take place; wind speeds are likely to be lower as the buildings are removed and funnelling of wind in-between buildings is reduced. Conditions will gradually change as the proposed buildings are constructed so that some areas of the site are more sheltered, while some experience higher wind speeds, particularly at the base of the Centre Point Tower.

There are no significant construction effects, therefore no mitigation is required; however, standard construction mitigation measures will be implemented, including standard site hoardings to shelter neighbouring areas.

Operational effects

The pre-existing wind conditions are not made significantly worse by the introduction of the proposed development, therefore mitigation is not required. However, there is a pre-existing issue which is mainly caused by Centre Point Tower and will be made worse by the new station entrances. This condition could be improved if trees and other vegetation were planted, to reduce wind speeds at ground level, although this is outside the influence of the St Giles Circus planning application.

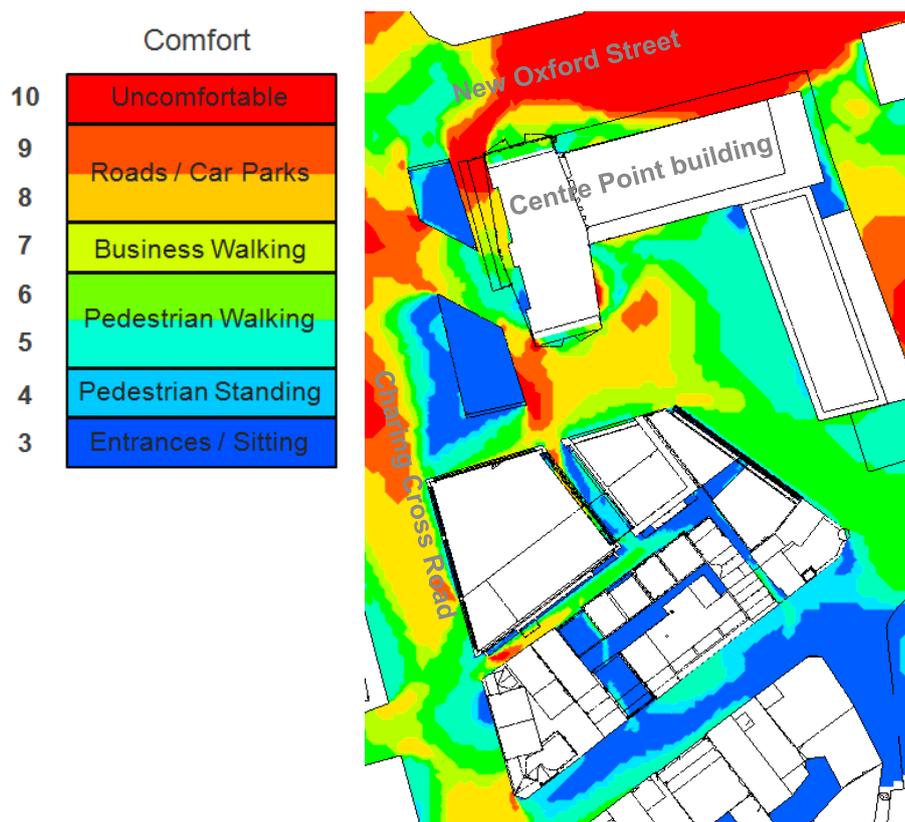


Figure 3-6 The proposed development does not make the existing condition worse

3.7 Air quality

The air quality assessment focussed on the likely significant changes in local air quality arising from the construction and operation of the proposed development. The results of the assessment have been evaluated with reference to national UK air quality objectives and assessment significance criteria. Ambient air quality in central London is generally poor, and results of air quality monitoring at locations near to the St Giles Circus site indicate that some air pollutant concentrations exceed UK objectives.

Demolition and construction effects

The development has the potential to create dust and other emissions during construction and demolition; however these can be prevented or reduced sufficiently by mitigation measures. Mitigation, including dust control measures, will be incorporated into a Construction Environmental Management Plan.

Operational effects

The effect of vehicle and heating or power appliance emissions are expected to be indiscernible.

3.8 Noise and vibration

Noise monitoring was carried out at the site, which indicated that existing noise levels are quite high, mainly due to traffic noise. As with all major construction works, the St Giles Circus development will lead to the generation of some noise and vibration during the construction phase. Once the project construction is complete there may be noise generated from the operation of development, for example from building services and from activity in and around the development.

Demolition and construction effects

As a major construction project, it is inevitable that high levels of noise and vibration will occur during the demolition and construction process. Activities such as demolition and piling will cause temporary major adverse effects for people closest to the works, even where mitigation is applied. However; through application of best practice and careful management of the works, it is expected that the overall impact of construction noise can be limited to be minor or moderate adverse.

With the exception of locations closest to the works, vibration levels associated with construction are expected to remain significantly below the levels associated with building damage and within acceptable comfort levels inside buildings.

Operational effects

Overall, the change in the volume of road traffic attributed to the development will be small and will not significantly affect environmental noise. Building services are not expected to contribute significantly to noise levels and the development will provide high standards of sound insulation for the basement auditorium, ensuring that amplified sound will be well insulated from the surrounding environment, although there is the potential for some sound to escape from the restaurant, bar and events spaces.

By providing control through management of the premises and through appropriate design and operation of sound equipment, the impact of noise related to the activities and occupancy of the development will be limited to minor significance.

3.9 Transport and movement

The site is located in an area with excellent public transport links, served by multiple bus and underground services and, in the near future, by Crossrail services. The pedestrian environment around the site and immediate area has previously been recognised as poor and is in the process of being improved as part of neighbouring developments.

Data published by London Underground has been used to establish baseline conditions for underground stations and services, with growth factors agreed with Camden Council to forecast future trends. Road traffic baseline data has been established through discussion with Transport for London and accounts for several future scenarios with regards to possible road closures and changes to bus operations.

Demolition and construction effects

Construction works have the potential to generate additional traffic movements, particularly Heavy Goods Vehicles (HGVs), during the construction period. Prescribed routes and working times for construction vehicles and large delivery vehicles will be agreed with the highway authority, before work starts, to mitigate effects on the highway network. These measures will be set out in a Construction Management Plan (CMP) which deals with construction logistics and that will be agreed with Camden Council and other key stakeholders before construction commences. This will build upon the draft CMP, which has already been prepared.

Some routes might temporarily become more hazardous for drivers, pedestrians and cyclists due to construction traffic using the roads. It is also likely that routes in the area will be busier with delays affecting local people, especially those using public transport routes and local journeys at peak times. The temporary closure of bus stops and closures or diversions of pedestrian routes may lead to some moderate short-term inconvenience to public transport users and pedestrians, resulting in longer journey times; but the provision of safe, signed alternative routes will be included within the CMP.

Operational effects

The retail, food and beverage, hotel and venue facilities will attract visitors from the local area and further afield and will lead to an increase in travel to and from the site, although the development when fully operational will not have a significant effect on the number of vehicles passing through Denmark Street from St Giles High Street towards Charing Cross Road. The number of public transport trips to and from the site via bus routes and nearby underground stations will increase, although the peak travel times associated with the development will not coincide with the peak times on the public transport networks. The effect of additional trips on public transport services will therefore be indiscernible. The accessibility of the site will improve significantly once Crossrail is operational. These are not being delivered as part of the proposals but will provide additional transport options to residents, staff and visitors.

The most significant effect is likely to occur during events using the proposed basement event space, but these are expected to only result in minor or indiscernible increases in demand; significant attention has been paid to the management of queues and safe dispersal of departing visitors to ensure safe access and egress is possible without affecting nearby pedestrians or travellers. To mitigate any negative effects related to the event activity, a series of management plans have been drafted to support the application to indicate how such activity can be organised. A Framework Travel Plan has also been produced, which will be developed further to encourage sustainable travel, reduce travel demands and set targets for the review and monitoring of travel behaviour. Light goods vehicles and occasional HGV's will visit the site for servicing and supplies; the proposals will result in a moderate increase in servicing activity, so additional loading space is being provided on Denmark Street. A draft Delivery and Servicing Plan sets out how the servicing activity can be managed to minimise adverse effects and reduce the number of vehicles delivering to the development.

200 new off-street cycle parking spaces are being provided, but no additional car parking, in line with Camden's targets for car-free development; on-street disabled parking is to be increased, though, to improve accessibility for those with disabilities. The increase in disabled parking and space for servicing will result in a loss of pay and display parking in the area (Figure 3-7); however, due to the extremely high public transport accessibility, this has been agreed with Camden Council.



Figure 3-7 Proposed changes to parking and loading on Denmark Street

3.10 Socio-economic

The socio-economic assessment used population and economic data, along with knowledge of existing and proposed uses at the St Giles Circus site to identify potential effects relating to the following:

- Effects associated with employment: jobs creating during construction and once the development is complete, the effect of economic activity at the site on jobs in the surrounding area, and Gross Value Added;
- Effects associated with population: changes in spending and Council Tax revenue, effects on existing and proposed public amenities and leisure facilities, and access to healthcare and education; and
- Effects on crime levels.

Demolition and construction effects

The two key effects during the construction period will be the creation of approximately 100 construction jobs, and disruption to residents and businesses, for example due to construction noise and reduced access.

Operational effects

Once the development has been completed, the following are anticipated:

- A reduction of up to 75 jobs on site with associated effects on the economy of the local area;
- Additional annual council tax revenue and household spending due to 19 new residents; and
- The addition of 11 affordable housing units on the site.

During the design of the development, architects met with the local police architectural officer to discuss ways of reducing the risk of crime. The results of these discussions were taken on board; therefore the risk of crime in the area should be reduced.

In general, the scale of the proposed redevelopment means that the socio economic effects are likely to be relatively small and localised. The addition of new housing and residents, including an affordable housing component is likely to be beneficial to the area; however the reduction in employment space on the site is likely to have adverse effects.

3.11 Waste management

Waste strategies were developed for the St Giles Circus scheme in order to estimate the volume and types of waste likely to be produced by the development, and reduce the volume of waste produced during construction and demolition (with a Site Waste Management Plan) and once the development is completed (with an Operational Waste Strategy). These two documents influenced the design of the development and provided the basis for assessing the effects of the proposals on local waste infrastructure. At present, the volume of waste produced by the residents and businesses on site is not sufficient to put a strain on waste infrastructure.

Demolition and construction effects

Demolition in parts of the site will generate an initial volume of waste; construction activities will then continue to produce a small amount of waste throughout all of the construction phases, for example from waste materials and packaging. With measures in place through the Site Waste Management Plan to reduce waste during this period, the effects on London's waste infrastructure are not expected to be significant.

Operational effects

Over 90% of the waste anticipated from the completed development will come from the commercial properties, although 86% of the waste produced is expected to be recyclable (Figure 3-8). To deal with this, space has been provided within the development for the separate and collection of three waste streams: food waste, mixed recycling and residual (everything else). Overall, the waste produced represents an increase of less than 5% when compared with the existing situation, therefore will put minimal pressure on local waste infrastructure.

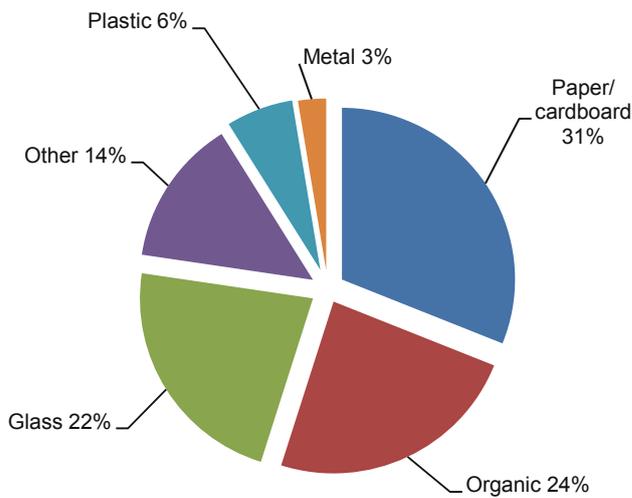


Figure 3-8 Predicted mix of different types of waste anticipated, once the development is occupied

3.12 Ground conditions and contamination

The ground conditions and contamination assessment considered the natural geological features at the site and how the ground conditions have been affected by previous activities, in order to quantify the potential risk of contaminated soils and groundwater and its effects on people and property during construction and operation.

The site lies on the edge of the river terrace between the Tyburn and the Fleet that both flow down to meet the River Thames beyond the Strand. The buildings on site have accommodated a variety of previous uses, so there is the possibility of debris associated with this; including ash, waste and discarded items; although these would be limited to small areas of the site.

Demolition and construction effects

Where new basements will be constructed, there is a potential risk of contamination being encountered in the ground; this may present some risk to people working on the site or the public nearby, mainly from dust and odours. There is also a potential for the local groundwater to be affected.

The construction activities will require careful planning and site management in order to address the following main issues:

- Potential removal of contaminated soil from the site;
- Potential exposure of the general public and site workforce to any contamination;
- Potential mobilisation of any contamination from soil or groundwater present at the site to effect water resources; and
- Potential for demolition and construction activities to cause soil or groundwater contamination, for example, as a result of accidental spillages of materials.

Best practice measures to manage and reduce these risks to an acceptable level will be implemented through a Construction Environmental Management Plan. With mitigation measures, no significant effects are anticipated.

Operational effects

Detailed ground investigations are to be undertaken prior to work commencing, to confirm the present ground conditions and the groundwater situation. This will ensure that there is no long term risk of soil contamination, harmful vapours or soil gas affecting the site.

3.13 Water resources and flood risk

The assessment of effects on water resources considered how the site will influence flood risk within and around the site, the effects on water quality, and the capacity of local infrastructure to deal with surface water and foul water (e.g. sewage) from the proposed development. Various studies informed this assessment, including a Flood Risk Assessment, a drainage strategy, and a Basement Impact Assessment, which looked specifically at risks to basements from flooding.

At present, the sewer system in London reaches capacity during heavy rain, with as little as 3mm of rainfall triggering sewer overflow into the River Thames; hence any polluted water which runs into the sewers could potentially reach the river. The St Giles Circus site is not considered to be at significant risk of flooding from the River Thames or the sea, but groundwater levels are high, so there is some potential for flooding from groundwater in basements.

Demolition and construction effects

The development will include basement excavation, so the Basement Impact Assessment outlines a number of measures for managing flooding from groundwater; with these in place, no significant effects are expected. Construction activity could potentially cause temporary but significant effects on water quality, for example from accidental spills. Mitigation measures are proposed including the use of pollutant interceptors, measures to protect soil, the reduction and management of sediment run-off, and management of discharge from de-watering activities. With the suggested mitigation, the risks to water quality are not expected to be significant.

Operational effects

There is likely to be an increased population on site; however, as the development is aiming to achieve environmental ratings through 'BREEAM' (Very Good rating) and 'Code for Sustainable Homes' (Level 4 rating), which have stringent requirements for water efficiency and sustainable drainage, the effects are not likely to be significant.

3.14 Ecology

The St Giles Circus site entirely consists of buildings and hard-standing, which are not considered to have any nature conservation value or considered to be ecologically significant. The areas within the site are not considered to support protected habitats or species and as such it is considered that the works are not constrained in terms of ecology. The proposals do have the potential to enhance the site's value for biodiversity, however.

Demolition and construction effects

The nearest ecological features to the St Giles Circus site are the Phoenix Gardens, St Giles in the Field church grounds and street trees. These are all off site and will not be affected by proposals; however steps will be taken to ensure their protection during construction.

Operational effects

The creation of new habitat in the form of green roofs, planted with a mix of plants specified by an ecologist, is considered to be a positive effect on biodiversity in the site and local area.

3.15 Cumulative effects

The assessment of cumulative effects considered the following:

- The combined effects of the St Giles Circus development and other developments nearby; and
- The interaction between effects, for example dust, noise and construction traffic combining to produce a more significant effect on a receptor.

The effects identified are presented in the table below.

Table 3-1 Summary of cumulative effects

Affected feature	Effect	Mitigation	Effect after mitigation
In combination with other developments			
Noise and vibration	Construction noise from Centre Point, if at the same time as St Giles	Construction Environmental Management Plan	Indiscernible to minor adverse
Transport and movement	Combined effects of construction traffic if other construction occurs at the same time.	Construction Management Plans on construction logistics for each of the developments	Minor adverse
Water resources and flood risk	Improvements to surface water run-off and the subsequent effects on flood risk, river water quality and the combined sewer network due to multiple developments implementing sustainable drainage	None required	Moderate beneficial
Interactions between effects			
Residents and businesses within and around the site, and users of the public realm	Disruption from combination of dust, noise, transport disruption during construction (particularly if other developments are undergoing construction at the same time as St Giles)	Construction Environmental Management Plan	Minor adverse
Users of the public realm and people passing through the site	Combination of improvements to heritage features, townscape and views	Non required	Moderate to major beneficial

All significant adverse effects relating to the St Giles Circus development in combination with other nearby developments can be mitigated to reduce them to an acceptable level. The only significant residual effect is therefore the moderately beneficial improvements to surface water run-off and the subsequent effects on flood risk, river water quality and the combined sewer network.

Once mitigation measures have been applied, the only significant interaction effect anticipated is beneficial and relates to the improvement of the public realm and sense of place. This moderate beneficial effect arises from the combined improvements to heritage features, townscape character, and views.

4 Conclusions

The only significant adverse effects expected to result from the proposed development are noise from events, which would affect future residential occupants of Centre Point House and Tower, should its proposed change of use occur; temporary changes to townscape and views during construction; and a reduction in internal daylight to rooms in three properties within 136 Charing Cross Road.

Several beneficial effects are also predicted. These include improvements to heritage features and their setting (restoration and refurbishment), and improvements to the townscape character and views. These combined will bring benefits of moderate to major significance to users of the public realm and people passing through the site. Cyclists will also benefit from improvements to the facilities made available.

Overall, the benefits of the scheme are more numerous and far-reaching than the adverse effects. The adverse effects are temporary (construction effects on townscape and views), acting upon small numbers of receptors (three properties in 136 Charing Cross Road), or uncertain (noise effects which will only be significant if Centre Point changes from commercial to residential use). In comparison, the beneficial effects will all be long term and will be felt by large numbers of people using or passing through the site, or contribute to improvements in the natural environment across a wider geographical area than the site alone.

The Environmental Impact Assessment process has identified potential issues in time for appropriate design interventions to be considered; adverse effects from the St Giles Circus development have therefore been minimised as far as has been possible, subject to the implementation of the mitigation measures identified.

The following pages summarise the mitigation measures proposed and the beneficial and adverse effects which will remain once these measures have been implemented.

4.1 Summary of mitigation measures required

Where significant effects have been predicted, mitigation measures have been proposed to reduce the effects. These are summarised in Table 4-1 (for construction effects) and Table 4-2 (for operational effects).

Table 4-1 Summary of mitigation measures to reduce demolition and construction effects

Mitigation measures	Purpose
Site to be screened by hoardings during construction	To reduce visual effect of construction and its effect on the setting of heritage assets; to reduce ground level wind speeds; to minimise noise from plant.
An archaeological evaluation followed by archaeological excavation and recording, and / or a watching brief during site preparation and ground reduction, as agreed with Camden's archaeologist.	To allow any archaeological features which may be present to be identified and recorded prior to or during construction.
Construction Management Plan dealing with construction logistics and a specific Construction Environmental Management Plan which will address the following: <ul style="list-style-type: none"> • Site planning • Specified working hours • Horizontally mounted security / floodlights, pointed away from residences etc and located away from site boundary • Measures to reduce dust, vehicle emissions and other air pollutant emissions • Noise reduction measures • Traffic management system and construction routes • Details of alternative routes and signage • Management of surface water and wastewater disposal • Site hygiene and personal protective equipment • Pollution control • Site hoardings • Protection of street trees. 	To reduce the effects of floodlighting, poor air quality, noise, and construction traffic; to minimise the risks associated with contaminated land and flood risk; to protect heritage and street trees. If other neighbouring schemes also have CMPs, this will reduce the risk of cumulative construction effects relating to transport and noise.
Site Waste Management Plan	To reduce the volume of waste generated during construction and demolition works, to increase the rates of reuse and recycling, and to comply with legislation.
Maximise benefit to local workforce through requirements for local hire	To keep economic benefits within the local area.

Table 4-2 Summary of mitigation measures to reduce operational effects

Mitigation measures	Purpose
Dimmable lighting control system, motorised louvers which can be controlled via the lighting control system, and blinds / curtains in new residences	To minimise the effects of light spill from lighting and media screens.
Further detailed design on residences and entertainment spaces (for example facade / ventilation / building envelope detailing)	To reduce internal noise levels
Adherence to measures set out in the operational waste strategy	To minimise the volume of waste created by the development and maximise reuse and recycling rates, therefore minimising pressure on local waste infrastructure
Gully traps and petrol interceptors incorporated into public realm	To reduce the risk of contaminants (e.g. sediment and hydrocarbons) entering the sewer system and watercourses
Green roofs planted for biodiversity benefit, as recommended by an ecologist	For ecological enhancement
Steps to ensure that existing businesses are retained on the site where possible or encouraged to relocate in other premises within the Borough	Retain local businesses within Camden
Travel Plan and Events Management Plan	To improve accessibility to and through the site

4.2 Significant residual effects

Although most adverse effects will be reduced to an acceptable level through the implementation of mitigation measures, some significant residual effects will remain. These are outlined in Table 4-3.

Table 4-3 Summary of significant residual adverse effects

Topic	Effect	Residual significance
Townscape & visual amenity	Temporary changes to townscape character and views, during construction	Major adverse
Sunlight & daylight	Reduced daylight to three rooms in 136 Charing Cross Road	Major adverse
Noise & vibration	Noise from events affecting residential occupants of Centre Point, should the change of use occur	Moderate adverse

The scheme is also anticipated to have significant beneficial effects, as described in Table 4-4.

Table 4-4 Summary of significant residual beneficial effects

Topic	Effect	Residual significance
Built heritage	Improvements to heritage features (restoration and refurbishment) and their setting	Minor / moderate beneficial
Townscape & visual amenity	Improved townscape character and views	Minor to moderate beneficial
Transport & movement	Improved number of cycle parking facilities	Moderate to major beneficial
Water resources & flood risk	Improvements to surface water run-off and the subsequent effects on flood risk, river water quality and the combined sewer network, due to multiple benefits in the area implementing sustainable drainage systems	Moderate beneficial
Interactive effects	Combined improvements to heritage features, townscape, views and ground level wind speeds	Moderate to major beneficial

Katherine Sydney
Buro Happold Limited
Camden Mill
Lower Bristol Road
Bath
BA2 3DQ
UK

Telephone: +44 (0)1225 320600
Facsimile: +44 (0)870 787 4148
Email: katherine.sydney@burohappold.com