20. Cumulative Effects

Introduction

20.1 This Chapter presents an assessment of the likely significant cumulative effects of the Development. The Chapter has been prepared by Waterman Infrastructure & Environment Limited (Waterman), with input from all technical specialists who contributed to the Environmental Impact Assessment (EIA) and this Environmental Statement (ES). The Chapter has been informed by all preceding technical chapters of this ES (**Chapters 7** to **19**).

Assessment Methodology

20.2 As noted within **Chapter 2: Environmental Impact Assessment Methodology**, only cumulative effects relating to the combination of individual effects (for example noise, townscape and visual effects) from the Development itself on a particular receptor were considered in this assessment.

20.3 As advised in the EIA Scoping Opinion dated June 2017 (**Appendix 2.1**), Appendix A of the EIA scoping clarification letter dated June 2017 (**Appendix 2.3**) and updated cumulative review (**Appendix 2.7**), based on LBRuT's cumulative criteria, there are no applications currently before LBRuT or extant permissions in place within 1 km of the Site that would give rise to significant environmental effects, owing to their small scale and location within established residential areas. As such, cumulative effects arising from the Development and any such permissions are not considered further within this assessment.

20.4 Likely in-combination cumulative effects have been identified and qualitatively assessed using the findings of all technical assessments reported within this ES (**Chapters 7** to **19**), together with professional judgement. In-combination cumulative effects have only been considered for the likely significant residual effects of the Development, on the assumption that identified mitigation measures would be implemented, such as a Construction Environmental Management Plan (CEMP).

Likely Cumulative Effects

Demolition and Construction

20.5 The likely in-combination cumulative effects during the Works for various sensitive receptors and land uses (identified in **Chapter 7 to Chapter 19**) in the vicinity of the Site are listed in **Table 20.1**. **Table 20.1** identifies the anticipated effect interactions during each of the key stages of the Works. In accordance with **Chapter 6: Development Programme, Demolition, Alteration, Refurbishment and Construction**, the demolition, alteration, refurbishment and construction activities have been outlined, some of which would overlap in terms of programme and timescales.

20.6 In line with the assessment methodology and findings of the technical assessments reported within this ES, the likely in-combination cumulative effects interactions during the Works are likely to result from:

- **short** to **medium-term**, **local**, **beneficial** and of **minor** to **moderate significance** on surrounding receptors from demolition of existing buildings on-Site in relation to daylight, sunlight and overshadowing (refer **to Chapter 18: Daylight, Sunlight, Overshadowing and Light Pollution**);

- **long-term**, **local**, **adverse** of **minor** to **major significance** on surrounding properties from construction of proposed buildings in relation to daylight;
- **long-term**, **local**, **adverse** of **minor significance** on surrounding properties (Boat Race House and Churchill Court only) from construction of proposed buildings in relation to sunlight;
- **temporary, medium-term, local residual adverse effect**s of **minor** to **moderate** level (provided construction threshold limit not exceeded these effects would be **insignificant**) on nearby residents in relation to noise generated from activities such as demolition and site preparation works, construction, landscaping and highways works (refer to **Chapter 9: Noise and Vibration**);
- **temporary, short-term, local adverse** effects of **minor** to **moderate** level on nearby residents in relation to vibration generated from sheet piling operations (considered to be **insignificant**, refer to **Chapter 9: Noise and Vibration**);
- **permanent**, **local**, **adverse effects** of **minor significance** on heritage assets within the Site (Former Hotel Building, Former Bottling Building, Maltings Building, boundary walls, memorials and historic gates) arising from the removal of historic fabric within the Site (refer to **Chapter 15: Built Heritage**);
- **permanent**, **local, beneficial effects** of **minor** to **moderate significance** on the setting of heritage assets within and surrounding the Site arising from the demolition of existing modern brewery buildings and structures within the he Site (refer to **Chapter 15: Built Heritage**);
- **temporary**, **short** to **medium term**, **local** effects of **major adverse significance** on Townscape Character Area (TCA) 7: Stag Brewery (within the Site) in relation to the visual presence of large-scale plant such as tower or mobile cranes.
- **temporary**, **short** to **medium term**, **local**, **minor to moderate adverse** effects on TCAs (other than TCA 7) in the vicinity of the Site in relation to the visual presence of large-scale plant such as tower or mobile cranes (refer to **Chapter 16: Townscape and Visual Assessment**); and
- **temporary**, **short** to **medium term**, **local** effects, ranging from **minor** to **major adverse** significance on local views and visual receptors including residents, users and workers of shops and local businesses, road users, users of the National Trails or recreational users of Mortlake Green (depending on the angle and distance of view) from the visual presence of large-scale plant such as tower or mobile cranes (refer to **Chapter 16: Townscape and Visual Assessment**).

20.7 Within **Table 20.1**, the likely sensitive receptors have been grouped together according to land use and / or key receptors.

20.8 Socio-economic, greenhouse gases, drainage, ground conditions, ecology, and archaeology significant residual effects have not been included in the assessment of likely in-combination effects. This is because the likely significant effects that have been identified would not have the potential to interact with any other environmental effect.

Table 20.1: Likely cumulative effect interactions during the different stages of the Works (refer to 'Notes' overleaf)

Sensitive Receptor / Land Use	Demolition Works	Alteration and Refurbishment Works	Piling, Basement and Substructure Works	Superstructure and Façade Cladding	Fit-Out	Landscaping and External Works
Existing surrounding residential occupants.	DSO, N, LV, T	N, LV, T	N, LV, T, V	N, LV, T, DS	(N), (LV), (T)	N, (LV), (T)
Future residential occupants of the Development.	×	N, LV, T	N, LV, T, V	N, LV, T	(N), (LV), (T)	N, (LV), (T)
Existing and future pedestrians, cyclists and road users.	LV, T	LV, T	LV, T	LV, T	(LV), (T)	(LV), (T)
Former Hotel Building (BTM).	H, HS**, T7	×	×	×	×	×
Former Bottling Building (BTM).	H, HS**, T7	×	×	×	×	×
Maltings Building (BTM).	HS**, T7	H, T7	×	×	×	×
Northern Boundary Walls.	H, HS*, T7	×	×	×	×	×
Eastern Boundary Wall.	H, HS*, T7	×	×	×	×	×
Southern Boundary Wall.	H, HS*, T7	×	×	×	×	×
Memorials.	H, HS*, T7	×	×	×	×	×
Historic Gates.	H, HS*, T7	×	×	×	×	×

Notes: *DSO – short to medium-term, local, beneficial and of minor to moderate significance on surrounding receptors from demolition of existing buildings on-Site in relation to daylight, sunlight and overshadowing.*

DS – long-term, local, adverse of minor to major significance on surrounding properties from construction of proposed buildings in relation to daylight and sunlight.

H – permanent, local, adverse effects of minor significance on heritage assets within the Site (Former Hotel Building, Former Bottling Building, Maltings Building, boundary walls, memorials and historic gates) arising from the removal of historic fabric within the Site.

HS - indirect, permanent, local, beneficial effects of minor significance upon the setting of heritage assets within and surrounding the Site arising from the demolition of existing modern brewery buildings and structures within the Site.*

*HS** - indirect, permanent, local, beneficial effects of moderate significance upon the setting of heritage assets within and surrounding the Site arising from the demolition of existing modern brewery buildings and structures within the Site.*

N –temporary, short to medium term, local, adverse effects of minor to moderate significance in relation to noise generated from activities.

V –temporary, short to medium term, local, adverse effects of minor to moderate significance in relation to vibration generated from sheet piling activities.

T - temporary, short to medium term, local, minor to moderate adverse effects on TCAs (other than TCA 7) in the vicinity of the Site in relation to the visual presence of large-scale plant such as tower or mobile cranes.

T7 - temporary, short to medium term, local effects of major adverse significance to Townscape Character Area 7: Stag Brewery (within the Site) in relation to the visual presence of large-scale plant such as tower or mobile cranes.

LV - temporary, short to medium term, local effects, ranging from minor to major adverse significance on local views and visual receptors from the visual presence of large-scale plant such as tower or mobile cranes.

( ) = Effect/s of only very minor significance

✗ - No interactive effects.

20.9 On review of **Table 20.1**, cumulative (in-combination) effects during the Works relate to:

- existing and future residents, who would be adversely affected by noise, vibration, daylight, sunlight, townscape and visual effects, with temporary beneficial effects from the demolition of the existing buildings on-Site in terms of daylight, sunlight and overshadowing;
- existing and future pedestrians, cyclists and road users, who would be adversely affected by townscape and visual effects; and
- on-Site heritage assets, which would be adversely affected by the direct removal of historic fabric and the visual presence of large-scale plant or mobile cranes, however the setting of which would benefit from the demolition of the modern brewery buildings.

Completed and Operational Development

20.10 An assessment of the likely in-combination cumulative effects, once the Development is complete and operational, has been undertaken. The likely significant in-combination cumulative effects are as follows:

- Existing surrounding residential occupiers would experience **beneficial** effects in terms of:
  - employment opportunities (**major significance** at the **local** level **minor significance** at the **district** level);
  - access to publicly accessible amenity space and playspace (**moderate significance** at both the **local** and **district** level);
  - use of on-Site community facilities (**minor significance** at the **local** level);

- views (ranging from **minor** to **moderate significance**) and townscape character (**minor significance**);
- setting of heritage assets within and surrounding the Site (**minor significance**);
- improvements to crime and community safety (**minor significance** at the **local** level); and
- tidal flood risk (**minor significance**).

- Existing surrounding residential occupiers would experience **adverse** effects in terms of:
  - demand for early years places (**moderate significance** at the **local** level and **minor significance** at the **district** level);
  - demand for primary school places (**minor significance** at both at the **local** and **district** level);
  - noise from changes in road traffic (**minor significance** – although this effect is noted as **insignificant** in **Chapter 9: Noise and Vibration**);
  - intermittent noise during usage of the sports pitch and MUGA (up to **minor significance** – although this effect is noted as **insignificant** in **Chapter 9: Noise and Vibration**);
  - loss or change of historic landscape character along the River Thames (**minor significance**);
  - loss of daylight (those with significant effects ranging from mostly **minor** to **moderate** significance, with **major significance** on **Boat Race House** only); and
  - loss of sunlight (**minor significance**) on Boat Race House and Churchill Court properties.
- Existing surrounding non-residential receptors would experience an **adverse** effect of **moderate significance** in terms of daylight for Jolly Gardeners; but **beneficial** effects in terms of:
  - generation of employment and expenditure of the new resident population (**moderate significance**);
  - views (**minor significance**);
  - tidal flood risk (**minor significance**); and
  - setting of heritage assets (**minor significance**).
  - .
- Existing and future pedestrians and users of the Site would experience generally **beneficia**l effects overall in terms of:
  - pedestrian wind comfort around thoroughfares (**moderate significance**) and building entrances (**minor significance**);
  - townscape character within the Site (**major significance**) and surrounding the Site (**minor** to **moderate significance**); and
  - views (generally ranging from **minor** to **major beneficial significance**, with an **adverse** effect of **moderate significance** on View 2 for recreational users of the Thames Path National trail).

Road users would experience **minor beneficial effects** from views of the Development, apart from along Thames Bank at Viewpoint location 2 where there be a **minor adverse** effect (however, this would be temporarily in transit). Road users would also experience **minor adverse** effects along Mortlake High Street and Lower Richmond Road due to driver delay owing to the traffic calming measures implemented by the Development to aid pedestrians and cyclists.

References

20.11 There are no references for this Chapter.