14. Summary of ES and Schedule of Mitigation

Introduction

14.1 The purpose of this Chapter is to provide a summary of the outcome of the assessments reported within **Technical Chapters 6 – 12**, focussing on the following key objectives:

- Provide a summary of residual and likely significant effects, the latter of which should inform the decision making process;
- Provide a 'Schedule of Mitigation', outlining all primary and tertiary mitigation committed to, and secondary mitigation considered;
- Conclude on the actions needed to manage environmental effects during construction and operation and establish a suitable mechanism to link to planning conditions, thereby delivering and securing the mitigation; and
- Provide a summary of the assessment of cumulative effects.

Summary of Residual and Significant Effects

14.2 Each Technical Chapter (**Chapters 6 – 12**) reports the output of the assessment through residual and likely significant effects, inclusive of a summary. However, the assessment of all residual effects including the likely significant effects across the ES is summarised from both the construction and operation phases in **Table 14.1** and **Table 14.2**, respectively. Those effects determined to be significant have been shaded in grey.

Table 14.1: Summary of Residual and Significant Effects During Construction

Effect	Receptor	Residual Effect	Is the Effect Significant
Socio-Economics and Human Health			
Creation of direct, indirect and induced employment opportunities	Resident labour force and business base	Moderate Beneficial	YES
Economic productivity generated, measured in gross value added	Economic productivity generated, measured in gross value added	Minor Beneficial	NO
Townscape and Visual			
Changes to townscape and landscape	Surrounding residential areas and Stanley Park/Anfield Cemetery.	Minor Adverse	NO

Effect	Receptor	Residual Effect	Is the Effect Significant
character within the site context.			
Changes to built/landscape heritage assets as townscape receptors.	Grade II* listed Stanley Park, Grade II* listed Anfield Cemetery including internal listed buildings and structures. Listed buildings within the context around the site, including those along Anfield Road.	Moderate Adverse	YES
Changes to tree cover	Trees within the Site and immediate site context. There are a number of trees located to the boundary with the park. Some are on LFC land but the majority are within Stanley Park. Trees within the park are protected under its listed status.	Minor Adverse	NO
Changes to scale, massing and height.	The existing stadium, and its relationship to the surrounding built context.	Minor Adverse	NO
Changes to movement and linkages.	Movement and circulation within the stadium. Movement and linkages along Anfield Road. Connection to/from Stanley Park.	Minor Adverse	NO
Changes to public open space	Visual and physical changes to the interface between the Site and immediately adjacent Stanley Park.	Minor Adverse	NO
Changes to site character	Visual and physical changes at site level, including; public realm, movement and linkages, trees and landscape, legibility and connectivity.	Minor Adverse	NO
Change to the character and amenity of the view.	1. View north west from Anfield Road.	Moderate Adverse	YES
Change to the character and	2. View west from Utting Avenue/Priory Road junction	Minor Adverse	NO

Effect	Receptor	Residual Effect	Is the Effect Significant
amenity of the view.	across Grade II* registered Stanley Park.		
Change to the character and amenity of the view.	3. View south west from Priory Road.	Moderate Adverse	YES
Change to the character and amenity of the view.	4. View south from Stanley Park (south)	Moderate Adverse	YES
Change to the character and amenity of the view.	5. View south from Anfield Cemetery (north).	Minor Adverse	NO
Change to the character and amenity of the view.	6. View south from Anfield Cemetery (south).	Minor Adverse	NO
Change to the character and amenity of the view.	7. View south from Stanley Park (north).	Moderate Adverse	YES
Change to the character and amenity of the view.	8. View south east from Anfield Road.	Minor Adverse	NO
Change to the character and amenity of the view.	9. View south west from Stanley Park.	Moderate Adverse	YES
Change to the character and amenity of the view.	10. View north east from St Domingo Road.	Negligible Adverse	NO
Change to the character and amenity of the view.	11. View north west from Anfield Sports and Community Centre.	Negligible Adverse	NO
Change to the character and amenity of the view.	12. View south west from Utting Avenue (south).	Negligible Adverse	NO

Effect	Receptor	Residual Effect	Is the Effect Significant
Change to the character and amenity of the view.	13. View south west from Abingdon Road playing fields.	Negligible Adverse	NO
Change to the character and amenity of the view.	14. View south west from Utting Avenue (north).	Negligible Adverse	NO
Change to the character and amenity of the view.	15. View south from Walton Hall Park and Walton Sports Centre.	Negligible N/A	NO
Built Heritage			
Change in the setting of heritage assets outside the Site	Stanley Park (grade II* registered park and garden) 35-37 Anfield Road (grade II listed building) 39-41 Anfield Road (grade II listed building) 43-45 Anfield Road (grade II listed building) 73 Anfield Road (non-designated heritage asset)	Moderate Adverse	YES
	Anfield Cemetery (grade II* registered park and garden) Arkles Public House (grade II listed building) 31-33 Anfield Road (non-designated heritage asset) Anfield Road School (non-designated heritage asset) Anfield Stadium (non-designated heritage asset)	Minor Adverse	NO
Physical change or alteration of heritage assets within the Site.	Stanley Park (grade II* registered park and garden)	Minor adverse	NO
	Anfield Stadium (non-designated heritage asset)	Negligible	NO
Biodiversity			

Effect	Receptor	Residual Effect	Is the Effect Significant
Disturbance and destruction of a potential bat roost	A potential transitional bat roost in the Anfield Road Stand	Negligible	NO
Transport			
Driver severance and journey delay associated with the temporary closure of part of Anfield Road	Drivers and passengers	Minor, Adverse	NO
Driver severance and journey delay associated with the temporary closure of part of Anfield Road	Pedestrians and cyclists	Minor, Adverse	NO
Temporary closure of part of Anfield Road leading to increased flows on alternative/diversion routes affecting highway safety and accidents	Drivers and passengers	Minor, Adverse	NO
Temporary closure of part of Anfield Road leading to increased flows on alternative/diversion routes affecting highway safety and accidents	Pedestrians and cyclists	Minor, Adverse	NO
Noise and Vibration			
Properties with a * notation are predicted to experience noise levels ≥75dBA, so a significant effect occurs for durations of works less than one month.			

Effect	Receptor	Residual Effect	Is the Effect Significant
Foundations and substructure	2-24 Alroy Rd, 128-144 Anfield Rd, 33-45 Anfield Rd 73-75 Anfield Rd*[1], 77-85 Anfield Rd, 250-252 Anfield Rd*, 254-268 Anfield Rd, 1-29 Skerries Rd, 31-39 Skerries Rd*	Potentially Significant using 5228-1 Example Method Two - The Five dB Change Method	YES
Superstructure	75 Anfield Rd, 250-252 Anfield Rd, 31-39 Skerries Rd, 73 Anfield Rd*	Potentially Significant using 5228-1 Example Method Two - The Five dB Change Method	YES
Roof	73-75 Anfield Rd, 37-39 Skerries Rd	Potentially Significant using 5228-1 Example Method Two - The Five dB Change Method	YES
Steel Frame Erection Anfield Road Stand	45 Anfield Rd, 140-144 Anfield Rd, 2-12 Alroy Rd 17-37 Skerries Rd, 75 Anfield Rd, 250-260 Anfield Rd, 73 Anfield Rd*, 39 Skerries Rd*	Potentially Significant using 5228-1 Example Method Two - The Five dB Change Method	YES
Existing upper tier and roof demolition	75 Anfield Rd, 250-254 Anfield Rd, 27-39 Skerries Rd, 73 Anfield Rd*	Potentially Significant using 5228-1 Example Method Two - The Five dB Change Method	YES
Construction of new Anfield Road Alignment	41-45 Anfield Rd, 136-144 Anfield Rd, 2-8 Alroy Rd	Potentially Significant using 5228-1 Example	YES

[1] Properties with a * notation are predicted to experience noise levels the same or greater than 75dBA, a significant effect.

Effect	Receptor	Residual Effect	Is the Effect Significant
	77-81 Anfield Rd, 256-266 Anfield Rd, 5-27 Skerries Rd, 29-39 Skerries Rd*, 73-75 Anfield Rd*, 250-254 Anfield Rd*	Method Two - The Five dB Change Method	
Construction vibration	39 Skerrries Rd	Minor impact below SOAEL	NO
Wind Microclimate			
N/A			

14.3 As identified in **Table 14.1**, the construction phase residual effects range from moderate beneficial to moderate adverse. Significant beneficial effect are anticipated in relation to the creation of employment opportunities for the resident labour force and business base. As can be expected with a constraints construction site, some significant short terms adverse effect are expected as a result of construction works. These are anticipated to primarily relate to noise during normal site hours (during the day) and also in relation to heritage assets from both a townscape and heritage perspective. Some more local views are also expected to experience an adverse effect.

14.4 All other effects identified would not be significant.

Table 14.2: Summary of Residual and Significant Effects During Operation

Effect	Receptor	Residual Effect	Is the Effect Significant
Socio-Economics and Human Health			
Creation of direct, indirect and induced employment opportunities	Resident labour force	Moderate Beneficial	YES
Economic productivity generated, measured in gross value added	Business and their workforce	Minor Beneficial	NO
Expenditure of visitors in the local and wider economy	Businesses in the visitor economy and their workforce	Moderate Beneficial	YES
Townscape and Visual			

Effect	Receptor	Residual Effect	Is the Effect Significant
Changes to townscape and landscape character within the site context.	Surrounding residential areas and Stanley Park/Anfield Cemetery.	Moderate Beneficial	YES
Changes to built/landscape heritage assets as townscape receptors.	Grade II* listed Stanley Park, Grade II* listed Anfield Cemetery including internal listed buildings and structures. Listed buildings within the context around the site, including those along Anfield Road.	Negligible Beneficial	NO
Changes to tree cover	Trees within the Site and immediate site context. There are a number of trees located to the boundary with the park. Some are on LFC land but the majority are within Stanley Park. Trees within the park are protected under its listed status.	Minor Beneficial	NO
Changes to scale, massing and height.	The existing stadium, and its relationship to the surrounding built context.	Minor Beneficial	NO
Changes to movement and linkages.	Movement and circulation within the stadium. Movement and linkages along Anfield Road. Connection to/from Stanley Park.	Moderate Beneficial	YES
Changes to public open space	Visual and physical changes to the interface between the Site and immediately adjacent Stanley Park.	Moderate Beneficial	YES
Changes to site character	Visual and physical changes at site level, including; public realm, movement and linkages, trees and landscape, legibility and connectivity.	Major Beneficial	YES

Effect	Receptor	Residual Effect	Is the Effect Significant
Change to the character and amenity of the view.	1. View north west from Anfield Road.	Minor Adverse	NO
Change to the character and amenity of the view.	2. View west from Utting Avenue/Priory Road junction across Grade II* registered Stanley Park.	Minor Adverse	NO
Change to the character and amenity of the view.	3. View south west from Priory Road.	Minor Adverse	NO
Change to the character and amenity of the view.	4. View south from Stanley Park (south)	Minor Adverse	NO
Change to the character and amenity of the view.	5. View south from Anfield Cemetery (north).	Minor Adverse	NO
Change to the character and amenity of the view.	6. View south from Anfield Cemetery (south).	Minor Adverse	NO
Change to the character and amenity of the view.	7. View south from Stanley Park (north).	Minor Adverse	NO
Change to the character and amenity of the view.	8. View south east from Anfield Road.	Moderate Adverse	YES
Change to the character and amenity of the view.	9. View south west from Stanley Park.	Minor Adverse	NO
Change to the character and amenity of the view.	10. View north east from St Domingo Road.	Neutral Negligible	NO

Effect	Receptor	Residual Effect	Is the Effect Significant
Change to the character and amenity of the view.	11. View north west from Anfield Sports and Community Centre.	Neutral Negligible	NO
Change to the character and amenity of the view.	12. View south west from Utting Avenue (south).	Neutral Negligible	NO
Change to the character and amenity of the view.	13. View south west from Abingdon Road playing fields.	Negligible Adverse	NO
Change to the character and amenity of the view.	14. View south west from Utting Avenue (north).	Negligible Adverse	NO
Change to the character and amenity of the view.	15. View south from Walton Hall Park and Walton Sports Centre.	Negligible N/A	NO
Built Heritage			
Change in the setting of heritage assets outside the Site.	Stanley Park (grade II* registered park and garden) Anfield Cemetery (grade II* registered park and garden)	Minor to Moderate Adverse	YES
	35-37 Anfield Road (grade II listed building) 39-41 Anfield Road (grade II listed building) 43-45 Anfield Road (grade II listed building) 73 Anfield Road (non-designated heritage asset) 31-33 Anfield Road (non-designated heritage asset)	Negligible	NO
	Arkles Public House (grade II listed building) Anfield Stadium (non-designated heritage asset) Anfield Road School (non-designated heritage asset)	Negligible	NO

Effect	Receptor	Residual Effect	Is the Effect Significant
Physical change or alteration of heritage assets within the Site	Stanley Park (grade II* registered park and garden) Anfield Stadium (non-designated heritage asset)	Negligible	NO
Biodiversity			
Disturbance to a confirmed hibernation bat roost	Confirmed hibernation bat roost in the Kop Stand	Negligible	NO
Noise and Vibration			
Road traffic noise	73 Anfield Road, Anfield Road	Major impact in the short term but falling below SOAEL	YES
Event Noise – Assessment of Concert Music Noise Level (MNL)	**North East Facing Stage Orientation:** 45 Anfield Road, north west of the Stadium; Residences on Anfield Road, to the south east of the Stadium as far as the junction with Arkles Lane; Residences on the north west side of Skerries Road (approximately northern third of Skerries Road from the junction with Anfield Road); and Residences facing onto Arkles Lane. **South West Facing Stage Orientation:** Residences at junction of Anfield Road and Arkles Lane; Residences on the southwestern portion of Skerries Road; Residences to the south of Walton Breck Road (but set back from junctions with Walton Breck Road) including Venmore Street,	Moderate impact falling between LOAEL and SOAEL	NO

Effect	Receptor	Residual Effect	Is the Effect Significant
	Burleigh Road South, Hartnup Street, Donaldson Street, Glaisher Street and Davy Street; Residences on the southern part of Pulford Street. **Central Stage Orientation** Residential Streets to the east and Northeast of Anfield Stadium including Anfield Road, Skerries Road, Wylva Road, Arkles Road and Arkles Lane; Residential Streets to the west and northwest of Anfield Stadium including Anfield Road, Alroy Road, Rockfield Road, Sybil Road, Conningsby Road, Pulford Street and streets accessed from Burnand Street. Residences to the south of Walton Breck Road (but set back from junctions with Walton Breck Road) including Burleigh Road South, Burleigh Road North, Venmore Street, Hartnup Street, Donaldson Street, Glaisher Street, Maslin Drive and Davy Street.		
Wind Microclimate (refer to Chapter 12 for the location of receptors)			
Thoroughfares locations with walking use wind conditions during the windiest season (Configuration 4)	80, 112, 118, and 134	Negligible	NO
Thoroughfares locations with strolling to sitting use wind conditions during	All other thoroughfare receptors	Negligible to moderate beneficial	NO

Effect	Receptor	Residual Effect	Is the Effect Significant
the windiest season (Configuration 4)			
Crossings locations with standing use to sitting use wind conditions during the windiest season (Configuration 4)	88, 259-262, and 265	Minor beneficial to major beneficial	NO
Entrances to the Proposed Scheme and to the Stadium with strolling use wind conditions or calmer during the windiest season (Configuration 4)	85	Negligible	NO
Entrances to the Proposed Scheme and to the stadium with strolling use wind conditions or calmer during the windiest season (Configuration 4)	164, 173, 175, and 232	Minor adverse	YES
Entrances to the Proposed Scheme and to the Stadium with standing use wind conditions or calmer during the windiest season (Configuration 4)	18-20, 22, 27, 30, 34-36, 38, 44-47, 68, 69, 71-74, 76, 77, 90, 91, 95, 99, 119, 135, 136, 138-140, 144, 166-171, 176, 185-189, 209-211, 213, 214, 224-226, 233, 234, 238, 248-250, 268-270, 287, 289, 298, 308, 310, 312, 315, and 317	Negligible to minor beneficial	NO
Bus stops with standing use wind conditions or calmer during the windiest season (Configuration 4)	29, 37, 56, 243, 255	Negligible to minor beneficial	NO

Effect	Receptor	Residual Effect	Is the Effect Significant
Pitch and Stands with standing use wind conditions or calmer during the windiest season (Configuration 4)	1-15, and 319-339	Negligible to minor beneficial	NO
Ground level amenity spaces with sitting use wind conditions or calmer during the summer season (Configuration 4)	26, 264, 266, 272, 273, 275, 277, 283, 285, 286, 292, and 295	Negligible	NO
Stanley Park with wind conditions strolling to standing use wind conditions during the summer season (Configuration 4)	148-150, 153-156, 195, 384-391, and 393-410	Negligible	NO
Strong Winds (Configuration 4)	164, 173, 177, 345, and 347	Major Adverse	YES

14.1 As shown in **Table 14.2**, the operation phase residual effects range from major beneficial to major adverse. Significant beneficial effects are anticipated as a result of the creation of employment opportunities for the resident labour force, in addition to those associated with increased expenditure in businesses in the visitor economy and their workforce. Due to the improvement in public realm and design of the Proposed Scheme, significant beneficial effects are anticipated on townscape character within the site context and in relation to improvements in movement and linkages, public open space and site character.

14.2 Some adverse effects can also be expected due to the presence of the Proposed Scheme in a single view (view south east from Anfield Road) due to the presence of the Proposed Scheme removing further views in this location. It is also considered that there would be an adverse effect on the setting of two heritage assets (Stanley Park and Anfield Cemetery). Localised strong winds, including at some entrances of the Stadium also present a significant adverse effect. In addition, very limited significant adverse effects (limited to 73 Anfield Road) wold occur due to the realigned Anfield Road and associated road traffic noise.

14.3 All other effects considered are not expected to be significant

Schedule of Mitigation

14.4 As set out in **Chapter 2: Approach to EIA**, the EIA has considered primary, secondary and tertiary mitigation in line with IEMA EIA Guidance to Shaping Quality Development. Each of the **Technical Chapters 6 – 12** has considered primary and tertiary mitigation prior to

undertaking the assessment of likely significant effects. Following the conclusion of effects based on the Proposed Scheme, any further mitigation measures or monitoring arrangements (i.e. secondary mitigation) have been detailed.

14.5 In accordance with IEMA Guidance and the EIASR (**Appendix 2.1**), three types of mitigation have been identified and used within the ES, comprising:

- **Primary** – modifications to the location or design of the Proposed Scheme made during the pre-application stage that are in inherent part of the project;
- **Secondary** – actions that will require further activity in order to achieve the anticipated outcome; and
- **Tertiary** – actions that would occur with or without input from the EIA feeding into the design process. These include actions that will be undertaken to meet other existing legislation requirements, or actions that are considered to be standard practices used to manage commonly occurring environmental effects.

14.6 All primary, secondary and tertiary mitigation referenced throughout the ES has been collated and is summarised into **Table 14.3**.

14.7 The Schedule of Mitigation defined the actions needed to manage environmental effects during the construction and operational phases of the Proposed Scheme and should be used as a mechanism to secure the mitigation considered within the ES, largely through conditions and any monitoring.

Table 14.3: Schedule of Mitigation

Mitigation Adopted at Scoping Stage Full detail is outlined in the Scoping Report submitted as part of the application for the Proposed Scheme (**Appendix 2.1**). A summary is provided below:
Air Quality
Measures incorporated into a CEMP informed by the Institute of Air Quality Management (IAQM) Guidance[i] and will include prevention measures, such as screening stockpiles of materials, deployment of windbreak netting and dampening exposed soils as appropriate, and set out requirements for ongoing monitoring and liaison with the local community, and LCC.
The implementation of a Match Day Transport Strategy and Event Transport Management Strategy by LFC to support fan travel to and from the stadium on match days and for concerts/major events, and to support sustainable travel choices.
Climate Change and Greenhouse Gases
The Application is supported by a Flood Risk Assessment and Drainage Strategy. This work has been undertaken in accordance with the latest Environment Agency guidance, and include an allowance for future climate change (a minimum betterment of at least 30% from existing discharge rates will be achieved).
Water Resources, Flood Risk and Drainage

During construction activities, surface water run-off would be controlled through the implementation of a CEMP. The CEMP will be compiled by the contractor and outline what mitigation measures will be implemented to control surface water runoff from the Site during construction.

It is anticipated that during the construction phase standard mitigation measures, as outlined in the national Guidance for Pollution Prevention (GPP) documents, would be included within the CEMP to prevent pollution within surface water discharges.

Ground Contamination

The CEMP will ensure training is provided to raise unexploded ordinance (UXO) awareness as part of the Site inductions and as a primary mitigation measure to enhance the safety of workers on-site.

It is anticipated that dust arising from earthworks during construction would be mitigated through the implementation of a CEMP as a tertiary mitigation measure, and informed by IAQM guidance.

Concrete slabs will be used to reinforce foundations as a form of primary mitigation, to provide a single level of ground gas protection; as recommended by a Phase II geo-environmental investigations report[ii].

The CEMP will incorporate measures to control and prevent leaks and spillages of potentially contaminated groundwater, which lies at approximately 30m below ground level.

Archaeology

Ground disturbance caused by the Proposed Scheme which would have the potential to insignificantly affect archaeological remains would be mitigated through construction through a watching brief and, if necessary, excavation and preservation by record.

Risk of Major Accidents and Disasters

It is anticipated that policies, procedures and mitigation measures currently being adhered to at the Stadium will be carried forward and implemented for the Proposed Scheme.

Mitigation measures incorporated into the CEMP include ensuring that equipment and material are properly secured when not in use, wearing the appropriate safety equipment, and ensuring staff have undertaken suitable awareness sessions on the dangers of working during high winds.

The Proposed Scheme has incorporated mitigation measures for heatwaves into the design which aim to reduce the risk of the building overheating. These measures include: each occupied room will be designed to comply with TM52: Limits of Thermal Comfort (CIBSE, 2013), and high density areas will have comfort cooling provided. The comfort requirements will be designed against a future weather file and will take into account the potential risks posed by climate change.

Any mitigation measures to conserve water during a drought can be included in the CEMP.

In the event of a drought, the Proposed Scheme may experience and have to mitigate for temporary bans on the water supply as decided by the utilities company. These mitigation measures may include; prioritising the water supply, ensuring the public are

aware of the limited water supply, and the potential to have to cancel or postpone matches in the event of severe droughts.

It is intended that any effects for urban fires during construction will be mitigated for within the CEMP during construction. Mitigation measures may include; ensuring flammable waste is disposed of suitably, ensuring any flammable materials or ignition sources are stored under lock-and-key, and ensure staff and visitors are aware of the stadium's fire safety procedure.

Waste

Measures to reduce the effects of material resource use throughout the design process, may be achieved through reducing the material requirements in the design itself, the use of site-won or recycled materials and the use of materials with a high proportion of recycled content.

The Proposed Scheme will implement mitigation measures to minimise waste generated during construction such as implementing the waste hierarchy to minimise disposal and maximise reuse and recycling.

Lighting

LFC will ensure that suitable colour temperatures are selected for light sources where required to mitigate impacts on wildlife, reduce sky glow and minimise risk of human response to lighting where legally compliant, practicable and safe to do so.

LFC will utilise applicable lighting standards from relevant British / European / UEFA standards to ensure lighting is appropriate to the work that is being undertaken, that areas are not over lit and to reduce wasted energy.

LFC will take measures to reduce obtrusive light, taking into account the safety and operational requirements of the site, including:

1. Ensure that the reduction and control of obtrusive light is an integral part of the landscaping and built environment design process.

2. Ensuring sensitive receptors and areas are considered during the lighting design process with a view to reducing obtrusive light.

3. Specification of suitable photometric distribution during design development to reduce sky glow, control spill light and luminous intensity.

4. Specification of suitable lighting control equipment to enable dimming or switching of light sources during times when artificial lighting is not required.

5. Were appropriate apply supplementary photometric control methods such as baffles, shields or louvres.

6. Considering the position, tilt, orientation and mounting height of luminaires to reduce obtrusive light.

The limitations for obtrusive light, obtained from ILP GN01:2011[iii] should be adhered to during the construction and operational phase.

Lighting levels should be selected from relevant British / European standards to ensure lighting is appropriate to the work that is being undertaken and that areas are not over lit. Refer to British Standard Light and Lighting – Lighting of work places Part 2: Outdoor work places BS EN 12464-2 2014[iv].

Temporary floodlighting should be mounted at a tilt of 0° and utilise a double asymmetrical photometric configuration. The ILP advises in GN01:2011[v] that a

maximum main beam angle of 70° should be utilised to minimise the effects of glare along with spill and upward light.
Temporary lighting will be located and directed away from residential properties.
LFC will monitor the effectiveness of lighting mitigation measures for the Site. Monitoring will consist of surveys that will involve the measurement of lighting levels following the baseline assessment methodology with measurements compared against the assessment. Improvements will be carried out where necessary and practicable to do so, along with periodic maintenance and inspections.
Obtrusive light emissions produced during construction activities will be controlled through the implementation of the CEMP.
Primary Mitigation Full detail is outlined in **Technical Chapters 6 – 10**. A summary is provided below:
Socio-Economics and Human Health
N/A
Townscape and Visual
Construction of the new Stand will be to the rear of the existing stand to allow it to remain fully functional throughout the majority of the works.
The construction site will primarily be contained within the existing match day parking and fan zone area adjacent to the north of Anfield Road and south of Stanley Park, minimising potential landscape impacts on the Park and sensitive views from within the Park.
The design intent is for a net cut and fill balance, utilising sandstone arisings from excavation as granular fill, minimising the potentially adverse townscape and visual effects from this source of construction traffic.
Potential impacts on boundary trees is minimised, and sufficient replacements are incorporated in the landscape proposals to mitigate against loss.
Continuation of the design aesthetic already established as part of the Main Stand development.
Creation of a high quality public realm which reflects its position in relation to Stanley Park, enhances the relationship between the Park and the Stadium, and prioritises pedestrian movement.
Improved access to Stanley Park which reflects the urban grain and enhances connectivity.
Opportunities for use on non-match days as a venue for conferences and meetings (anticipated to be opportunity to host exhibitions on non-match days), to complement non-match day activities that currently take place within the Main Stand.
Cohesion in use of materials with the Main Stand and a high quality palette of materials.
Glazed elements fronting onto Stanley Park to allow views across the Park, and to create a positive relationship between the stadium and the Park.

Incorporation of bespoke artwork into the public realm to create a strong sense of place and high quality environment.
Built Heritage
The construction site will primarily be contained within the existing match day parking and fan zone area adjacent to the north of Anfield Road and south of Stanley Park, minimising potential impacts on the Park and sensitive views from within the Park.
As outlined in **Chapter 4: Description of the Proposed Scheme**, the external appearance of the new stand echoes that of the Main Stand, maintaining a similar design approach and palette of materials. The primary material is red facing brickwork, enclosing elements of glazing and cladding with profiled metal cladding to the roof and gables. As with the Main Stand, no reflective materials are proposed (with the exception of glazing) to reduce glaring in longer range views from Stanley Park and Anfield Cemetery.
The introduction of glazed elements fronting onto Stanley Park to allow views across the Park, and to create a positive relationship between the Stadium and the Park.
The previously approved scheme involved continuing the metal roof trusses from the Main Stand around onto the Anfield Road Stand. This has been removed from the Proposed Scheme to assist in reducing the perceived mass of the building in views from the surrounding area.
Creation of a high quality public realm which reflects its position in relation to Stanley Park, enhances the relationship between the Park and the Stadium, and prioritises pedestrian movement.
Biodiversity
Where possible, construction of temporary concert stages will be erected in such a way as to avoid obstructing bat access to the roost throughout the year. Particular attention must be given during the winter months as this is the only time of year bats have been observed roosting in the Kop stand.
Transport
The existing Transport Strategy has been updated in response to the proposed increase in stadium capacity, to build upon current practices.
Noise and Vibration
The realigned carriageway for Anfield Road will be a low speed road designed to discourage speeding and with a high-quality surface which should ensure traffic noise is controlled as effectively as practicable.
Under an Event Management Strategy (EMS), noise mitigation will be applied for all concert type events as a matter of best practice. Noise associated with concert type events will be mitigated principally by implementation of an effective event Noise Management Plan (NMP), with measures based upon NCCP guidance.
Wind Microclimate
The proposed landscaping scheme, namely six approximately 5m high deciduous trees along Anfield Road; eighteen 50% porous screens (2m wide by 3m high) located at 3m above the ground; 5m high 50% porous screen around the north-west entrances to the

Proposed Scheme (leaving 2.5m of clearance from ground level); and 2m high 50% porous fence around the OB area.

Tertiary Mitigation

To be delivered as part of the commitment to a CEMP

Full detail is outlined in **Technical Chapters 6 – 10**. A summary is provided below:

Socio-Economics and Human Health

The construction site will be kept secure to adhere to the Construction (Design and Management) Regulations 2015. This will reduce the risk of crime during the construction phase and has contributed towards the decision to scope out an assessment of crime effects.

Continued development of the public realm, building upon the guiding principles established through the Main Stand expansion, will enhance the "walkability" of the Site and has informed the decision to scope out an assessment of active travel.

Townscape and Visual

Trees being retained will be subject to appropriate protection measures during the construction process, minimising potentially adverse effects on trees and in particular the protected trees within the Park.

Built Heritage

The implementation of a Construction Environment Management Plan (CEMP) will assist in containing and managing the construction process of the Proposed Scheme.

As outlined in **Chapter 4: Description of the Proposed Scheme**, temporary, secure fencing, barriers or hoardings around the perimeter of the Site will be established at the outset. This will partially screen the visual impact of the construction activities.

Trees being retained will be subject to appropriate protection measures during the construction process, minimising potentially adverse effects on trees and in particular the protected trees within the Park.

Biodiversity (should bats be identified in the Anfield Road Stand**)**

Appropriate phasing of the construction works to avoid death and/or injury. This would, if required, involve carrying out activities furthest away from any potential roost first or undertaking activities that will cause negligible disturbance first.

Transport

The Construction Traffic Management Plan will ensure that traffic associated with the construction of the Site is managed in a way that minimises its impact upon the highway network. This will likely include avoiding peak times of travel, ensuring vehicles are able to enter directly into site and not cause an obstruction on the highway, and details on any traffic management felt necessary to ensure safe movement of construction vehicles. This will also specify the route vehicles should take to and from the site, and detail roads which should not be used.

Noise and Vibration

Application of Best Practicable Means (BPM) as defined in Section 72 of the Control of Pollution Act 1974 by implementation of a CEMP based on good industry practice.

Apart from exceptional circumstances, construction activities will be limited to daytime only[vi].
BPM should be applied to manage noise emissions from construction works. Typical means by which noise may be controlled include (but are not limited to) the following; selecting quiet equipment; equipment should be fitted with silencers or mufflers; and a site contact should offer a contact number to, and develop good rapport with, nearby sensitive noise receptors.
Temporary acoustic screening should be provided around breaking activities. Screening should aim to prevent line of sight between works and receptor locations. This is most likely practical around hand-held equipment (e.g. hand-held breakers, compressors, etc.) compared to heavy plant (e.g. dumpers and excavators).
Wind Microclimate
N/A
Secondary Mitigation Full detail is outlined in **Technical Chapters 6 – 10**. A summary is provided below:
Biodiversity (should bats be identified in the Anfield Road Stand**)**
As some areas of Anfield Road Stand were not fully inspected, an increased survey effort will be undertaken to provide additional evidence that the low potential status of bats using the Anfield Road Stand is a robust assessment and that there is no roosting feature hidden out of view of accessible areas. As such, two nocturnal surveys will be undertaken consisting one dusk and one separate dawn survey, to be undertaken between May and September with at least one being undertaken between May and August in line with best practice[vii].
Should the proposed survey results confirm presence of a transitional bat roost, effort will be made to encourage bats to move to the surrounding landscape of their own accord (where time allows prior to construction) and to dissuade bats from re-entering Anfield Road Stand, prior to construction commencing.
If it is not feasible to erect stages in a way to avoid obstruction to bats accessing the roost in the Kop Stand during the months September-April (inclusive), when the bat roost is determined to be in use (hibernation), then a EPSL will be applied for to avoid committing an offence under the Wildlife and Countryside Act 1981 (as amended).

Summary of Assessment of Cumulative Effects

14.8 An assessment has been undertaken in relation to likely cumulative effects. The assessment considered effect interactions as well as in-combination effects with 7 other Approved Projects.

14.9 The assessment of effect interactions identified that interactions were limited to a single receptor group: *Population and Human Health*, as a result of increased employment and economic activity during both the construction and operation of the Proposed Scheme. This is alongside adverse noise effects from construction activities and as a result of the realignment of Anfield Road (limited to a single property) during operation. It should be noted that due to the broad category of the receptor group, this includes receptors which

may not experience all effects stated. For instance, the occupants of the single property effected by noise may not benefit from increased employment opportunities, potentially not falling with the appropriate employee profile.

14.10 The assessment of in-combination effects identified that, overall where common receptors are evident, in-combination effects were generally considered to be no greater than that reported at the project level (i.e. the Proposed Scheme in isolation). Effects were not considered to be significant (beyond those at a project level) for all topics and at all receptors.

References

[i] Institute of Air Quality Management (2014). 'Guidance on the assessment of dust from demolition and construction.

[ii] Jacobs SMK Ltd. (2015). Liverpool FC Expansion: Phase II Geo-Environmental Investigation Interpretive Report.

[iii] Institute of Lighting Professionals Guidance Notes for the Reduction of Obtrusive Light GN01:2011.

[iv] British Standard Light and Lighting – Lighting of work places Part 2: Outdoor work places BS EN 12464-2 2014.

[v] Institute of Lighting Professionals Guidance Notes for the Reduction of Obtrusive Light GN01:2011.

[vi] In accordance with Liverpool City Council *Construction hours of work Guidance note for contractors and developers: https://liverpool.gov.uk/media/2779/construction-site-noise-guidance.pdf (accessed in November 2019)*

[vii] Natural England (2020) Natural England website. [Online] [Accessed 13 January 2020]. Available at: https://www.gov.uk/government/organisations/natural-england