The People's Project

Bramley-Moore Dock – Planning Addendum

Sustainability Statement

September 2020

BUROHAPPOLD ENGINEERING

The Peoples Project

Sustainability Statement

0040026

11 September 2020

Revision 04

BMD01-BHE-ZZ-XX-RP-YS-0300

Revision	Description	Issued by	Date	Checked
00	Draft issue for comment	FA	21/12/2019	BJ
01	Revised in line with comments from CBRE	FA	22/12/2019	BJ
02	Revised in line with comments from CBRE	FA	23/12/2019	BJ
03	Updated for purpose of resubmission	FA	11/09/2020	LB
04	Revised in line with comments from CBRE	FA	11/09/2020	LB

author	**Fergus Anderson**
date	**11/09/2020**
approved	**Lloyd Baker**
signature	Digitally signed by Lloyd Baker Date: 2020.09.11 16:23:41+01'00'
date	**11/09/2020**

Contents

1 Executive Summary

A Sustainability Statement was prepared on behalf of Everton Stadium Development Limited (hereafter 'the club' or 'Everton') to support a full planning application for the development of a stadium (52,888 seat capacity) with associated facilities and infrastructure at Bramley-Moore Dock, Liverpool (hereafter referred to as 'BMD'). A planning application (LPA ref. 20F/0001) was subsequently submitted in December 2019 and has been subject to statutory consultation.

A detailed consultation response was received from MEAS, dated 30th April 2020, on the sustainability report submitted with the scheme:

'Both section 15 of the Design and Access Statement (The People's Project MEIS dated December 2019) and the Sustainability Statement (Buro Happold Engineering Doc Ref: 0040026 Rev 01 dated December 2019) provide details of how sustainability has been addressed through the design process including a solar photovoltaic array connection with the proposed district heat network for Liverpool Waters alongside resource efficiency measures.

This is sufficient to demonstrate compliance with UDP policies GEN8 (Environmental Protection) and HD21 (Energy Conservation) and emerging Local Plan policies R7 (Renewable and Low Carbon Energy) and R9 (Solar Panels) subject to heritage and visual elements being satisfactorily addressed. The Sustainability Statement should be secured by a suitably worded condition as an approved document'.

Upon receipt of all consultation feedback on the submitted application to date, the following changes (relevant to this statement) have been made to the submitted scheme which requires the submission of an amended application:

- Removal of multi-storey carpark (MSCP) – redesign of western elevation to incorporate a new elevated stepped amenity area / public realm, with sheltered access / egress to the west stand turnstiles below;
- Removal of surface carpark PV canopy to the west of the water channel and relocation of the PV panels on to the stadium roof on the south stand (2,050 sq. m of panels to be structurally integrated with roof so not visible from street level);
- Relocation of Outside Broadcasting (OB) compound and sub-station to northern extent of west quay. As a result of relocation of OB compound and sub-station, surface carparking has been relocated to the south of the west quay; and
- Internal stadium layout changes – relocation of plant areas and inclusion of battery storage areas.

This updated sustainability statement therefore seeks to demonstrate how Liverpool City Council's sustainability policies within the Unitary Development Plan (adopted 2002 and remains statutory development plan) and the emerging replacement local plan (Submission Version, May 2018 – plan examination still pending) have informed the proposed development. A bespoke sustainability assessment framework has been developed for the proposed development. A general description of how the framework functions, the reasons for its selection and its alignment to local policy are also set out within this document.

1.1 Chapter Updates made for Revised 2020 Submission

1. Legislation / policy revisions: there have been no related updates to legislation/policy that have affected either the methodology or findings of this assessment.
2. Technical assessments: amendments to this document have been made in line with revisions made to the other technical information submitted as part of the 2020 Revised Submission.
3. The sections that have been updated are detailed below:

3.1 The response to policies EP7 Recycling, EP9 Waste Storage and EP10 Hazardous Substances has been revised (Section 4.3.3). The update accounts for the forecast increase in construction waste generation, from 63,600 tonnes to 65,900 tonnes.

3.2 The responses to policies HD 21 and EP 16 have been revised to account for the impact of the design changes for energy performance. As set out within the Energy Statement a 4% improvement over Part L is demonstrated and the scheme now includes battery storage which will provide backup for life safety, essential loads and matchday continuity.

3.3 Responses to OE11 and OE12 have been updated to reflect the incorporation of additional trees along the Southern side of the stadium. The groups of trees replace the large structural wind baffles that were in the previous design.

3.4 Responses to T11 and T12 have been amended to reflect the reduction in onsite parking. In addition, the reduced number of on-site cycle storage spaces is addressed in the response to T6. A total of 89 and 153 parking spaces (both including 4 motorcycle bay spaces) will be provided for matchday and non-matchday users respectively (match day spaces is reduced due to outdoor broadcast requirements). 152 on-site cycle parking spaces are to be provided.

2 Introduction

2.1 Scope of the document

A Sustainability Statement was prepared on behalf of Everton Stadium Development Limited (hereafter 'the club' or 'Everton') to support a full planning application for the development of a stadium (52,888 seat capacity) with associated facilities and infrastructure at Bramley-Moore Dock, Liverpool (hereafter referred to as 'BMD'). A planning application (LPA ref. 20F/0001) was subsequently submitted in December 2019 and has been subject to statutory consultation.

A detailed consultation response was received from MEAS, dated 30th April 2020, on the sustainability report submitted with the scheme:

'Both section 15 of the Design and Access Statement (The People's Project MEIS dated December 2019) and the Sustainability Statement (Buro Happold Engineering Doc Ref: 0040026 Rev 01 dated December 2019) provide details of how sustainability has been addressed through the design process including a solar photovoltaic array connection with the proposed district heat network for Liverpool Waters alongside resource efficiency measures.

This is sufficient to demonstrate compliance with UDP policies GEN8 (Environmental Protection) and HD21 (Energy Conservation) and emerging Local Plan policies R7 (Renewable and Low Carbon Energy) and R9 (Solar Panels) subject to heritage and visual elements being satisfactorily addressed. The Sustainability Statement should be secured by a suitably worded condition as an approved document'.

Upon receipt of all consultation feedback on the submitted application to date, the following changes (relevant to this statement) have been made to the submitted scheme which requires the submission of an amended application:

- Removal of multi-storey carpark (MSCP) – redesign of western elevation to incorporate a new elevated stepped amenity area / public realm, with sheltered access / egress to the west stand turnstiles below;
- Removal of surface carpark PV canopy to the west of the water channel and relocation of the PV panels on to the stadium roof on the south stand (2,050 sq. m of panels to be structurally integrated with roof so not visible from street level);
- Relocation of Outside Broadcasting (OB) compound and sub-station to northern extent of west quay. As a result of relocation of OB compound and sub-station, surface carparking has been relocated to the south of the west quay; and
- Internal stadium layout changes – relocation of plant areas and inclusion of battery storage areas.

It is recognised that sustainable development cuts across a number of issues and disciplines, reference should be made to the accompanying planning documents for further technical details. Of particular note are the following documents:

- Environmental Impact Assessment (CBRE);
- Design and Access Statement (Pattern);
- Other supplementary Environmental Statements, including but not limited to:
  - Operational waste management strategy;
  - Construction waste management strategy; and
  - Flood Risk Assessment.

2.2 Proposed development

A detailed description of the proposed development is provided in the Planning Statement and Environmental Statement submitted with the full planning application. In summary, the proposed development is for a 52,888 seat capacity stadium with associated facilities and infrastructure.

To enable the proposed development, all buildings will be demolished with the exception of the Grade II listed Hydraulic Tower, which will be retained. The Grade II listed BMD walls will also be retained and infilled, with a shallow water channel, oriented north to south, to be excavated from the infill on the western side of the dock.

A Fan Zone (public realm area) is proposed to the east of the site between the stadium and Regent Road. Within the Fan Zone, the existing BMD wall coping will be exposed within the external hard landscaping / public realm works. The Hydraulic Tower will be incorporated into the Fan Zone and potentially used as an exhibition/cultural centre. Any physical works (internal or external) to the tower will be subject to appropriate listed building consent submissions.

Three additional site access points are proposed through the Regent Road wall to enable pedestrian access to the site via the Fan Zone. The existing northern and southern access points are proposed to be maintained for both pedestrian and vehicular access (subject to appropriate management).

Car parking will be provided on site to cater for both match and non-match days by means of an at-grade car parking proposed along the western side of the proposed water channel. The at-grade parking be accessed via roads passing over the isolation structures (comprising the existing structure to the south and proposed structure to the north).

A Distribution Network Operators compound with switch rooms and transformers (DNO compound) is also proposed at the west of the water channel, to the north of the car park, adjacent to which a Growlight storage will be provided. An Outside Broadcast (OB) compound is also to be accommodated in this area. Refer to the Pattern Design and Plan-It drawings submitted with the planning application.

Stadium Activity / Use

The proposed stadium will primarily cater for football and it is anticipated that a total of 28 games (19 of which are league home fixtures) would be played per season (subject to Everton's progress in Domestic and European cup competitions). A further 4 no. non-football major events (at full capacity), such as concerts or non-football sporting events (boxing, rugby etc.) are also proposed.

The stadium also will accommodate the club's ticket office and club shop. The hospitality areas proposed in the east stand (to be used as a café on non-football / major event days) and west stand (to be used as a restaurant) will also have public access. In addition, the following events may also take place throughout the year:

- Meetings/Conferences – potential for up to 261 days per year
- Exhibitions/Conventions – potential for up to 339 days per year
- Weddings – potential for up to 79 days per year
- Funerals – potential for up to 261 days per year
- Banqueting – potential for up to 339 days per year
- Christmas Parties – potential for up to 27 days per year
- Stadium Tours – potential for up to 339 days per year

As initial detailed, the Hydraulic Tower is intended to function as an exhibition/cultural space as well as the start/end point for the River Walk (to be connected to the wider approved Liverpool Waters scheme – when built out).

Energy Efficiency Measures

The Sustainability Statement should be read alongside the Energy Statement submitted with the application. Notably, the energy statement confirms that the following GREEN energy generation strategies have been proposed as part of the submitted scheme design:

- The building requires 312MWh/yr of electricity generation via photovoltaics in order to achieve a compliance margin of 4% over Part L 2013 Target Energy Rating (TER). This equates to approximately 2,050m^2 of active PV area (physically defined on the stadium south stand roof).
- Battery Storage Technology has been incorporated and sized to provide backup for life safety, essential loads and matchday continuity whilst having capacity to facilitate energy market participation and perform load balancing

Off-Site Works

On the basis of the submitted Environmental Statement and the technical reports which inform the assessment, off-site infrastructure works proposed include:

- Implementation of queue management systems at Sandhills station to maintain safety. It is anticipated that a crowd corralling area will be required at land owned by Merseytravel adjacent to the existing station access (waiting area required to enable managed access to the platform post-match);
- Provision of ecological mitigation measures including the installation of cormorant rafts on Nelson Dock;
- Highways works (S278 works); and
- Improvement works to infrastructure including utilities (detailed report submitted with planning application).

2.3 Liverpool Waters – Future Baseline

Peel Land & Property secured outline planning permission (LPA ref. 10O/2424 – latest non-material amendment is ref. 19NM/1121) in 2013 for a mixed-use development comprising a maximum of 1,690,000m^2 of mixed use including 9,000 dwellings and 310,000m^2 of office space (figures rounded). The site stretches from Princes Dock in the south to Bramley-Moore Dock to the north. The timeframe for full delivery of the scheme at the time of planning application was 2041. A further non-material amendment submission has been made for the Liverpool Waters scheme under ref. 20NM/1801 and this is pending determination at this time. The proposed amendments are however focused towards the south of the Liverpool Waters site with no changes to the Northern Docks neighbourhood comprising Nelson Dock and Bramley-Moore Dock.

2.4 Bramley-Moore Dock

The application site is located within the Northern Docks (comprising Nelson Dock and Bramley-Moore Dock) area of the Liverpool Waters scheme with the following development proposed for the 2036-2041 period (as per latest approved parameter plan associated with non-material amendment ref. 19NM/1121):

- C3 Dwellings- 219,500m^2.
- A1 Retail- 5,000m^2.
- A2 Financial & Professional services- 300m^2.
- A3 Food & drink- 2,200m^2.
- A4 Drinking establishments- 1,200 m^2.
- B1 Business- 1,800m^2
- D1 Non-Residential Institutions- 6,600m^2.
- D2 Assembly and Leisure-1,000m^2.

The amount of the development listed above which relates to Bramley-Moore Dock (excluding Nelson Dock) is not specified in the permission, which details the amount of development per Neighbourhood only.

2.5 Mersey Heat (Liverpool Waters)

As part of the Liverpool Waters development to the South of Bramley Moore Dock, Peel Energy have developed a heat network proposal to serve the development. The scheme is known as "Mersey Heat" and is to serve the developments to the South of Liverpool Waters initially (around Princes Parade) before being expanded in a phased approach to serve developments to the North towards Bramley Moore Dock. At the time of writing the installation of the pipework to serve the initial phases is underway. Mersey Heat is a registered company owned by Peel Energy who will own the network and associated assets.

A number of heat generation technologies have been considered during the design period of the project such as biomass and combined heat and power (CHP). The current proposal is for the network to be served by ground source heat pumps with gas fired boilers for backup. This has been proposed due to the reduced carbon emissions which could be realised with a heat pump solution. Planning permission has been granted to install a district heating network servicing Central Docks South, and Central Government funding has been secured via HNIP (Heat Network Investment Project).

3 Planning policy context

3.1 Scope of the policy review

Section 38(6) of the Planning and Compulsory Purchase Act 2004 and Section 70(2) of the Town & Country Planning Act 1990 require that planning applications to be determined in accordance with the statutory development plan, unless material considerations indicate otherwise. The statutory development plan for the City of Liverpool currently comprises the Unitary Development Plan (adopted 2002).

An overview of the key policy drivers relevant to the Sustainability Statement are provided in this chapter. A number of national and local policies have driven the approach to sustainability. The UK Sustainable Development Strategy 'Securing the Future' sets out the UK Government's approach to delivering sustainable development, and is defined as follows:

> "*The goal of sustainable development is to enable all people throughout the world to satisfy their basic needs and enjoy a better quality of life, without compromising the quality of life of future generations*".

Whilst the Liverpool UDP is the statutory development plan, given that it was adopted in 2002, an overview of the relevant national planning policies and guidance is provided before summarising the relevant 'saved' plan policies.

It is acknowledged at the outset that the NPPF is a material consideration in assessment of the planning application (likewise is the draft Liverpool Local Plan although full weight cannot be afforded to relevant policies as it is has yet to be formally examined in public).

3.2 National policy

National Planning Policy Framework (Updated Feb 2019)

The National Planning Policy Framework (NPPF) and relevant planning practice guidance sets out the Government's planning policies for England. **The presumption in favour of sustainable development** is at the heart of the framework, cascading through to local plans and the approval process for planning applications.

Chapter 2 of the NPPF – *Achieving Sustainable Development* details that:

7. The purpose of the planning system is to contribute to the achievement of sustainable development. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs4.

8. Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives):

*a) **an economic objective** – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;*

*b) **a social objective** – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and*

*c) **an environmental objective** – to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.*

9. These objectives should be delivered through the preparation and implementation of plans and the application of the policies in this Framework; they are not criteria against which every decision can or should be judged. Planning policies and decisions should play an active role in guiding development towards sustainable solutions, but in doing so should take local circumstances into account, to reflect the character, needs and opportunities of each area.

*10. So that sustainable development is pursued in a positive way, at the heart of the Framework is a **presumption in favour of sustainable development** (paragraph 11).*

In terms of the wider NPPF, the key issues addressed are summarised below:

Building a strong, competitive economy	Achieving well-designed & safe built environments
Ensuring the vitality of town centres	Protecting Green Belt land
Promoting healthy and safe communities	Meeting the challenge of climate change, flooding and coastal change
Promoting sustainable transport	Conserving and enhancing the natural environment
Supporting high quality communications	Conserving and enhancing the historic environment
Making effective use of land	Facilitating the sustainable use of natural resources & materials
Provide accessible facilities for current and future needs	Ensuring a minimal amount of waste & pollution

25 Year Environmental Plan (2018)

This plan sets out the Government's ambition to *'…champion sustainable development, lead in environmental science, innovate to achieve clean growth and increase resource efficiency to provide benefits to both our environment and economy*'.

The plan provides fresh impetus for the principles of sustainable development to be at the heart of decision-making, setting out clear objectives and common language for policy and decision makers to adopt.

Policies and actions are structured around six key areas:

Chapter 1: Using and managing land sustainability
Chapter 2: recovering nature and enhancing the beauty of landscapes
Chapter 3: Connecting people with the environment to improve health & wellbeing
Chapter 4: Increasing resource efficiency and reducing pollution and waste
Chapter 5: Securing clean, healthy, productive and biologically diverse seas and oceans
Chapter 6: Protecting and improving our global environment

Climate Change Act 2008

The Climate Change Act sets out the UK Government's pathway to reduce greenhouse gas emissions by at least 80% (relative to 1990 levels) by 2050. This includes the requirements to set legally binding carbon budgets over five-year periods to act as intermediate milestones.

On 27th June 2019, a more ambitious target of net zero carbon by 2050 was adopted by the UK Government in response to public sentiment and the release of the Intergovernmental Panel on Climate Change (IPCC) Special Report on Global Warming of 1.5ºC (October 2018).

3.3 Sub-regional policy

Liverpool City Region Devolution Agreement

The Liverpool City Region Combined Authority Devolution Agreement was agreed on 17th November 2015. The Agreement provides for the transfer of significant powers for economic development, transport, housing and planning and employment and skills.

A new, directly elected Liverpool City Region Mayor will act as Chair to the Liverpool City Region Combined Authority and will exercise the following powers and functions devolved from central government:

- Responsibility for a devolved and consolidated local transport budget, with a multi-year settlement to be agreed at the Spending Review;
- Responsibility for franchised bus services, which will support the Combined Authority's delivery of smart and integrated ticketing across the Combined Authority; and
- Powers over strategic planning, including the responsibility to create a Single Statutory City Region Framework, a Mayoral Development Corporation and to develop with government a Land Commission and a Joint Assets Board for economic assets.

Liverpool City Region Local Enterprise Partnership

The Liverpool City Region Local Enterprise Partnership (LEP) was formed in March 2012. It is a public-private partnership which aims to deliver the following:

- Growth: in terms of absolute output (GVA) and also in jobs;
- Increased Productivity: this means being more innovative and effective in how the LCR does business and increasing competitiveness on both the national and international stage; and
- A rebalanced economy: with a reduced emphasis and dependency on public sector jobs through a renewed focus on encouraging private sector growth and job creation.

The LEP identifies the key sectors for growth as:

- Super-port ;
- Low Carbon Economy;
- Visitor Economy;
- Advanced Manufacturing;
- Life Sciences;
- Digital and Creative Business; and
- Professional Services.

Liverpool City Region Growth Plan and Strategic Economic Plan

The Liverpool City Region Growth Plan and Strategic Economic Plan (SEP) provides the strategic framework for interventions to drive new job creation and growth in the City Region. The Growth Plan and SEP articulate the ambitions of the City Region in terms of stimulating job creation as well as providing the rationale for intervention with a particular emphasis placed on enabling private sector investment and growth.

Five transformational strategic projects are identified:

- Liverpool City Centre as a global brand, visitor and business destination;
- The Liverpool City Region Freight and Logistics Hub that builds on our natural assets and the changing nature of the international and national logistics industry;
- LCR2Energy which will facilitate the transition of the City Region's energy supply need to a more low carbon supply by capitalising on off-shore wind energy and marine energy generation with associated supply-chain business growth benefit;
- Increasing access and capacity of the Port of Liverpool is a medium-term project which is absolutely necessary if the economic opportunity of the City Region is to be obtained; and
- A City Region Capital Investment Fund to include local funds from Growing Places Fund and European Programme, alongside Government monies, to co-invest in key capital schemes that will deliver new jobs.

Other relevant policies:

- Liverpool City Region Spatial Investment Plan.
- Liverpool City Region Local Investment Plan.
- Merseyside Local Transport Plan (LTP).
- A Transport Plan for Growth.
- Joint Waste Local Plan (2013).

3.4 Local policy

Unitary Development Plan

The UDP provides the statutory framework to guide development and protect and enhance the environment of the City.

Part I of the UDP sets out the strategy of the Plan. In essence, these are the City Council's strategic planning objectives which provide the framework for the detailed policies and proposals found in Part II of the Plan.

Across the nine strategic planning objectives outlined in the UDP, multiple categories include important issues related to the sustainability of the project. The categories include:

- Heritage & Design in the Built Environment (HD);
- Open Environment (OE);
- Transport (T);
- Environmental Protection (EP); and
- Community Facilities (C).

The sub-categories assumed relevant for the proposed project are given overleaf, alongside their requirements.

Policy Ref	Summary of Requirements
EP 1 Vacant, derelict and neglected land	• Promote and encourage the reclamation of derelict land and the restoration of neglected land. • Contribution to achieving urban regeneration aims, integrate and support other regeneration initiatives. • Facilitate inward investment and job creation. • Minimize the contamination, dereliction or danger posed by the site..
EP2 Contaminated land	• Submission of site survey information regarding; type, degree and extent of contamination. • Submission of specific remedial measures for dealing with contamination, as well as proposed timescales.
EP7 Recycling	• Co-operation with LCC to increase recycling rates.
EP9 Waste storage	• Ensure sufficient on-site storage for all waste resulting from the premises. • Provide sufficient space for a licensed waste disposal contractor to transfer waste effectively.
EP10 Hazardous substances	• Ensure there is no unacceptable risk to public health & safety. • Waste is located away from sensitive areas (e.g. residential areas). • Consultation zone doesn't fall across residential areas or where large groups of people congregate. • That the materials do not constrain reasonable developments. • Does not cause significantly unacceptable risk to increased number of people visiting the area or living in the local area.
EP11 Pollution	• Ensure that the development is not likely to result in unacceptable levels of air/water/noise/other pollution, unless there are suitable strategies in which to combat these.
EP12 Protection of water resources	• Avoid adversely impacting quality of groundwater/surface water by: i. Surface/waste – water discharge. ii. Disposal of foul-sewage, trade effluent or surface water. iii. Disturbance of contaminated land. iv. Spillage or leakage of oil or chemicals. • Avoid abstraction of surface/ground water resulting in: i. Increased water demand. ii. Unacceptable risk to current water supplies.
EP13 Flood protection	• Unless mitigated, avoid being: i. At unacceptable risk of flooding. ii. Likely to increase flooding elsewhere. iii. The cause for loss of access to watercourse for maintenance. iv. The cause of adverse impacts on the water environment, due to increased surface run-off.
EP16 Renewable Energy	• Prevent detrimental impacts on neighbouring uses. • Prevent detrimental impacts on environmentally sensitive areas. • Is in accordance with other policies in the 'Plan'.
EP3-EP8 (excluding EP7)	• These UPD policies have been replaced by the adoption of 'Merseyside and Halton Waste Local Plan (18th July 2013), meaning they are no longer in operation.
HD8 Preservation and enhancement of conservation areas	• Avoid detracting from the 'character of the area'. • Utilise planning guidance and advice from LCC.
HD9 Demolition of buildings in conservation areas	• Preserve of any building, part of a building or structure in a conservation area which makes a positive contribution to the character or appearance of the conservation area.
HD11 New development in conservation areas	• Preserve/Enhance the character of the conservation area. • Provide full information on the potential impacts on the area, including materials and landscaping. • Satisfy the criteria outlined by LCC regarding historical conservation.
HD14 Streetworks in conservation areas	• Seek to protect and enhance the quality and appearance of streets, footpaths and other public spaces in conservation areas.

Policy Ref	Summary of Requirements
HD 19 Access for all	• Suitable provision for disabled employees and customers. • Provide easily accessible public areas for disabled visitors/employees (e.g. parking areas, paths, dropped kerbs, pedestrian crossings, street furniture and open space).
HD21 Energy conservation	• Minimise energy demand.
HD22 Existing trees and landscaping	• Retain key ecological and natural features/sites. • Ensure sufficient space is left between existing trees and buildings. • Maintain/protect retained trees/woodlands during construction.
HD 23 New trees and landscaping	• Provide high quality landscaping and boundary treatment. • Promote nature conservation through use of native species and creation of habitats where appropriate.
HD24 Public art	• Encourage the provision of appropriate new works of art, including the visual arts, crafts and landscape design, within public places and as part of new development proposals.
HD28 Light spillage	• Lighting scheme satisfies minimum requirements for security and working purposes. • Spillage and glare minimised particularly in residential/commercial areas, areas of wildlife interest and areas where landscape qualities would be impacted.
OE5 Protection of nature conservation sites	• Avoid adversely affecting SPAs, Ramsar sites, SSSIs, RIGS, Sites of nature conservation value, legally protected wildlife or conservation value sites in neighbouring authority areas.
OE6 Development and nature conservation	• Site investigations to identify the nature conservation interest. • Set out a proposal for such an areas' protection and management. • Organise compensatory measures for if damaged or destroyed.
OE7 Habitat creation and enhancement	• Support/initiate proposals for habitat and wildlife corridor creation and enhancement. • Manage wildlife areas to positively benefit wildlife. • Undertake ecologically sensitive landscaping. • Support community groups, schools etc. in habitat creation and enhancement initiatives.
OE11 Protection of green space	• Where developing on green sites, avoid the material harm to: i. The recreational function of the green space. ii. The visual amenity of the green space. iii. It's relationship to adjoining green spaces.
OE12 Enhancement of green space	• LCC will try to enhance the publicly accessible green space by: i. Improve quality and management ii. Pursue opportunities for new recreational provision in local green spaces iii. Providing new parks (see Proposals Map)
T6 Cycling	• Consideration for the LLCs Cycling Strategy. • Ensure cycling parking facilities for sites regularly visited by the public and secure parking for new developments.
T7 Walking and pedestrians	• Provision of safe and convenient walking routes within all major development sites.
T8 Traffic management	• Priority investment given to schemes which: i. Improve public transport facilities and services. ii. Improve road safety. iii. Protect and improve environment, specifically for locals. iv. Improve conditions for cyclists & pedestrians. v. Open up/improve access to areas of employment. vi. Optimise efficient operation of highway network. • Implementation of traffic calming measures in residential and local areas, as well as shopping centres.
T12 Car parking provision in new developments	• Provide car parking facilities to meet minimum operational needs. • Additional parking will be permitted up to a maximum standard, determined by: i. Nature/type of use. ii. Whether off-site parking would endanger highway/pedestrian safety. iii. Whether locality is served by public parking. iv. Whether off-site parking would have demonstrable harm to residential amenity. v. Relative accessibility of development site by public transport.

Policy Ref	Summary of Requirements
T13 Car parking for the disabled	• Provided in accordance to: i. Minimum 6% of first 100 spaces are reserved for orange badge holders, negotiable thereafter. ii. Car parking spaces to provide sufficient width for the easy transfer of wheelchairs in and out of a car. iii. Disabled bays should be clearly marked and located close to the development access points. iv. In multi-storey car parks, disabled parking bays must be adjacent to lifts.
T15 Traffic impact assessment	• Submission of a full Traffic Impact Assessment (TIA). • Excessive additional traffic caused that would result in additional road/public transport requirements, will require the developer to construct these improvements as well.
C7 The football clubs	• LCC will try to provide effective solutions to car parking restrictions on match days. • LCC will aid both clubs in progressing their developments, providing they do not adversely affect residential amenity and are in accordance with other policies in the Plan.

Joint Waste Local Plan for Merseyside and Halton (Waste Planning Merseyside, 2013)

The Joint Waste Local Plan for Merseyside and Halton, adopted in 2013, focuses on collaborative waste management planning between Halton, Knowsley, Liverpool, St. Helens, Sefton, and Wirral Councils, all of which form part of the Liverpool City Region. The plan sets the direction for the region's future waste management development for the period between 2013 to 2027, both in terms of site allocations for new waste processing/management sites and the development of detailed management policies. Upon adoption of the Waste Local Plan, its policies and allocations became part of each partnered authority's Local Development Frameworks (LDF).

The following policies set out in the Waste Local Plan are of particular relevance:

- Policy WM8 – Waste Prevention and Resource Management

  Any development involving demolition and/or construction must implement measures to achieve the efficient use of resources, taking particular account of the following:

  - Construction and demolition methods that minimise waste production and encourage re-use and recycling materials, as far as practicable on-site;
  - Designing out waste by using design principles and construction methods that prevent and minimise the use of resources and make provision for the use of high-quality building materials made from recycled and secondary sources; and
  - Use of waste audits or site waste management plans (SWMP), where applicable, to monitor waste minimisation, recycling, management and disposal.

  Evidence demonstrating how this will be achieved must be submitted with development proposals of this type.

- Policy WM 9 – Sustainable Waste management Design and Layout for New Development

The design and layout of new built developments and uses must, where relevant, provide measures as part of their design strategy to address the following:

- Facilitation of collection and storage of waste, including separated recyclable materials;
- Provide sufficient access to enable waste and recyclable materials to be easily collected and transported for treatment; and
- Facilitate small scale, low carbon combined heat and power in major new employment and residential schemes, where appropriate.

Liverpool (Draft) Local Plan

The NPPF requires the preparation of a local plan to be based on evidence about the economic, social and environmental characteristics and prospects of the area.

The Liverpool Local Plan (Draft Submission Version) was submitted for formal examination in May 2018. Therefore, in accordance with the NPPF (para. 48) it has substantial but not full weight until it has been examined and ultimately adopted. It is understood that examination of the local plan will commence later in 2020.

The following vision is set out within the local plan:

"*By 2033 Liverpool will be a sustainable, vibrant and distinctive global city at the heart of the City Region. Development opportunities will have been maximised to create an economically prosperous city with sustainable communities and an outstanding environment*."

Building on the Vision and taking account of the key issues within Liverpool a number of strategic priorities have been identified for the City:

- Strengthen the city's economy;
- Create residential neighbourhoods that meet housing needs;
- Vital and viable centres;
- A high quality historic environment;
- Attractive and safe city with a strong local identity;
- High quality green infrastructure;
- Use resources efficiently;
- Maximising sustainable accessibility; and
- Maximising social inclusion and equal opportunities.

The strategic priorities are will be delivered by the policies in the Local Plan. Those which are relevant to the Sustainability Statement for the proposed development are summarised overleaf:

Policy Ref	Summary of Requirements
STP2 Sustainable Growth Principles and Managing Environmental Impacts	New development should seek to avoid negative impacts on the environment through the adoption of best practice. Any adverse impact should be mitigated through appropriate measures. New development should promote social inclusion, make improvements to health and well-being, contribute to a net gain in biodiversity, be located where accessible by sustainable transport and be well adapted to the effects of climate change.
STP4 Presumption in Favour of Sustainable Development	Adheres to the requirement within the NPPF to approve development which accords with the Local Plan without delay. Where the Local Plan is out of date or silent, the City Council will grant permission unless material considerations indicate otherwise
CC10 Waterfront design requirements	Development on the Waterfront should be of a high-quality design that respects its sensitive historic surroundings, whilst making adequate provision for access, parking and servicing and not undermining local amenity and operations of businesses. Conservation and high-quality, sustainable design are at the heart of this policy. Specific reference is made to pedestrian / cycle movement routes and green infrastructure.
UD4 Inclusive design	All development proposals, by virtue of their location and physical features, should meet the highest standards of accessibility and inclusion so that all potential users, regardless of mental or physical ability, age or gender can use the development safely and easily.
UD5 New buildings	All new buildings should be designed to the highest design standards, based on a clear rationale, and aesthetic based on the characteristics of the area. The building is highly sustainable, including re-cycling and renewables. Buildings are robust and adaptable.
HD1 Heritage assets: Listed Buildings, Conservation Areas; Registered Parks an Gardens; Scheduled Ancient Monuments	Consent or permission will not be granted for applications which are not fully justified and accompanied by full information necessary to assess the impact of the proposals on the heritage asset. Also, development or works which are unsympathetic to the heritage asset and/or its setting in terms of its architectural, historic, cultural or artistic significance will not be consented.
HD2 Liverpool Maritime Mercantile City World Heritage Site	The City Council will support proposals which conserve or, where appropriate, enhance the Outstanding Universal Value of the Liverpool Maritime Mercantile City World Heritage Site
GI1 Green infrastructure	The recreational function, visual amenity, historic and structural quality and value of the City's green infrastructure resource will be protected and enhanced.
GI4 Water spaces	The City Council will support proposals for increasing opportunities to allow for greater access to, interaction with, and recreational use of water spaces in the City, whilst ensuring the spaces and their settings are protected and enhanced. Proposals for new development adjacent to a water space should demonstrate that account has been taken of its setting.
GI5 Protection of biodiversity and geodiversity	Development which may result in a likely significant effect on an internationally important site must be accompanied by sufficient evidence to enable the Council to make a Habitats Regulations Assessment. Adverse effects should be avoided and/or mitigated to ensure that the integrity of internationally important sites is protected.
GI7 New planting and design	All new development should make an appropriate contribution to the enhancement of the City's green infrastructure resource. As a minimum, proper provision should be made on site for the planting and successful growth of new trees and landscaping, including any replacement planting provided as compensation for loss due to development.
GI9 Green infrastructure enhancement	Development proposals should be designed to / will be expected to incorporate new and/or enhanced green infrastructure or green spaces of an appropriate type, standard, size and which reflect the needs of the area. These may include improving the recreational function of open spaces, addressing deficiencies in access to open space.
R1 Air, light and noise pollution	Planning Permission will not be granted for development which has the potential to create unacceptable air, water, noise or other pollution or nuisance.
R3 Flood risk and water management	All proposals for development must follow the sequential approach to determining the suitability of land for development, directing new development to areas at the lowest risk of flooding and where necessary apply the exception test, as outlined in national planning policy. Developers will be required to demonstrate, where necessary, through an appropriate Flood Risk Assessment (FRA) at the planning application stage, that development proposals will not increase flood risk on site or elsewhere, and should seek to reduce the risk of flooding. New development will be required to include or contribute to flood mitigation, compensation and/or protection measures, where necessary, to manage flood risk associated with or caused by the development.
R4 Coastal Protection	All development proposals must not increase the risk of tidal flooding or coastal erosion, impair the ability of the coast to form a natural sea defence or adversely affect the integrity of designated sites of European and/or International nature conservation importance.
R5 Rivers, canals, watercourses and culverts	Planning permission will not be granted for any development which, in the opinion of the City Council following consultation with the Environment Agency, would adversely affect the quality or supply of surface water or groundwater.
R7 Decentralised energy networks	Proposals for renewable and low carbon energy generating and distribution networks at all scales of development will be supported, including community-led projects and district heat and power schemes. Where a decentralised network has been or is programmed to be constructed, future development within the network area will be required to connect as part of a planning obligation unless it can be demonstrated that this would not be viable. All major development proposals should seek to integrate low carbon energy and decentralised energy networks into the proposal.
R9 Solar panels	The installation of solar panels for energy generation will be supported, in particular for building- mounted installation subject to other Local Plan policies. Proposals for solar panel development will need to be appropriately sited and should take account of the wider cultural and heritage landscape; and minimise impact on visual amenity.
R10 Non-fossil fuel energy sources	The adoption of non-fossil fuel technologies to generate locally sourced energy will be supported as part of the transition to a low carbon economy, subject to other Local Plan policies. Proposals must demonstrate that; it is appropriately sited; any cultural and heritage landscape issues are addressed; there will be no adverse impact on biodiversity; impact on visual amenity is minimised; and where it would be appropriate to do so, it has been subject to community engagement and has community support.
TP1 Improving accessibility and managing demand for travel	Development proposals should make the best use of existing transport infrastructure. Where this cannot be achieved, development should be phased to coincide with new transport infrastructure provision.
TP5 Cycling	Proposals for new development should demonstrate that they will have a positive impact on the cycling network and its users and provide appropriate cycle access and sufficient, secure cycle parking facilities.
TP6 Walking and Pedestrians	All new development proposals should protect, maintain and where appropriate improve the existing pedestrian infrastructure, not adversely impact on the pedestrian or the environment and provide appropriate pedestrian access, and improve the safety and security of pedestrians
TP9 Public transport	Public transport should be considered in the design of all development and it should be clear how the issue of ensuring public transport usage as a realistic alternative to private car trips has been addressed where it is material to do so.

The Local Plan will be supported by an Infrastructure Delivery Programme (IDP) which will identify future infrastructure requirements (including physical, social and green infrastructure), to support population change and housing and employment growth.

Liverpool City Centre Strategic Investment Framework (2012)

The City Centre Strategic Investment Framework 2012 (SIF) was produced by Liverpool Vision and launched in November 2012. It provides a vision and ambition for the economic development and growth of Liverpool City Centre over the next 15 years. The SIF has four key principles embedded within it:

- Making Liverpool City Centre economically distinctive;
- Building on the significant progress that has been made over the past decade;
- Seeking to capitalise on Liverpool's distinctive public brand and image and its exceptional quality of place; and
- Making Liverpool a green city, putting climate change and renewable energy at its heart.

Liverpool City Council Climate Change Strategic Framework (2009)

In 2009 Liverpool City Council set a carbon reduction target which aims to reduce carbon emissions by 35% by 2024. This framework examines how climate change may affect the city, outlines the current impacts on the climate and the steps currently being taken to reduce this. It also sets out what we need to do next to measure and manage our activities to ensure a 35% reduction is delivered.

Liverpool City Council's Climate Emergency Declaration (2019)

May 2019, saw a motion to declare a climate emergency by Liverpool City Council, pass unanimously. The motion formally declares such an emergency and that foreseen impacts of climate change will significantly impact the city of Liverpool and its citizens. The passing of this motion was not accompanied with additional policy but the Combined Authority has committed to producing a Climate Action Plan by December 2019 in which it will set out how it plans to tackle the climate emergency. A number of key policies have however already been introduced, including:

- A Zero Carbon target of 2040;
- A £10m Green Investment Fund;
- The Mersey Tidal Commission;
- £460m investment in new, state-of-the-art trains for Merseyrail network – improving and future proofing green public transport;
- The cleanest bus fleet outside of London – with 7/10 vehicles being low emission and 25 zero emission hydrogen buses arriving next year;
- Establishment of a Clean Air Taskforce;
- A "Brownfield First" approach to development; and
- Investment into the first phase of a £16 million 600km cycling and walking network.

4 Sustainability standards review

4.1 Overview

Within this section, a summary of the Sustainability Framework developed for TPP is presented. This is followed by details of how the sustainability policies of LCC, as set out within the UDP, are satisfied and have informed the proposed development. In doing so, it is evidenced how the requirements of the NPPF are satisfied also.

4.2 Summary of bespoke sustainability assessment framework

A successful Sustainability Framework builds on the existing values and activities already taking place in an organisation. It must also be agile and respond to existing and emergent policy and trends relevant to the project's specific context, stakeholders and sector.

The development of the Sustainability Framework for TPP has been an iterative process. As set out in Appendix A, this has involved a series of desktop reviews and workshops to develop a clear understanding of the aforementioned points to establish a robust platform from which to progress. Key to this process was understanding the opportunities and constraints of two key approaches:

1. Adopting an existing, third party certification such as BREEAM or LEED. Note, this is not stated as a requirement within the current or emerging planning policy; and
2. Development of a bespoke Sustainability Framework, unique to TPP.

Based on the outcomes of the engagement process and those issues identified in Table 2-1 of Appendix A, it was decided that a sustainability assessment system tailored to both the Clubs aspirations, context of Bramley-Moore dock and the stadium proposals would be developed. The primary driver for this decision is the fact that relatively few stadiums nationally, and even internationally, have achieved certification and the risk believed to be attributed to successfully delivering this poses. The sustainability assessment system has been developed based upon a review of the most appropriate, robust and pioneering elements of existing certification frameworks (e.g. BREEAM, LEED). The project will not however pursue certification under any such system.

The proposed approach was submitted to LCC during the Pre-Application Consultation and the project team received confirmation that the proposed approach was appropriate and valid.

The structure and flow of information within the Sustainability Framework is illustrated within Figure 4-1. The core features within this are described below:

- **Overarching framework themes:** the top level themes against which sustainability progress and performance will be reported both within the project and client team as well as to external stakeholders;
- **Design fundamentals:** establishes the priority outcomes to be driven through each overarching theme. For example, Resource Efficiency will be made up of several design fundamentals including operational energy consumption, water usage and waste management; and
- **Key Performance Indicators:** each design fundamental contains a number of KPIs. The KPIs are the mechanism through which successes (and challenges) will be monitored throughout the project life cycle. The targeted KPIs have been selected based on the contribution of these to the overarching themes. KPIs are a mixture of quantitative and qualitative targets dependent upon the nature performance indicator.

A full description of the methodology underpinning and content of the Sustainability Framework is given in Appendix A.

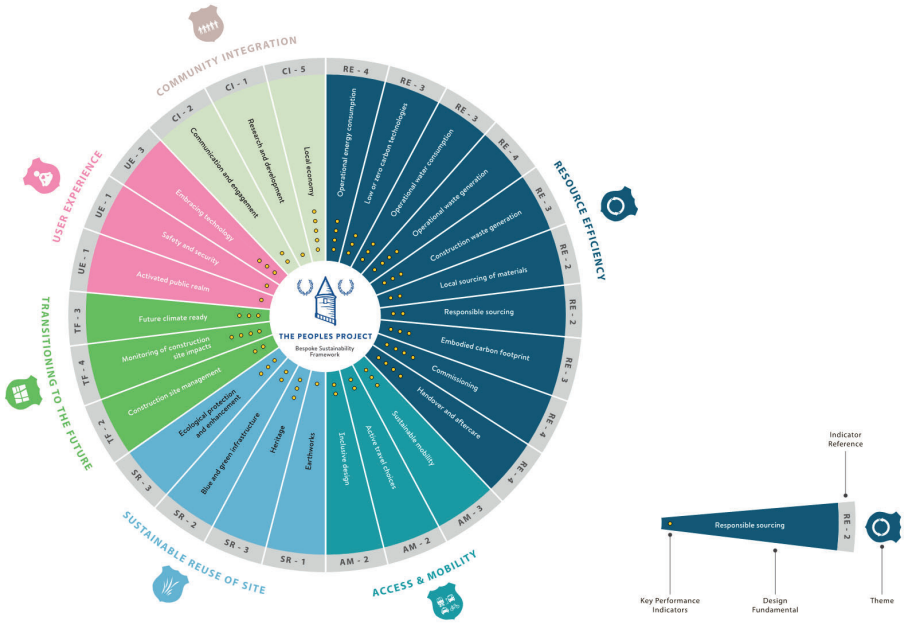


Figure 4-1 Sustainability Framework summary diagram

4.3 Project UDP compliance

4.3.1 Section summary

The following section summarises how the proposed development has, as a minimum, complied with the relevant criteria defined by LCC in the UDP. Sustainability branches over a range of project components and disciplines, therefore there are references throughout, to accompanying planning submission documents that contain the technical details.

In addition, within Appendix A evidence of how the policies contained within the Draft Local Plan are supported through the KPIs contained within the Sustainability Framework.

4.3.2 Land Usage

EP1 Vacant, derelict & neglected land

The application site comprises Bramley-Moore Dock (BMD), on the River Mersey (centred on National Grid Reference (NGR) SJ3345292491). The site predominantly comprises a dock waterbody, surrounded by a Grade II Listed dock retaining wall (Ref. 1072980) and hardstanding.

The application site was previously used for aggregate storage and distribution, operated by Mersey Sands. However, the lease for this use expired in August 2019. The site remains occupied by Svitzer, which operates their tug boat services and whose lease has recently been extended until May 2020. Cataclean also recently operated from the site and the existing warehouse on the southern quay has been used for nightclub events.

Peel Land & Property ('Peel L&P') received outline planning permission (Ref.10O/2424 – latest approved non-material amendment is 19NM/1121) for the Liverpool Waters scheme between Princes Dock in the south and Bramley-Moore Dock (BMD) in the north. As detailed in the introductory section of this report, BMD is located along with the adjacent Nelson Dock to the south in the Northern Docks neighbourhood and development is not proposed, according to approved parameter plans, to come forward until the 2036-2041 period.

The combined societal value of The People's Project (note, this includes the Bramley-Moore Dock stadium, Goodison Legacy Project and Everton in the Community initiatives) is estimated to be £148m over 25 years. This is in addition to £219m social and heritage value associated with the new stadium.

Reference should be made to the following documents for further details:

- The Societal Value of the Relocation of Everton Football Club: Update of Social Value Analysis (Simetrica-Jacobs);
- Social and Heritage Value Report – Post Covid-19 Update (Simetrica-Jacobs); and
- Environmental Impact Assessment: Ground conditions and contamination (CBRE: BuroHappold).

A detailed overview of the public benefits of the scheme is provided in the Planning Statement and Planning Statement Addendum prepared by CBRE in support of the planning application.

EP2 Contaminated land

Combined geo-environmental and geotechnical ground investigations were undertaken over two phases during 2017 and 2018. These included investigation of the dock wharves (on-shore) and within the dock basin (offshore).

The identified effects from the proposed development to a range of potential receptors following mitigation has been found to be negligible. Mitigation will be achieved through implementation of appropriate health, safety and hygiene regime (to include Personal Protective Equipment and welfare provisions), good construction practice and removal of any gross contamination. Measures will also be implemented to minimise infiltration and prevent the creation of downward migration pathways in addition to further monitoring to fully characterise the sites ground gas regime.

Climate change is unlikely to effect the presence or occurrence of contamination within the proposed development. The sources, pathways and receptor relationship includes a consideration of the potential for rising flood levels.

Reference should be made to the following documents for further details:

- Environmental Impact Assessment: Ground conditions and contamination (CBRE: BuroHappold).

4.3.3 Waste & Hazardous Substances

EP7 Recycling: EP9 Waste Storage: EP10 Hazardous Substances

With the adoption of the Merseyside and Halton Joint Waste Local Plan, a number of waste related policies within Liverpool's UDP were superseded and replaced. The UDP policies replaced by the Waste Local Plan relate specifically to landfill gas (Policy EP3), landfill (Policy EP4), waste related uses (Policy EP5), waste reception centres (Policy EP6), recycling (Policy EP7) and fly-tipping (Policy EP8).

An operational waste management strategy has been developed for the proposed development. This document sets out the following:

- An estimate of the anticipated waste generation for the proposed development during operation (~16,700 kg/match);
- Guidance on the future management of waste to ensure that adequate spatial provision for clean and efficient storage and collection of waste is incorporated within the design;
- Details of how waste and recycling can be easily collected, stored and managed by the Facilities Management (FM) team in a sustainable, efficient and discreet manner; and
- Details of how the principles of the waste hierarchy and circular economy have been integrated into the development's design and operations.

A Construction Waste Management Strategy (CWMS) has also been prepared to accompany a Full Planning Application for the proposed development. It aims to ensure that construction, demolition and excavation (CD&E) waste from the development is minimised and handled in an environmentally sustainable manner.

In total, it is estimated that approximately 65,900 tonnes of waste will be generated from the demolition and site clearance works, the stadium substructure works, the stadium superstructure works, and the cut to existing quay areas to achieve new pavement formation level.

The waste from demolition, substructure and construction works will likely contain high proportions of easily excludable, re-usable and recyclable materials that could be diverted from landfill disposal. There is therefore potential to achieve a high recycling rate for the proposed development. Moreover, if a best practice approach is taken during the demolition and construction works, then 3,600 tonnes of construction waste could be diverted from landfill through reclamation and recycling.

Reference should be made to the following documents for further details:

- Operational waste management strategy (BuroHappold);
- Construction waste management strategy (BuroHappold); and
- Construction Management Plan (submitted as an appendix to Chapter 4 of the Environmental Statement) (Laing O'Rourke).

4.3.4 Pollution

EP11 Pollution

Pollution resulting from the development has been minimised in order to reduce the negative environmental impacts of both the construction process and in use stadium operations.

Due to the direct surroundings of the site including the River Mersey, as well as planned residential and commercial areas associated with the phased Liverpool Waters scheme (primarily Nelson Dock to the immediate south of the application site), detailed assessments of the impact of the proposed scheme in relation to noise, lighting, daylight overshadowing, wind micro-climate and water resources have been prepared as part of the submitted Environmental Statement. The respective assessments identify that subject to best practice and the adoption of appropriate management and mitigation measures, the proposed development will not contribute to the creation of unacceptable pollution or nuisance.

Noise

During the construction phase of the proposed development, noise levels at existing noise sensitive properties would be within the BS 5228 fixed limit criteria. Assessments of the increase in road traffic noise as a result of the proposed development has shown that noise levels at nearby existing sensitive receptors are predicted to fall within and below the Lowest Observed Adverse Effect Level.

Noise intrusion assessments have shown that cumulative LAeq noise levels are predicted to be within the BS 8233/WHO criteria at all nearby sensitive receptor locations on the basis of worst-case assumptions, with windows-closed. Plant and internal entertainment noise emission limits have been specified to ensure that plant and music breakout levels from internal spaces of the development are at least 5 dB below existing daytime and night-time background noise levels. The plant locations on the roof of the west and east stands have been moved northwards to be further away from future residential receptors at Nelson Dock (when constructed).

Assessments of noise from sporting and entertainment events within the stadium has been undertaken which demonstrate that noise from sporting events are not expected to significantly affect existing ambient noise levels and noise limits for entertainment events have been proposed.

Given the low tranquillity value of the area, the proposed development is not expected to adversely affect the tranquillity of the area.

Therefore, it is considered that the proposals will not have a 'significant adverse impact' on health or quality of life and are compliant with the provisions of the statutory development plan (Liverpool UDP) and the National Planning Policy Framework (NPPF).

Reference should be made to the following documents for further details:

- Environmental Impact Assessment: Chapter 9: Noise & Vibration (CBRE: White Young Green); and
- Environmental Statement: Noise & Vibration assessment, August 2020 (White Young Green).

Air Quality

The Air Quality Chapter of the Environmental Statement discusses and predicts the potential effects during the construction and operational phase of the proposed development. The overarching conclusion of the Air Quality Assessment is that the proposed development is not considered to be contrary to the statutory development plan or other relevant material considerations including the National Planning Policy Framework (NPPF) and the emerging Liverpool Local Plan (not full weight given it is pending formal examination).

The potential effects during the construction phase include fugitive dust emissions from site activities, such as demolition, earthworks, construction and trackout. The impacts during the operational phase take into account of exhaust emissions from additional road traffic generated due to the proposed development. The assessment has determined that the potential impact description of dust emissions associated with the construction phase of the proposed development is 'high risk' at the worst affected receptors. Using the methodology described in Appendix A of the Air Quality Assessment, appropriate site-specific mitigation measures associated with the determined level of risk have been identified. These mitigation measures form part of the 'Construction Management (Delivery) Plan. It is anticipated that with these appropriate mitigation measures in place, the risk of adverse effects due to emissions from the construction phase will not be significant.

With respect to the detailed traffic modelling for the proposed construction flows, a 2020 assessment year based upon a three-year construction period, has been undertaken. The impact description of effects is determined to be 'negligible' at the all existing receptors for NO_2. This is expected to reduce to 'negligible' at all receptors, following mitigation in the form of a revised routing plan. For PM_{10} and $PM_{2.5}$ the exposure is determined to be 'negligible' at all sensitive receptor locations.

The impact description of the effects of changes in traffic flow as a result of the proposed development, with respect to NO2, PM10 and PM2.5 exposure, the impact description of effects is determined to be 'negligible' at all existing receptors.

The percentage changes in long-term process contribution of NO_2 are all less than 1.0% of the relative air quality objectives as a result of the operations at all sensitive receptor locations. The impact on the sensitive receptors is determined to be 'negligible'.

A short-term (hourly) air quality assessment has been undertaken at sensitive receptors to determine the predicted exposure at the residential properties adjacent to the proposed taxi rank. The assessment has shown that there is not predicted to be any exceedances of the short-term air quality objectives with respect to NO_2 during a pre and post-match event.

Reference should be made to the following documents for further details:

- Environmental Impact Assessment: Chapter 8: Air quality (CBRE: White Young Green).
- Environmental Statement: Air Quality Assessment: August 2020 (White Young Green).

Water

Refer to EP12.

EP12 Protection of water resources

A water quality assessment has been carried out using the Simple Index Method as set out in the CIRIA SuDS Manual.

The pitch and delivery yard are deemed a medium pollution hazard level as defined by the CIRIA SuDS Manual; these areas are proposed to be discharged to the foul water system.

The rest of the areas of site are considered to be low risk on the pollution hazard index (highlighted with blue boxes) and therefore the level of treatment required to the surface water run-off is reduced. This treatment is proposed to be provided by a proprietary system (a Downstream Defender) installed immediately upstream of the outfalls.

A surface water drainage strategy has been developed that accounts for the potential impacts of climate change. The site has been split into a series of drainage catchments. The strategy is set out in the drainage strategy produced by BuroHappold.

In addition to pollution management, reference should be made to the following documents for further details:

- Planning submission: Drainage Strategy (BuroHappold).

HD28 Light Spillage

With regard environmental sustainability the proposals have sought to meet the recommended luminance levels in the exterior context to mitigate obtrusive light and its consequent adverse effects in the nocturnal environment and human health and wellbeing.

White Young Green have undertaken a lighting assessment for the proposed development. This ES chapter discusses the potential impacts during the construction and operational phases of the development against policies in the statutory development plan (Liverpool UDP) and other relevant material considerations.

The assessment has concluded that the risk of the proposed scheme resulting in exceedances of either the ILP pre-curfew or post-curfew obtrusive light limitations will be low at both existing and committed residential receptors during the event and non-event scenarios. Ecological habitats along the southern and western boundaries of the site are not predicted to experience light trespass that significantly exceeds 2 lux. As the events are not constant occurrences and the surrounding species not considered overly sensitive to light it is considered that the effect will be not significant during the event and non-event scenarios. The assessment has concluded that, provided the specified lighting design and design principles are implemented, the sky glow levels associated with the development will meet the ILP Environmental Zone criteria.

Reference should be made to the following documents for further details:

- Design and Access Statement: Section 8 (Pattern).;
- Environmental Impact Assessment: Chapter 16: Lighting (CBRE: White Young Green); and
- Environmental Statement: Lighting Assessment: August 2020 (White Young Green).

4.3.5 Climate Change & Flooding

EP13 Flood Protection

BuroHappold submitted a pre-application enquiry to the Environment Agency to request Product 4 information as well as preliminary advice on the development in May 2017. Further consultations have been undertaken since to determine the requirements for the FRA. Key outcomes include:

- Stadium: The development levels were agreed to be based on the 2115 1 in 200 (0.5% annual exceedance probability) flood levels with 300mm freeboard (finished floor level raised above 7.3m above ordnance datum);
- Hydraulic Tower: The Hydraulic Tower will be refurbished. As the levels are currently under the designed flood level, flood resilient measures should be incorporated. Kitchen areas should be raised above 7.3m above ordinance datum; and
- Car park: the surface car park on the western quay beyond the new proposed water channel will be at grade below the designed flood level, as per existing levels (deemed to be acceptable).

The Flood Zone map produced by the EA shows that the majority of the site lies within Flood Zone 1 which is considered at low risk of flooding. To the west of the site, there are small areas which are shown to be in Flood Zones 2 and 3, defined as medium and high risk of flooding respectively

The development platform for the football stadium is proposed to be raised above the 2115 1 in 200 year still water level which is defined as the designed flood level with a minimum of 300mm freeboard, as agree with the Environment Agency. The stadium level has therefore been set to 7.3m above ordinance datum, allowing more than 300mm freeboard from the designed flood level.

The fan zone and Hydraulic Tower will be retained at the existing level (6.6m above ordinance datum). The multi-storey car park ground floor levels vary between 6.8m above ordinance datum near the existing dock walls raising up to 7.3m above ordinance datum to tie in with stadium levels. The residual risk of flooding will be managed through a flood evacuation and management plan. During the February 2019 pre-application meeting, the EA have been consulted on the flood risk management approach described below. The Environment Agency were in agreement with the approach.

The FRA determines the site to be at low risk of flooding from the following sources: fluvial and tidal, sewer, ground water and artificial sources. Medium risk of surface water flooding was identified. The drainage strategy will ensure no flooding of buildings for up to the 1 in 100 year event (with allowance for climate change).

Reference should be made to the following documents for further details:

- Flood Risk Assessment (BuroHappold).

4.3.6 Energy

HD21 Energy Conservation

In order to achieve these set targets, MEAN, LEAN and GREEN energy efficient strategies have been proposed in the design. These include, but are not limited to:

- Improved thermal performance of the building envelope against minimum building regulations requirement;
- Improved glazing performance to reduce unwanted solar gain whilst maintaining the potential for daylight against minimum building regulations requirement;
- High efficiency heat-recovery devices to harness energy within exhausted air and recirculate it back into the building to reduce heating and cooling loads;
- Centralised heating plant to allow for ease of future connection to a district heat network; and
- Efficient lighting and lighting controls.

The following GREEN energy generation strategies have been proposed:

- Photovoltaic array generating 312 MWh/yr of renewable energy (this equates to 2,050m^2 of active PV area); and
- Utilising battery storage and smart grid technologies.

The results from Building Regulations Part L calculations for The People's Project demonstrated that the above energy efficiency design strategy has the potential to reduce the regulated carbon emissions by at least 4% compared to the target notional building and therefore meet the Building Regulations.

Reference should be made to the following documents for further details:

- Energy statement (BuroHappold).

EP16 Renewable Energy:

A low and zero carbon energy feasibility study has been produced for the proposed development. This provided a critical analysis of the following potential low carbon and renewable energy opportunities:

- Solar photovoltaics (PV), mounted to roof and/or car park structure;
- Large scale, single wind turbine;
- Small scale, multiple wind turbines;

- Power purchase agreement from adjacent wind farm;
- Water source heat pump and CHP; and
- Connection to district heat network.

The building requires 312MWh/yr of electricity generation via photovoltaics in order to achieve a compliance margin of 4% over Part L 2013 Target Energy Rating (TER). This equates to approximately 2,050m^2 of active PV area.

Battery Storage Technology has been incorporated and sized to provide backup for life safety, essential loads and matchday continuity whilst having capacity to facilitate energy market participation and perform load balancing

Reference should be made to the following documents for further details:

- Energy statement (BuroHappold).

4.3.7 Conservation Areas

HD8 Preservation and enhancement of conservation areas: HD9 Demolition of buildings in conservation areas: HD11 New development in conservation areas

The Club's Principles of Design set out the approach to heritage, the directives of which are to respect the maritime heritage of Bramley-Moore Dock, capture the features and essence of the Club's new neighbourhood, and to make features of key restored structures on site.

Engineering aspects are dedicated to preserving and enhancing the extant heritage elements of the site, including designing in such a way to not damage existing heritage elements. Key engineering considerations outlined herein include dock infill methodology, protection and revealing of historic dock walls, creation of a water channel, making safe the Hydraulic Engine House, design of the Public Realm, and creating new openings within the Regents Road wall.

- Dock Infill Methodology: This sequence includes the construction of a new isolation structure (to also act as a vehicle and pedestrian bridge) at the Northern entrance of Bramley-Moore Dock, infilling the dock with marine won sand from the Irish Sea, and careful compaction with vibration monitoring. The proposed infill method was used during the infill of Wellington Dock to create the platform for the now-built United Utilities Waste Water Treatment Plant.
- Historic Dock Walls: The extant dock walls are not to be damaged by development of the site; Exposure of historic dock walls is to be maximised within the context of the design for the appreciation of all.
- Water Channel: A meaningful water channel is proposed to the west of the stadium to provide visual and hydrological connectivity with the wider dock system. The historic dock wall on the western elevation of the channel is to remain exposed as per its current appearance.
- Hydraulic Engine House: Making safe the Hydraulic Engine House (HEH) is the first step toward the eventual full restoration of this unique heritage element. The stadium is positioned away from the Hydraulic Engine House to allow for the HEH to function independently as an anchor of the east entry plaza and an asset of the wider Public Realm, and so that its distinct aesthetic can be appreciated in full.
- Public Realm Engineering: for all publicly accessible areas around the stadium, external levels are to be set at or close to historic ground levels to retain the character of the dock, and to allow for the retention of as much of the existing granite set hardscape as possible.
- Regent Road Wall: The wall is to be modified with three new pedestrian openings sized to allow for safe access and egress from the site (proposed opening size being significantly reduced from that submitted with the original planning application in December 2019). The openings are designed to maintain the overall integrity and appearance of the existing wall. The existing sliding gate entrances at the northeast and southeast corners of the Regent Road Wall will remain in use in their current operation as vehicular entry and exit points.

Prior to the start of construction, identified heritage features are to be removed from the surface of the dock and stored securely. These elements are to be made suitable for re-incorporation ideally within their pervious location in the finished scheme.

Reference should be made to the following documents for further details:

- Environmental Impact Assessment: Cultural heritage (CBRE: Kevin Murphy Associates); and
- Design and Access Statement: Section 2.2, 7.5 (Pattern).

HD14 Streetworks in conservation areas

As set out above, the transport strategy has sought to protect and enhance the heritage value of the site.

The concept for the Hardworks strategy of TPP has achieved a balance between the functional requirements of an inclusive design and respect for heritage through the preservation of the historic surfacing and materials.

The design principle for using reclaimed granite setts within the site will be focused around the surfaces adjacent to the historic features such as the BMD coping stones, railway tracks, the Nelson Dock edge and the Regent Road Dock Boundary Wall.

The proposed street furniture is sensitive and appropriate in its aesthetic appearance to the historic dockland environment, whilst providing the necessary comfort and support for all users groups. The design principle for the Eastern fan plaza is to have more of a focus on Everton as a football club with reference to the blue seats and the Leitch truss, club insignia etc whereas the remainder of the site plays more of a homage to the site's heritage. Proposed changes to the Western Water Channel Seating Terraces have sought to incorporate changes to incorporate further heritage measures, such as changing in the materiality of the lower terrace area to a composite decking so that the look and feel is more in-keeping with a waterfront promenade or jetty. The main design change since the original planning application submission is a new elevated western terrace which will provide a new high-quality public realm space to the west of the stadium and provide publicly accessible views across the River Mersey. The stepped terrace is influenced by the various historic graving docks within the Liverpool Waters scheme and elsewhere along the city waterfront.

Reference should be made to the following documents for further details:

- Environmental Impact Assessment: Cultural heritage (CBRE: KM Heritage);
- Environmental Impact Assessment: Transport (CBRE: Mott MacDonald);
- Design and Access Statement: Section 7.3, 7.7 (Pattern).

4.3.8 Green Spaces

HD22 Existing trees and landscaping

The application site predominantly consists of hard stand surrounding an open dock water body with a number of buildings (predominantly vacant). Habitats on site are summarised as follows:

- Scattered scrub;
- Tall ruderal vegetation;

- Introduced scrub;
- Hardstanding;
- Buildings; and
- Open water.

The application site is located beyond the boundary of any designated sites. Therefore, construction works on the application site will not result in the direct loss in area of habitat which supports qualifying features of these designated sites. Implementation of the embedded mitigation (detailed in Section 12.7 of the Environmental Statement, Appendix 12.1) and additional mitigation (detailed in Section 12.10 of the Environmental Statement, Appendix 12.1) will act to prevent any likely significant adverse effects from the application site clearance and construction phase of the proposed development.

Reference should be made to the following documents for further details:

- Environment Statement: Appendix 12.1: Biodiversity (White Young Green); and
- Environmental Impact Assessment: Biodiversity (CBRE, White Young Green).

HD 23 New trees and landscaping

BMD and Liverpool Waters in general is an extremely harsh, coastal, saline and windy environment where a majority of soft landscaping species would struggle to flourish. Through extensive studies of the Liverpool waterfront to understand which species have failed and which have survived and thrived in these conditions, the applicant's design team has selected a handful of suitable species. The soft planting proposals for BMD are focused around the fan plaza with a significant increase in planting compared to the submitted scheme as the large wind baffle (outrigger) structures are replaced with trees for wind mitigation purposes – particularly in the south west corner of the stadium. 50% of specified species are native.

Reference should be made to the following documents for further details:

- Design and Access Statement: Sections 7.4 (Pattern).

OE5 Protection of nature conservation sites

The site is not located within a Special Protection Area (SPA), Ramsar site, Site of Specific Scientific Interest (SSSI), or Site of Nature Conservation Value as identified by the City Council.

Reference should be made to the following documents for further details:

- Environment Statement: Biodiversity (White Young Green).

OE6 Development and nature conservation & OE7 Habitat creation and enhancement

A terrestrial and aquatic ecological survey and assessment of the site has been undertaken.

Terrestrial ecology

Section 12.6.1 of the Environmental Statement summarises the potential significant effects for terrestrial ecology associated with the construction and operation of the proposed development. Adopted mitigation measures are set out in Section 12.7 and the assessment of significance post mitigation in Section 12.8.

Implementation of the embedded mitigation (detailed in Section 12.7 of the Environmental Statement, Appendix 12.1) and additional mitigation (detailed in Section 12.10 of the Environmental Statement, Appendix 12.1) will act to prevent any likely significant adverse effects from the application site clearance and construction phase of the proposed development. In addition, implementation of additional mitigation measures during the operational phase are considered likely to prevent or significantly reduce the potential effects of the proposed development upon relevant ecological receptors.

- Environment Statement: Appendix 12.1: Biodiversity (White Young Green); and
- Environmental Statement: Terrestrial ecology: Chapter 12 (CBRE: White Young Green).

Aquatic ecology

Section 13.3 of the Environmental Statement sets out the baseline conditions. An assessment of significant impacts is presented in Section 13.6, this identifies a number of minor adverse impacts that would be incurred pre-mitigation. Incorporated mitigation and enhancement measures are set out in Section 13.7 and the post-mitigation assessment set out in Section 13.8. This concludes that the residual significance of all potential impacts is negligible. Potential enhancements to the ecological value of the proposed new water channel will be secured through the submission of a habitat creation plan.

Reference should be made to the following documents for further details:

- Environmental Statement: Aquatic ecology (CBRE: Carcinus Ltd).

OE11 Protection of green space: OE12 Enhancement of green space

The proposed development site has no existing green space of recreational or amenity value. The soft landscaping strategy for the fan plaza and wider public realm will provide the local community and wider city region with a new, valuable year-round recreational asset.

The main change from the first application is that there are now additional trees shown along the Southern side of the stadium. The groups of trees replace the large structural wind baffles that were in the previous design. The species selection has been carefully considered to ensure the trees have the best chance of survival in what is recognised as a very harsh environment.

Reference should be made to the following documents for further details:

- Design and Access Statement: Sections 7.4 (Pattern).

4.3.9 Accessibility & Sustainable Transport

HD19 Access for all: T13 Car parking for the disabled

Section 9 of the Design and Access Statement details the inclusive design strategy. Inclusive design has been integral to the design process throughout and the updates to the scheme since the planning submission in December 2019 have enabled the design team to make further improvements. The slightly larger stadium concourses have been redeveloped along with the seating bowl to provide better facilities for disabled supporters and new facilities have been added which support a range of needs. Other improvements have been made throughout the public realm, to circulation and wayfinding, to entrances and parking.

Best practice standards for inclusive design have provided guidance for the proposed development – Guide to Safety at Sports Grounds (Green Guide), Accessible Stadia and BS 8300:2018 'Design of an inclusive and accessible built environment' with the objective of meeting the duties set out in the Equality Act 2010. These are viewed as minimum standards to achieve and the public realm design aims to better these standards where at all possible.

During the design development process, the design team consulted with the Corporate Access Forum, this is a mechanism that enables members of disability groups to comment upon and influence major development proposals in the City. This was arranged via LCC's Access Officer. It is acknowledged that this engagement will continue throughout the technical design of the public realm to ensure that it meets the needs of all users at all stages of the design.

The Everton Disabled Supporters Association ('EDSA') was formed in 1994 and works alongside Everton Football Club to improve the match day experience for all supporters. The Club has canvassed their thoughts and suggestions during the development of the stadium proposals.

Principles of inclusive design are established and detailed throughout the Design and Access Statement. The design proposals include:

- 54 match and non-match day accessible parking spaces (2 no. of which will be electric);
- Lifting and re-laying of existing granite setts could conflict with the provision of smooth, easily traversable surfaces, so where setts or similar materials are used, they will either be treated or laid to form a sufficiently flat, slip free surface; and
- New materials will have appropriate finishes to minimise slips and appropriate colours so that they do not confuse or create a visual challenge.

Reference should be made to the following documents for further details:

- Design and Access Statement: Sections 2.2.2, 6.3.1, 9 (Pattern).

T6 Cycling

Parking for 152 bicycles will be provided within the stadium site. The cycle storage and stands are accommodated through two different types. A two-tiered storage structure at the north east corner which will mainly be used by stadium staff. It is covered and will have natural surveillance from 24 hr security staff. The standalone stands are located along the western inside of the Regent Road Wall which can be used by supporters and visitors and also on the Western Quayside adjacent to the BMD South West dock shoulder. Cycling will be encouraged as an active means of travel for people to get to the stadium.

The North Liverpool Key Corridors scheme is scheduled to finish in 2020 and will deliver improvements to walking and cycling connectivity in the area as well as renewing some existing infrastructure.

Reference should be made to the following documents for further details:

- Design and Access Statement: Sections 7.7.9 (Pattern).

T7 Walking and pedestrians

In future years, as the Liverpool Waters site to the south of the stadium is developed, new pedestrian routes towards the city centre via Liverpool Waters will be created. Peel Land & Property, as the developer of Liverpool Waters are obliged to provide three north – south pedestrian/cycle routes through the entire development site. Once provided, these would connect to Bramley-Moore Dock providing three pedestrian routes from the stadium through Liverpool Waters to Princes Dock in the south, supporting onward connectivity to the city centre. Therefore, although all pedestrian and vehicle access to the stadium will initially be via the Regent Road Dock Wall when the stadium opens, in future years new pedestrian routes from the stadium via Liverpool Waters will be available.

The North Liverpool Key Corridors scheme is scheduled to finish in 2020 and will deliver improvements to walking and cycling connectivity in the area as well as renewing some existing infrastructure.

Reference should be made to the following documents for further details:

- Design and Access Statement: Sections 7.8, 9 (Pattern).

T8 Traffic management

The site access strategy has been developed to meet the varying demands that will occur at the stadium on non-match days and across all stages of the match day (pre-match, during-match and post-match). The existing arrangements are satisfactory to provide access to the site in its current use, and for non-match, non-event day stadium use. However, the existing openings are insufficient for the crowd movement demand that will be generated on match days / event days. To accommodate this increased demand, new openings will be created within the Dock Wall to provide additional capacity on match / event days. There new openings will seek to mitigate the impact on the integrity of the Dock Wall.

As set out in Section 11 of the Design & Access Statement:

- There are several walking routes from the site to key destinations including the city centre and Sandhills rail station (1km from application site). Sandhills is located on the Merseyrail Northern Line and serves three branch lines to the north (Southport, Ormskirk and Kirkby) as well as stations in Liverpool city centre (Moorfields and Liverpool Central connecting to the Wirral Line; Liverpool Lime Street to national, regional and suburban rail services) and South Liverpool (Hunts Cross and Liverpool South Parkway – the latter being a large park & ride facility). Bank Hall and Kirkdale rail stations are also within appropriate walking distances;
- The North Liverpool Key Corridors scheme as discussed previously is scheduled to finish in 2020 and will deliver improvements to walking and cycling connectivity in the area as well as renewing existing infrastructure;
- The area's cycle infrastructure will be enhanced further through the North Liverpool Corridor Scheme which will deliver a segregated cycleway along the length of Regent Road. Upon completion in 2020, the route will provide a segregated cycleway connecting the City Centre to the south, to Sefton to the north for onwards connectivity along the Sefton Coast;
- Pre-application discussion with commercial bus operators have indicated that a match-day shuttle bus would be a viable service to run on a commercial basis. In addition, as this part of north Liverpool develops, it is anticipated that additional bus services will be run by the operators, as demand increases; and
- In future years, as Liverpool Waters to the south of the stadium is developed, new pedestrian routes towards the city centre via Liverpool Waters will be created.

Principles of inclusivity are set out in Section 9 of the Design & Access Statement.

Reference should be made to the following documents for further details:

- Environmental Impact Assessment: Transport (CBRE: Mott MacDonald); and
- Design and Access Statement: Section 9 (Pattern).

T12 Car parking provision in new developments

Following the omission of the multi-story car park from the original submitted application scheme, on-site parking has been significantly reduced. The on-site parking provision is now contained in the west quay surface car park.

Since the west quay is a flexible space, as described on the previous page, the parking provision varies between match days and non-match days (given the requirements of the outdoor broadcast compound). The diagrams opposite show the car park layouts for both scenarios and the parking bay counts are listed below.

Match Day Parking:

- Standard Bays – 25.

- Accessible Bays – 52.
- Electric Charging Bays – 6.
- Accessible Electric Charging Bays – 2.
- Motorbike Bays – 4.
- Total Parking = 89.

Non-Match Day Parking:

- Standard Bays – 71.
- Accessible Bays – 52.
- Electric Charging Bays – 24.
- Accessible Electric Charging Bays – 2.
- Motorbike Bays – 4.
- Total Parking = 153

Reference should be made to the following documents for further details:

- Design and Access Statement: Section 3.6.1 (Pattern).

T15 Traffic impact assessment

An assessment of the impact of traffic in terms of Severance, Pedestrian Amenity, Pedestrian Delay, Accidents and Safety and Driver Delay as outlined within the IEMA guidelines has been undertaken (see Section 7 of the EIA).

The same assessment has been undertaken for the operational traffic flows on non-match days and non-major event days. The 2023 & 2028 with development scenario has been compared against the 2023 & 2028 Baseline. The assessment demonstrated that there is anticipated to be a negligible impact of the proposed development on all of the criteria set out within the IEMA guidance assessed in this section.

For the assessment of impact on pedestrian, cycle and vehicular access to Nelson Dock on match days and major event days, impact was found to be negligible. For the assessment of the impact of the proposed development on the operation of the transport network when a match is played, or a major event is held at the application site, the impact was found to be minor adverse. The assessment of the impact of crowd disaster and violence was determined to be minor adverse.

Reference should be made to the following documents for further details:

- Environmental Impact Assessment: Transport (CBRE: Mott MacDonald); and
- Design and Access Statement (Pattern).

4.3.10 Community

HD24 Public Art

A public art strategy will developed for the site and the intent of this is set out in the Design and Access statement. This aims to connect fans to past players and stories as well as the site's history as a working dock and the stories and facts attached to this. Key interventions include for example the incorporation of the Archibald Leitch latticework into balustrading, fencing and cycle stands. Additional opportunities such as incorporating stories, symbols and facts branded into the timber of the benches or inscribed into paving stones will also be explored.

Reference should be made to the following documents for further details:

- Design and Access Statement: Sections 7.5.3 (Pattern).

C7 The Clubs

As set out in the responses above, the design (notably the transport strategy) has been developed in such as a way to mitigate impacts on the neighbouring communities. The transport assessment has found impacts for the surrounding pedestrian, cycle and vehicular access networks to be negligible.

Reference should be made to the following documents for further details:

- Environmental Impact Assessment: Transport (CBRE: Mott MacDonald); and
- Design and Access Statement (Paterrn).

5 Conclusion

Buro Happold have prepared a Sustainability Statement on behalf of Everton Stadium Development Limited in support of a full planning application for the development of a new stadium with associated facilities and infrastructure at BMD, Liverpool.

In their consultation response, MEAS (30th April) confirmed that the original submitted statement (and scheme) was compliant. The design-changes which have prompted the update to the original submission (e.g. reduction in on-site parking, integration of battery storage) are believed to be beneficial from a sustainability perspective. As set out within this document that Sustainability Statement demonstrates compliance with the existing adopted and emerging local plan policy and the overarching NPPF.

Appendix A Sustainability Performance Framework: Methodology document

BUROHAPPOLD ENGINEERING

The Peoples Project

Sustainability Performance Framework: Methodology Document

0040026

25 September 2019

Revision 02

Revision	Description	Issued by	Date	Checked
00	Draft issue for comment	FA	13.09.19	BJ
01	Issue for information	FA	19.09.19	BJ
02	Incorporation of comments from CBRE	FA	25.09.19	BJ

\\Srv-bath03\project filing\0040026 EFC\F42 Sustainability\03 Reports\04 Internal Reports\Sustainability\10 Method statement\190925 FA 0040026 Sustainability Performance Framework 02.docx

author	**Fergus Anderson**
date	**25.09.19**
approved	**Ben Jones**
signature	
date	**25.09.19**

..

Contents

1 Introduction

1.1 Context

During the 19th century, the Liverpool docks enabled the city to grow into a globally significant and influential commercial centre. Now, an exciting new chapter is about to be written at Bramley-Moore. New life will be breathed into it as it is brought back into meaningful use and opened up to the people of the city.

Fédération Internationale de Football Association (FIFA) believes that football is more than just a game. Through its unique power and universality, football can transform lives and raise self-esteem, as well as unite and inspire entire communities. Stadia can further be a catalyst for environmental improvement regionally, encouraging pro-environmental behaviours and facilitating transitions in regional infrastructure networks for example. At the same time however, the ecological footprint of stadia and sporting events are also significant.

Sustainability is at the heart of the Club's ambitions for the site. This is echoed throughout the 11 Key Principles set out by the Club, for example:

- To harness the unique features of the Bramley-Moore site to create an environmentally friendly and sustainable stadium;
- To maintain 'The People's Club' ethos by listening to, investing in, working with and inspiring not only fans, but communities across the city and beyond;
- To build on the award-winning work of Everton in the Community, facilitating sustainable economic and social benefits for the area;
- To work with conservation agencies and Historic England, to ensure that development is sensitive to the history and significance of the Bramley-Moor site;
- To embrace cutting-edge technology; and
- Present a much needed regeneration opportunity for the North of Liverpool.

Everton Football Club have commissioned BuroHappold Engineering to work collaboratively with the organisation to develop a Sustainability Framework. The purpose of the Sustainability Framework is to ensure the client's sustainability aspirations for the project are embedded within The Peoples Project (TPP). Through drawing on a robust evidence base, the Sustainability Framework should empower the client and project team to make more informed decisions throughout the project lifecycle.

1.2 Document purpose

This document has been produced to clearly and transparently communicate:

1. How the adopted Sustainability Framework has been developed;
2. The methodology that underpins this;
3. Its alignment to key drivers including Liverpool City Council (LCC) planning requirements;
4. The roles and responsibilities of project team members to ensure that the intended sustainability outcomes are delivered throughout the project lifecycle; and
5. The Clubs proposed planning commitments.

This document may be shared with external stakeholders. BuroHappold welcome feedback to inform the further refinement and development of the proposed approach.

1.3 Contents of this report

This report includes the following sections:

- **Sustainability Framework overview:** This section introduces the purpose and structure of the proposed Sustainability Framework for TPP. A summary of the overarching themes and core components of the framework is provided; and
- **Alignment with project drivers:** Presents the Sustainability Frameworks alignment to a number of key international and national drivers as relevant to the project context;
- **Planning commitments:** Outlines the project team and Club's proposed planning commitments in relation to sustainability; and
- **Conclusions & next steps:** Here, the required actions for the implementation of the Sustainability Framework are set out.

2 Sustainability Framework Overview

2.1 Introduction

This section sets out the structure of the proposed Sustainability Framework. The rationale behind the selection of the overarching framework themes and Key Performance Indicators (KPIs) is presented.

2.2 Adopted approach

A successful Sustainability Framework builds on the existing values and activities already taking place in an organisation. It must also be agile and respond to existing and emergent policy and trends relevant to the project's specific context, stakeholders and sector.

The development of the Sustainability Framework for the stadium has been an iterative process. As set out in Appendix A, this has involved a series of desktop reviews and workshops to develop a clear understanding of the aforementioned points to establish a robust platform from which to progress. Key to this process was understanding the opportunities and constraints of two key approaches:

1. Adopting an existing, third party certification such as BREEAM or LEED. Note, this is not stated as a requirement within the current or emerging planning policy; and
2. Development of a bespoke Sustainability Framework, unique to TPP.

A summary of the opportunities and constraints of each approach are summarised in below in Table 2-1.

Table 2-1 Sustainability framework approach: summary opportunities and constraints

	Application of existing framework (e.g. BREEAM, LEED)	Development of bespoke TPP Sustainability Framework
Opportunities	• High level of understanding and recognition within UK design and construction teams. • Certification would allow the stadium to be benchmarked against other stadia, nationally and internationally. • External audit of the design and construction provided by independent third party. • Certification provides an opportunity to enhance external brand through attainment of target rating and 'badge'.	• Builds on the existing values and activities already taking place in the Club. • Development of a methodology aligned to priority outcomes for the Club and key stakeholders. • Foster greater sense of Club ownership and responsibility for sustainability outcomes. • Reduced certification costs as well as greater opportunity for value driven investment.
Constraints	• Relatively few stadia globally with (post-construction) certification; reduces the ability to benchmark the stadium as well as suggests a level of risk in actually delivering the performance requirements in the context of a stadium. • Prescriptive methodology which is not flexible to the Clubs existing values and activities. • A lack of transparency over what has been attained within a (for example) BREEAM Excellent building is frequently cited as a common challenge and barrier to benchmarking. • Cost of certification highlighted as a barrier as is the risk of effectively 'buying' credits to achieve rating with little value to club or other users / stakeholders.	• No external certification of design or construction based performance. • No formal 'badge' for performance will be received.

Based on the outcomes of the engagement process and those issues identified in Table 2-1, it was decided that a sustainability assessment system tailored to both the Clubs aspirations, context of Bramley-Moore dock and the stadium proposals would be developed. The primary driver for this decision is the fact that relatively few stadiums nationally, and even internationally, have achieved certification and the risk believed to be attributed to successfully delivering this poses. The sustainability assessment system has been developed based upon a review of the most appropriate, robust and pioneering elements of existing certification frameworks (e.g. BREEAM, LEED). The project will not however pursue certification under any such system.

2.3 Purpose of the sustainability framework

The successful implementation of the Sustainability Framework will support the Club to:

1. Progress their journey to becoming a more sustainable organisation through informing and aligning to their 11 Principles of Development;
2. To inform the sustainable development of The Peoples Project;
3. To set meaningful, aspirational but achievable targets;
4. To measure, track and document progress against these targets as the design develops;
5. To help integrate the various design team members in a way that allows different disciplines to best utilise their skills to deliver against the sustainability outcomes;
6. Align The Peoples Project sustainability strategy with that of funders and wider stakeholders; and
7. Inform the development of future targets and requirements for sustainability performance across the Clubs future capital projects and operations.

2.4 Sustainability Framework structure

2.4.1 Summary

The proposed structure and flow of information within the Sustainability Framework is illustrated within Figure 2-1. The core features within this are described below:

- **Overarching framework themes:** the top level themes against which sustainability progress and performance will be reported both within the project and client team as well as to external stakeholders;
- **Design fundamentals:** establishes the priority outcomes to be driven through each overarching theme. For example, Resource Efficiency will be made up of several design fundamentals including operational energy consumption, water usage and waste management; and
- **Key Performance Indicators:** each design fundamental contains a number of KPIs. The KPIs are the mechanism through which successes (and challenges) will be monitored throughout the project life cycle. The targeted KPIs have been selected based on the contribution of these to the overarching themes. KPIs are a mixture of quantitative and qualitative targets dependent upon the nature performance indicator.

These features will inform the development of the 'strategies' put forward by the project team to deliver a truly sustainable and successful Peoples Project. The overarching themes, design fundamentals and KPIs will be captured within a Sustainability Performance Tracker (see Section 2.5).

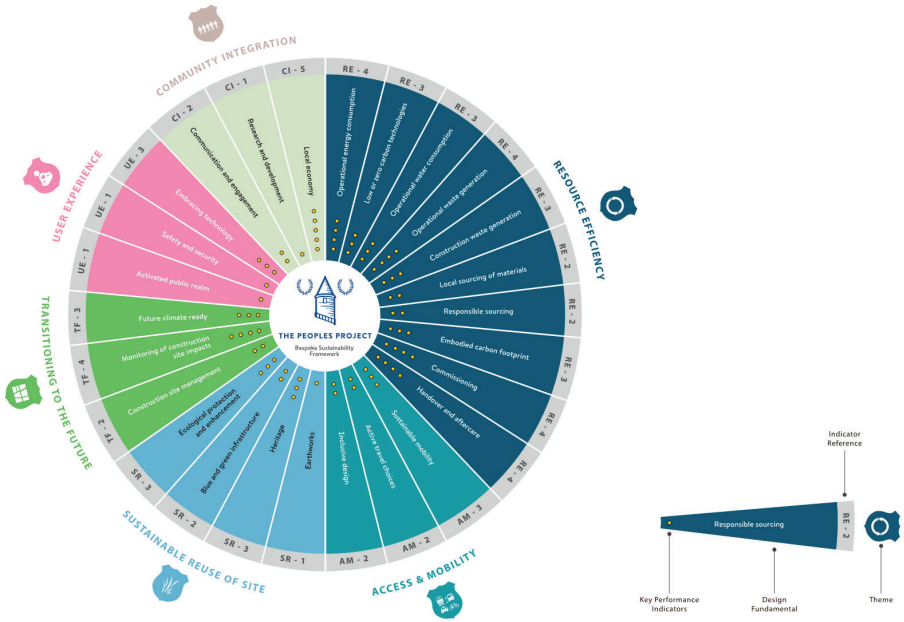


Figure 2-1 Sustainability Framework summary diagram

2.4.2 Overarching themes and design fundamentals

Table 2-2 summarises the overarching themes and design fundamentals. Justification for the selection of these has been provided as well as high level mapping to the Five Capitals and UN SDGs.

Both the overarching themes and design fundamentals have been developed based on the outputs of Workshops One and Two (see Appendix A). Following Workshop One, the preliminary overarching themes presented by BuroHappold where refined. This was done based on the greater understanding of the Club's aspirations and priorities as gained during the workshop. The design fundamentals where developed based on the outputs of the importance 'vs' influence mapping during which attendees were presented with the 19 sustainability issues and, in groups, asked to consider how important the issue is to the project, along with how much influence they had over the theme.

2.4.3 Key performance indicators

As set out in Appendix A, the proposed KPIs where developed based upon the outcomes of Workshop Two. BuroHappold developed initial proposals which were then reviewed and refined with the design team and client through a series of facilitated workshops.

Justification for the selection of KPI is set out in Appendix C.

2.5 Sustainability performance tracker

2.5.1 Purpose

The Sustainability Performance Tracker is the tool in which the overarching themes, design fundamentals and KPIs are documented. The tool is not intended to be a static document and rather should be updated throughout the project lifecycle to enable a transparent and accessible reference of sustainability performance at any point in time.

The current version of the Sustainability Performance Tracker can be found in Appendix B.

2.5.2 Structure

Figure 2-2 provides an overview of the structure that has been adopted for the Sustainability Performance Tracker.

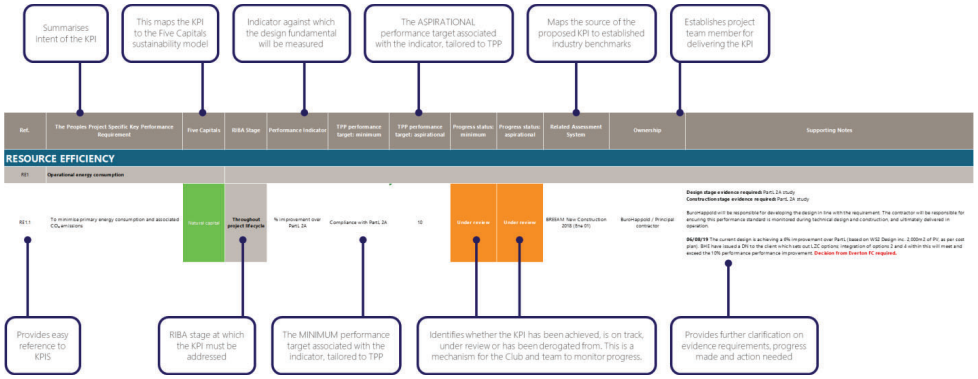


Figure 2-2 Illustration of Sustainability Framework structure

Table 2-2 Overview of overarching sustainability themes

Overarching theme	Summary of Design Fundamentals Design Fundamentals are highlight in green for reference	Why it's important	Mapping to UN SDGs																	Five Capitals				
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Natural	Human	Social	Manufactured	Financial
Resource Efficiency	• To minimise the impact of **operational energy consumption** • To encourage the use of **low or zero carbon technologies** • To encourage the reduction of **operational water consumption** • To minimise **operational waste generation** and its associated impacts • To minimise **construction waste generation** and its associated impacts • To promote the **local sourcing of materials** • To prioritise **responsible sourcing** of materials and products • Minimise and transparently report the projects **embodied carbon** • To assure a quality outcome through effective **commissioning** • To optimise in-use performance with **handover and aftercare** support	Global population growth and consumption rates are putting pressure on natural resources. The built environment contributes around 40% of the UK's total carbon footprint. Moreover, construction is one of the largest consumers of materials and produces more waste than any other sector in the UK. Water is increasingly scarce in some parts of the UK, a trend which will increase with climate change.						✓	✓				✓	✓	✓					✓			✓	
Access & Mobility	• To promote the use of **low carbon, sustainable transport modes** to minimise transport related emissions • To encourage **active travel choices** from staff, fans and visitors • To champion **inclusive design** to deliver consistent high quality experience for all	The transport sector contributes significantly towards greenhouse gas emissions. Promoting low-carbon transit options will help limit global temperature rise to 1.5 degrees Celsius above pre-industrial level' it also helps promote a healthier and more active community. Designing spaces for people, rather than the private vehicle, will also create more vibrant, accessible, safe and happier spaces. It is also important to design for inclusivity, to ensure that the same high quality experience is accessible to all, regardless of age, disability, gender, etc., as aligned with the Principle 'The People's Club'.			✓		✓		✓		✓	✓	✓	✓	✓					✓	✓		✓	
Sustainable Reuse of Site	• To promote the **ecological protection and enhancement** of the site • To maximise the visual and physical access to the **blue and green infrastructure** • To celebrate and engage individuals with the site maritime **heritage** • To minimise environmental impact of the **earthworks** for the dock infill	Bramley-Moore Dock has significant historical value and is situated part of Liverpool's UNESCO World Heritage site. As such, it is important to minimise the environmental and social impact of the development, and to ensure the site value if retained and celebrated as part of The Peoples Project. There is an opportunity for TPP to be a focal point along the water-front through maximising the visual and physical access to the riverside, enhancing the biodiversity on site and promoting user-interaction with the public realm and site history.			✓								✓			✓	✓			✓				
Transitioning to the Future	• To safeguard The Peoples Project by designing such that it is **future climate ready** • To ensure the **monitoring of construction site impacts** • To promote and celebrate responsible **construction site management**	The impact of climate change and other stresses are felt most acutely in cities; these growing risks has clear implication on the quality of life, infrastructure systems and local economy. Minimising construction impacts and building resilience by investing in physical adaptation efforts can provide co-benefits for a range of future challenges, including climate mitigation. It is also critical to ensure resiliency to social changes too; such as the potential in change of fan-base demographics and their needs.									✓		✓	✓	✓					✓				
User Experience	• To design an **activated public realm** which encourages pedestrian activity, social exchanges and positive sensory experiences • To consider **safety and security** as integral to creating a stress-free environment for staff, fans and visitors • To enhance user experience through **embracing technology** and its potential to significantly shape fans' interaction with the game for the better	To attract and sustain staff, fans and visitors, there must be effective social infrastructure for both match- and non-match day use. This includes creating active public realm and indoor spaces that people would want to work and socialise in – recognising that these spaces will also improve staff and fans' satisfaction, wellbeing and match-day experience. Technology also offers significant potential to increase fan experience and operational efficiency, particularly in adapting to changing social, environmental and economic needs.			✓				✓	✓	✓										✓		✓	
Community Integration	• To provide a range of **community non-match day uses** which are accessible, multi-functional and foster social exchange • To partner with local institutions to further **research and development** in sustainable stadia designs • To act as a catalyst for regeneration and support the **local economy**	TPP offers a unique opportunity to engage stakeholders. There is opportunity to support outcomes across the Five Capitals through, for example, engaging stakeholders with sustainability issues throughout the project lifecycle as well as create opportunities for individuals to develop new skills or pursue new careers. Targeted outcomes can be developed in line with the priority challenges faced by the local region through apply insights from data sets such as the Indices of Multiple Deprivation.			✓	✓			✓					✓					✓		✓	✓		✓

2.6 Roles and responsibilities

Within this section a summary of the roles and responsibilities of each project team member in ensuring the sustainability outcomes are embedded throughout the project lifecycle are set out.

It is acknowledged that external stakeholders, notably LCC, will wish to hold the development accountable to a level of sustainability performance. The Clubs proposals with regard this are set out in Section 4.2.

Client team

During the design stage, the Club has played a crucial role in the development of the Sustainability Framework and associated KPIs. Throughout the project lifecycle, all parties will be responsible for reporting progress against the KPIs to the Club. The Club have the overall authority and any design decisions which may affect the KPIs within the Sustainability Performance Tracker must be raised with the Club for their review.

During the construction stage, the Club will be responsible for undertaking the following:

- Monitor progress against the agreed sustainability performance targets to drive sustainability outcomes throughout the life of the project, attending key meetings and/or undertaking sustainability review workshops with the project team at key project stages; and
- Monitor site activities with sufficient frequency to ensure that risks of non-compliance are minimised, reporting on progress at relevant project team meetings, including identifying potential areas of non-compliance and mitigation measures.

The Club may wish to appoint an external consultant on their behalf to undertake these responsibilities during construction.

In addition, there are a number of KPIs for which the Club is responsible. It will be the Club's responsibility to ensure that the necessary actions are progressed in order to demonstrate compliance with these KPIs.

Sustainability advisor

BuroHappold have been appointed as the Club's sustainability advisor between RIBA Workstage's one through three. During this period, BuroHappold have been responsible for:

- Facilitating engagement sessions with the Club and project team to develop the Sustainability Framework;
- Providing advice to support the project and client team in developing effective and integrated strategies in response to the KPIs set out within the Sustainability Framework;
- Reviewing and monitoring the design development in line with the KPIs set out within the Sustainability Framework; and
- Ensuring a coordinated set of Employer Requirements are produced which effectively communicate the sustainability requirements to the construction team.

Design team

The design team have been responsible for:

- Engaging with the Club and sustainability advisor to inform the development of the Sustainability Framework and KPIs set out within this;
- Developing the design in line with the Sustainability Framework and KPIs set out within this;
- Flagging up, in a proactive manner, any project changes that may impact the attainment of Sustainability Performance Targets, including agreeing upon any remedial / alternate action required to ensure the intent of the Sustainability Performance Target is achieved; and
- Coordinating and providing all documentary evidence requested by the Club and sustainability advisor to demonstrate compliance with the Sustainability Performance requirements.

Construction team

The appointed contractor will be required to nominate a member of their team as their Environmental Sustainability Champion. The Environmental Sustainability Champion will be the main point of contact for the Club (or appointed consultant) during the construction stage to:

- Monitor site activities and design development through the construction stage, ensuring compliance with the Sustainability Performance requirements;
- Flag up, in a proactive manner, any project changes that may impact the attainment of Sustainability Performance Targets, including agreeing upon any remedial / alternate action required to ensure the intent of the Sustainability Performance Target is achieved. Equally, opportunities to go beyond the design intent, to maximise the project's performance against the agreed Sustainability Performance Targets throughout the Construction, Handover and Close Out stages should be identified; and
- Coordinate and provide all documentary evidence requested by the Club (or appointed consultant) to demonstrate compliance with the Sustainability Performance requirements and ensure the sustainability targets are achieved.

3 Alignment with project drivers

3.1 Introduction

This section provides a summary of the key sustainability drivers in the context of TPP. It sets out how the Sustainability Framework has been developed in alignment with these, ensuring that robust and coherent basis for the Framework.

3.2 International

3.2.1 United Nations Sustainable Development Goals

The United Nations (UN) Sustainable Development Goals (SDGs) were developed during the "Transforming our World: the 2030 Agenda for Sustainable Development" UN Summit on 25th September 2015. The SDGs replace the Millennium Developments Goals which ended in 2015 and are focused around: people, planet, prosperity, peace and partnerships.

The UN SDGs are comprised of 17 core issues, as shown in Figure 3-1. The 17 core issues are supported by 169 targets. Countries across the globe have adopted the UN SDGs as a means to end poverty, protect the planet and ensure prosperity for all by 2030. For the goals to be reached, collective action is required at all scales, from the Government through to organisations and the everyday citizen. The UK Government's commitment to the Goals is outlined in their Agenda 2030 document.

TPP has a significant opportunity to contribute to progress across the 17 UN SDGs within its local context. Ensuring the framework themes and KPIs defined within these align to the UN SDGs will provide the NCF with a global, international focus. Alignment between the overarching framework themes and UN SDGs is illustrated in Figure 3-1.

Table 2-2 outlines how TPP overarching themes and design fundamentals have been aligned to the UN SDGs.

Figure 3-1 United Nations Sustainable Development Goals

3.2.2 Five Capitals model of sustainability

To ensure that the development process of the Sustainability Framework for TPP has been robust and coherent it has been aligned with the Five Capitals model, which represents the leading thinking on sustainability.

The 'Five Capitals' model shown in Figure 3-2 is based on the "capital theory" approach. The definition proposed for capital is "a stock that yields a flow of valuable goods or services into the future". An example is that a stock or population of trees or fish (natural capital) provides a flow or annual yield of new trees or fish (natural income). If natural capital and subsequently natural income declines, then this is not classed as sustainable. The capitals are defined as follows:

- **Natural capital** refers to any stock or flow of energy and material that produces goods and services;
- **Human capital** consists of people's health, knowledge, skills and motivation. All these things are needed for productive work;
- **Social capital** concerns the institutions that help us maintain and develop human capital in partnership with others;
- **Manufactured capital** comprises material goods or fixed assets which contribute to the production process rather than being the output itself; and
- **Financial capital** plays an important role in our economy, enabling the other types of Capital to be owned and traded. But unlike the other types, it has no real value itself but is representative of natural, human, social or manufactured capital.

The 'Five Capitals' model defines a concept of limited capacity which cannot be exceeded without negative consequences. It also establishes important interlinkages and a hierarchy of nature feeding human and societal growth, enabling manufacturing and financial growth.

The 'Five Capitals' model provides a basis for understanding sustainability in terms of the economic concept of wealth creation or capital. Organisations use all five types of capital to provide their offer. A sustainable organisation will maintain and where possible enhance these stocks of capital assets, rather than deplete or degrade them.

Table 2-2 outlines how TPP overarching themes and design fundamentals have been aligned to the Five Capitals.

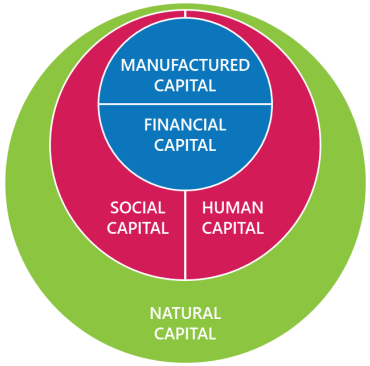


Figure 3-2 Five Capitals Model

3.3 Regional

3.3.1 Climate Emergency declaration

In May 2019, the Liverpool City Region Combined Authority declared a climate emergency.

The Combined Authority has committed to producing a Climate Action Plan by December 2019 in which it will set out how it plans to tackle the climate emergency. A number of key policies have however already been introduced, including:

- A Zero Carbon target of 2040;
- A £10m Green Investment Fund;
- The Mersey Tidal Commission;
- £460m investment in new, state-of-the-art trains for Merseyrail network – improving and future proofing green public transport;
- The cleanest bus fleet outside of London – with 7/10 vehicles being low emission and 25 zero emission hydrogen buses arriving next year;
- Establishment of a Clean Air Taskforce;
- A "Brownfield First" approach to development; and
- Investment into the first phase of a £16 million 600km cycling and walking network.

Climate emergency declarations are made up of two core components: reducing carbon emissions (operational and embodied) and protecting and enhancing natural capital. Table 3-1 summaries how the TPP Sustainability Framework is aligned to these core components of the climate emergency declaration:

Table 3-1 Alignment of TPP Performance Requirements with climate emergency objectives

	TPP Performance Requirements
Reducing carbon emissions	• Resource efficiency: all performance requirements within this section support the principal of reducing carbon emissions. All key aspects of the project lifecycle are considered, from operational energy consumption, water use and waste through to embodied carbon and construction site management. • Access & mobility: the performance requirements set out within this principle further support this aspiration, through maximising opportunities for low or zero carbon travel on both match and non-match days. • SR4 Earthworks: existing dock deposits will be left in place, capped with a separation geotextile and marine-won sand fill placed on top. This strategy will avoid the need to dredge and dispose of 50,000m^3 of dock deposits, reduce the total volume of fill by approximately 25,000m^3 and reduce marine vehicular movements. This strategy significant reduces the embodied impact of the sub-structure as well as construction related transport emissions. • UE3 Embracing technology: this particular performance requirement will seek to identify how the proposed technology strategy can support the Club in encouraging pro-environmental sustainable behaviour change within fans.
Protecting and enhancing natural capital	• SR1 Ecological protection and enhancement: aims to maximise the use of native plant species as well as assess opportunities associated with delivering a net biodiversity gain within the development boundary.

3.3.2 Regional planning policy

LCC have a broad set of sustainability aspirations; a summary of the local policy context is set out in Appendix D.

Both the existing and emerging policy documentation do not stipulate specific performance standards and methodologies to be adopted by developers in relation to sustainability. This supports the Club's aspiration to pursue the development of a bespoke Sustainability Framework for the project. It is recommended that Liverpool City Council are engaged in the development of this.

Table 3-2 provides a summary of the alignment between LCC planning policy and the requirements set out within the Sustainability Performance Tracker. The table focuses on the key sustainability related policies contained within the current Unitary Development Plan and emerging Local Plan. It is noted that the Sustainability Performance Tracker does not directly address all of the LCC policy requirements. The Sustainability Performance Tracker should be read in conjunction with the rest of the design documentation. Where LCC policy requirements are not addressed by the Sustainability Performance Tracker, reference to the appropriate strategy document has been made.

3.4 Internal sustainability certification frameworks

Although certification is less common for stadium developments, BREEAM (Building Research Establishment's Environmental Assessment Method) is widely adopted in the UK and has contributed much to the strong sustainability focus in UK building design, construction and use.

As set out within this report, TPP will not pursue BREEAM certification. The development of TPP Performance Tracker has however used BREEAM, among other certification systems (e.g. Living Building Challenge), as a key reference point for establishing performance standards.

Table 3-3 provides a summary of the alignment between the requirements of the Sustainability Performance Tracker with BREEAM New Construction 2018. Similar to LCC planning policy, the Sustainability Performance Tracker does not address all the credit criteria of BREEAM and as such, the Sustainability Performance Tracker should be read in conjunction with the wider body of design documentation. Table 3-3 demonstrates the design development has supported the intent of the significant majority of BREEAM performance criteria.

Table 3-2 Alignment of TPP sustainability performance requirements with LCC planning requirements (related to sustainability)

Legend	
Addressed within TTP Sustainability Framework	■

		TPP Sustainability Framework																										Comments
		Resource efficiency											Access & Mobility			Sustainable Reuse of Site				Transitioning to the Future				User Experience			Community Integration				
		RE1	RE2	RE3	RE4	RE5	RE6	RE7	RE8	RE9	RE10	RE11	AM1	AM2	AM3	SR1	SR2	SR3	SR4	TF1	TF3	TF4	TF5	UE1	UE2	UE3	CI1	CI2	CI3	CI4	
Liverpool City Council: Unitary Development Plan	EP1 Vacant, derelict and neglected land																														The development proposals are formulated around the restoration of neglected land.
	EP2 Contaminated land																														The development proposals have been informed by a contaminated land study.
	EP9 Waste storage																														Refer to the operational waste management strategy. This has been developed in line with the planning requirements.
	EP11 Pollution																														Refer the design proposals. An assessment of pollution impacts (noise, air, water, other) have informed the design development.
	EP12 Protection of water resources																														Planning requirements addressed within the design proposals.
	EP13 Flood protection																			■											A flood risk management strategy has been produced, this accounts for the impacts of climate change.
	EP16 Renewable energy	■	■	■														■													Refer to the energy strategy for information on the renewable energy proposals incorporated within the development.
	HD8 Preservation and enhancement of conservation areas																	■													A heritage strategy is being developed in line with the requirements of the planning policy and recommendations of Liverpool City Council and Historic England.
	HD9 Demolition of buildings in conservation areas																	■													A heritage strategy is being developed in line with the requirements of the planning policy and recommendations of Liverpool City Council and Historic England.
	HD11 New development in conservation areas																	■													A heritage strategy is being developed in line with the requirements of the planning policy and recommendations of Liverpool City Council and Historic England.
	HD14 Street works in conservation areas																	■													A heritage strategy is being developed in line with the requirements of the planning policy and recommendations of Liverpool City Council and Historic England.
	HD 19 Access for all														■																An inclusive design strategy is being developed in line with the planning policy requirements.
	HD21 Energy conservation	■	■	■							■	■																			Refer to the energy strategy for further detail. This has been developed based on the principle of harnessing the environment, through application of the energy hierarchy.
	HD22 Existing trees and landscaping															■															There are limited existing trees and landscaping on the current site.
	HD 23 New trees and landscaping															■															Refer to the soft works plan. External planting has been selected based on ecological value and suitability to the sites climatic context.
	HD24 Public art																														As per the landscape plan, key features such as historic statues have been incorporated.
	HD28 Light spillage																														The lighting strategy has been developed in accordance with the planning policy requirement and the sites heritage, ecology and security context.
	OE7 Habitat creation and enhancement															■															Opportunities for net biodiversity gain will be explored.
	OE12 Enhancement of green space															■															The landscape plan sets out how green space has been incorporated within the development proposals.
	T6 Cycling												■	■																	The transport strategy sets out cycle provision within the development proposals. Provision for match and non-match day users is planned.
	T7 Walking and pedestrians												■		■																The transport strategy sets out the proposals put forward to promote walking and pedestrian environments.
	T12 Car parking provision in new developments																														Refer the design proposals and access statement for details.
	T13 Car parking for the disabled																														Refer the design proposals and access statement for details.
	T15 Traffic impact assessment																														Refer the design proposals and access statement for details.
Liverpool City Council: (draft) Local Plan	CC8 Waterfront design requirements														■		■	■													Refer to the design and access statement for further information.
	UD4 Inclusive design														■																An inclusive design strategy is being developed in line with the planning policy requirements.
	UD5 New buildings	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■								The design development has been informed by the sustainability strategy.
	HD1 Designated heritage assets																	■													A heritage strategy is being developed in line with the requirements of the planning policy and recommendations of Historic England.
	GI1 Green infrastructure															■	■														Refer to the landscape and soft works plan for further information.
	GI3 Open space, sport and recreation provision																							■							The restoration and fan plaza provides significant opportunity for recreation (match and non-match day).
	GI4 Water spaces																■														Refer to the design and access statement for further information.
	GI5 Protection of biodiversity and geodiversity															■															Refer to the soft works plan. External planting has been selected based on ecological value and suitability to the sites climatic context.
	GI7 New planting and design															■															Refer to the soft works plan. External planting has been selected based on ecological value and suitability to the sites climatic context.
	GI9 Green infrastructure enhancement															■															Refer to the soft works plan. External planting has been selected based on ecological value and suitability to the sites climatic context.
	R1 Air, light and noise pollution																														Refer the design proposals. An assessment of pollution impacts (noise, air, water, other) have informed the design development.
	R3 Flood risk and water management																			■											A flood risk management strategy has been produced, this accounts for the impacts of climate change.
	R5 Rivers, canals, watercourses and culverts																														Planning requirements addressed within the design proposals.
	R7 Decentralised energy networks	■	■	■																											Refer to the energy strategy for information on the renewable energy proposals incorporated within the development.
	R8 Wind turbines		■																												An low and zero carbon technology has been undertaken and informed the selection of renewable technologies proposed.
	R9 Solar panels		■																												An low and zero carbon technology has been undertaken and informed the selection of renewable technologies proposed.
	R10 Non-fossil fuel energy sources		■																												An low and zero carbon technology has been undertaken and informed the selection of renewable technologies proposed.
	TP1 Improving accessibility and managing demand for travel												■	■																	Refer to the transport plan for further detail.
	TP5 Cycling												■	■																	Refer to the transport plan for further detail.
	TP6 Walking												■	■																	Refer to the transport plan for further detail.
	TP9 Public transport												■	■																	Refer to the transport plan for further detail.

Table 3-3 Alignment of TPP sustainability performance requirements with BREEAM 2018 New Construction

Legend	
Addressed within TTP Sustainability Framework	■

		TPP Sustainability Framework																									Comments
		Resource efficiency										Access & Mobility			Sustainable Reuse of Site				Transitioning to the Future			User Experience			Community Integration			
		RE1	RE2	RE3	RE4	RE5	RE6	RE7	RE8	RE9	RE10	AM1	AM2	AM3	SR1	SR2	SR3	SR4	TF1	TF2	TF3	UE1	UE2	UE3	CI1	CI2	CI3	
Management	Man 01 - Project Brief and Design																■											Requirements addressed within project brief, consultant scope of works, meeting minutes. BuroHappold are qualified BREEAM Advisory Professionals.
	Man 02 - Life Cycle Cost and Service Life Planning																											An elemental lifecycle cost analysis has not been undertaken. Various building systems have been analysed and selected based on both CAPEX and OPEX.
	Man 03 - Responsible Construction Practices																			■	■							Requirements incorporated within TPP Sustainability Framework.
	Man 04 - Commissioning and Handover									■																		Requirements incorporated within TPP Sustainability Framework.
	Man 05 - Aftercare										■																	Requirements incorporated within TPP Sustainability Framework.
Health and wellbeing	Hea 01 - Visual comfort																											Given the project context the scope of this assessment criteria is not deemed relevant or achievable.
	Hea 02 - Indoor air quality																											Credit requirements addressed within Mechanical Specification, Section B10.4, B10.6, B10.11.21 - B10.11.24.
	Hea 03 - Safe containment in labs																											Not applicable to TPP.
	Hea 04 - Thermal Comfort																											Due to the context of stadium, thermal modelling will not be undertaken. Concourses and the bowl are considered external spaces. Internal spaces will be air conditioned thus complying with comfort criteria.
	Hea 05 - Acoustic performance																											An acoustic strategy has been developed by a suitably qualified acoustician, based on the requirements of good practice and British Standards.
	Hea 06 - Security																					■	■					Requirements incorporated within TPP Sustainability Framework.
	Hea 07 - Safe and healthy surroundings													■		■						■						Requirements incorporated within TPP Sustainability Framework.
Energy	Ene 01 - Reduction of CO2 emissions	■																										Compliance with PartL 2A has been demonstrated. A minimum performance improvement of 6% is anticipated.
	Ene 02 - Energy monitoring	■	■																									Credit requirements addressed within Mechanical Specification, Section B10.9.
	Ene 03 - External lighting																											Credit requirements addressed within Mechanical Specification, Section B10.8.
	Ene 04 - Low Carbon Design		■																									An LZC study has been produced at RIBA Workstage 2. A minimum of 2,000 m2 of PV will be provided.
	Ene 05 - Energy efficient cold storage																											A green cooling strategy is being developed by the catering consultant. This supports the intent of this BREEAM credit.
	Ene 06 - Energy efficient transportation systems																											Credit requirements addressed within Mechanical Specification, Lift requirements (VVVF, LED lighting).
	Ene 07 - Energy efficient lab systems																											Not applicable to TPP.
	Ene 08 - Energy efficient equipment																											This recommendation will be made to the Club. Currently not addressed within TPP Performance Requirements.
Transport	Tra 01 - Transport assessment and travel plan											■		■														Requirements incorporated within TPP Sustainability Framework.
	Tra 02 - Sustainable transport measures											■	■															Requirements incorporated within TPP Sustainability Framework.
Water	Wat 01 - Water Consumption			■																								Credit requirements incorporated with Sustainability Employer Requirements.
	Wat 02 - Water Monitoring			■																								Credit requirements addressed within Mechanical Specification, Section B10.9.
	Wat 03 - Water Leak Detection			■																								Credit requirements addressed within Mechanical Specification, Section B10.11.31.
	Wat 04 - Water Efficient Equipment			■																								External planting will rely on precipitation only. Refer to soft works plan.
Materials	Mat 01 - Environmental impacts from construction products: LCA						■		■									■										Requirements incorporated within TPP Sustainability Framework.
	Mat 02 - Environmental impacts from construction products: EPD							■																				Requirements incorporated within TPP Sustainability Framework.
	Mat 03 - Responsible sourcing of construction products						■	■										■										Requirements incorporated within TPP Sustainability Framework.
	Mat 04 - Insulation																											This is no longer assessed as a separate issue within BREEAM UK New Construction 2018. This will be accounted for in the project LCA.
	Mat 05 - Designing for Durability and Resilience						■																					Credit requirements addressed within Structural Specification, Section 2.2.
	Mat 06- Material Efficiency						■																					Inherent as key principle of the design development.
Waste	Wst 01 - Construction Waste Management					■												■										Requirements incorporated within TPP Sustainability Framework.
	Wst 02 - Recycled and sustainably sourced aggregates					■	■											■										Base scheme filling will comprise of recycled aggregate. Dock deposits are left in place, capped with a separation geotextile and marine-won sand fill placed on top, reducing dock fill by 25,000m3.
	Wst 03 - Operational waste				■																							Requirements incorporated within TPP Sustainability Framework.
	Wst 05 - Adaptation to Climate Change																		■									Requirements incorporated within TPP Sustainability Framework.
	Wst 06 - Design for disassembly and adaptability																											Limited changing functional demands are anticipated.
Land use and ecology	LE01 - Site Selection																											The development boundary consists of previously developed, brown field land.
	LE02 - Ecological Value of Site and Protection of Ecological Features														■													An ecologist has been appointed to undertake an assessment of site ecological value. TPP Performance Requirements address the protection and enhancement of ecological features.
	LE03 - Managing negative impacts on ecology														■													As part of the ecologists study opportunities for achieving net biodiversity gain will be reviewed.
	LE04 - Change and enhancement of ecological value														■													As part of the ecologists study opportunities for achieving net biodiversity gain will be reviewed.
	LE05 - Long term ecology management and maintenance														■													Requirements incorporated within TPP Sustainability Framework.
Pollution	Pol 01 - Impact of Refrigerants																											Leak detection requirements addressed within Mechanical Specification, Section B10.11.30. R410A specified, GWP of 1,100.
	Pol 02 - NOx Emissions																											TPP sits in a 'high pollution area'. The specified boilers have a NOx emission standard of 30-40 mg/kWh.
	Pol 03 - Surface Water Run Off																											The development is situated in a low risk zone. A flood risk assessment which supports the principles of this credit has been developed.
	Pol 04 - Reduction of Night Time Light Pollution																											Credit requirements addressed within Mechanical Specification, Section B10.8
	Pol 05 -Reduction of Noise Pollution																											The level of any noise generated by fixed plant & equipment as part of the development shall be at least 5 dB below the pre-existing background LA90 noise level.

4 Planning commitments

4.1 Context

LCC will wish to ensure the Club and project team are held accountable to ensuring sustainability is embedded throughout the design and construction and is delivered in operation. Within this section, the Club and project team have set out what they propose is committed to as part of the planning conditions.

4.2 Proposals

The Club and project team, propose that:

1. All minimum performance criteria are viewed as mandatory and will be delivered by the Club as a minimum development requirement; and
2. The project team will endeavour to deliver the stretch performance targets but these will not form part of the minimum development requirements.

5 Conclusions and next steps

5.1 Conclusions

This report has detailed the proposed Sustainability Performance Tracker that is to be adopted on the TPP (Bramley Moore Dock stadium) and the process that has been followed to create it.

The Sustainability Frameworks purpose is to ensure the client's sustainability aspirations are understood and embedded within the project throughout its lifecycle. The framework will support the Club in delivering their development principles whilst supporting regional sustainability aspirations, as set out by LCC planning policy.

Through a series of workshops BuroHappold have built up a thorough understanding of the Club's aspirations.

A series of six overarching sustainability themes have been defined which will be delivered through a bespoke project strategies (e.g. integration of renewables) informed by a series of KPIs. The KPIs have been chosen based on their alignment to the strategic aspirations of the Club as identified during the workshops. Within the Sustainability Performance tracker, ownership and a series of clear actions are defined to establish clear next steps for each KPI.

5.2 Next steps

The following next steps are proposed:

1. LCC review the content of this document. The purpose of the review should be to provide LCC with an opportunity to comment and feedback on the proposed approach, performance standards and other sustainability related aspects of the design; and
2. Following this review, if necessary, BuroHappold would welcome the opportunity to meet with LCC to address any comments or clarifications have arisen during the review process, with the view to approve TPP Sustainability Performance Tracker.

Appendix A Development process

Introduction

Within this section, the development process and the main outcomes that have informed the Sustainability Framework at each stage are summarised. The timeline of this work is summarised in Figure A1.1. This has been an iterative process, involving a desktop review of drivers, engagement with the client team through two workshops, along with analysis of workshop content, peer reviews and industry benchmarking.

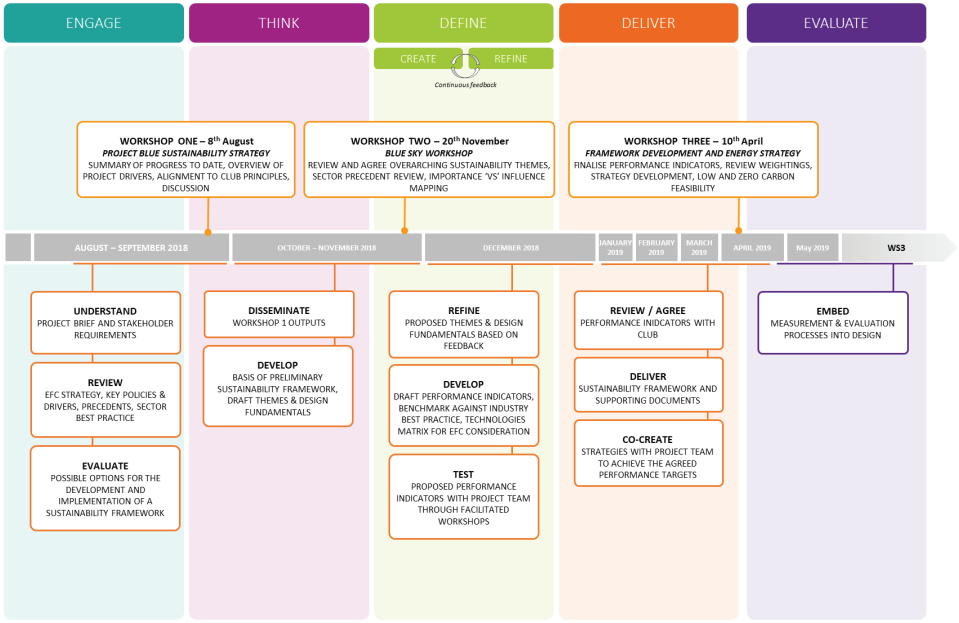


Figure A1.1 Summary of Sustainability Framework development process

Engage

Purpose

A successful Sustainability Framework builds on the existing values and activities already taking place in an organisation. It must also be agile and respond to existing and emergent policy and trends relevant to the project's specific context, stakeholders and sector. This stage focused on developing a clear understanding of these issues to create a robust platform from which to progress.

Key activities

- Desktop review of the Club's existing approach to sustainability;
- Desktop review of sustainability drivers relevant to the project context including national and regional policy drivers (e.g. existing Unitary Development Plan and emerging Liverpool Local Plan) as well as sector specific drivers (e.g. FIFA and UEFA strategies) and international best practice precedent studies (i.e. notable sustainability initiatives implemented by other football clubs internationally); and
- Critical analysis and presentation of the options the Club has in terms of their adopted approach to sustainability.

Outcomes

The outcomes of the desktop review undertaken by BuroHappold where collated into a Design Note and presented to the Club and team (ES-BHE-ZZ-ZZZ-RP-YS-0200_Approach to integrated sustainable design). This desktop review provided a robust starting point for understanding sustainability in the context of the development and was used to shape and inform those activities and discussions facilitated in Workshop One.

Think

Purpose

This stage sought to use the information gathered during the desktop review to explore with the Club the possible approaches to sustainability and what a successful and sustainable TPP would look like. Specific aims of this stage were to:

- Review the possible approaches to sustainability and agree the preferred way forward;
- Present initial ideas developed by BuroHappold in relation to the structure of the Sustainability Framework; and
- Develop a deeper understanding of the Club's sustainability aspirations.

Key activities

- Facilitation of Workshop One with the Club's leadership team. Over the course of the workshop, BuroHappold presented the context of sustainability in relation to the proposed development, highlighting opportunities and the central role sustainability will play in delivering the Club's principles;
- Desktop transcription and analysis of the workshop outputs. This was used to inform the refinement of the overarching themes and design fundamentals which would be explored during Workshop Two; and
- Production of a report setting out workshop outputs and recommended next steps.

Outcomes

The outcomes of the workshop where captured and presented to the Club and design team in a Design Note (Project Blue - Sustainability strategy progress - Summary report, issued 17th September 2018). The Club advised they would like to pursue a bespoke approach to sustainability, tailored to their aspirations and the project context. This approach was viewed to add more value than the application of a sustainability assessment system such as BREEAM. Prior to Workshop one BuroHappold had developed a series of possible overarching themes, feedback from the Club with regard their sustainability aspirations was captured in order to enable these to be refined; this resulted in two of the Principles being updated.

Define

Purpose

During this phase BuroHappold sought to finalise the overarching themes for the projects Sustainability Framework. Moreover, BuroHappold set out a series of design fundamentals under these themes for review with the Club. Acknowledging the Club's high and broad sustainability aspirations, this would be used to engage the Club regarding their priorities – i.e. which sustainability outcomes should be prioritised.

Key activities

- Facilitation of Workshop Two. This workshop sought to, review and agree on the overarching sustainability themes with the bespoke sustainability framework. BuroHappold further presented a series of exemplary case studies from with the sporting sector which were used to explore the design fundamentals and understand the Club's priorities. This was achieved through an importance 'vs' influence mapping exercise;
- Production of one no. design note (BMD01-BHE-ZZ-ZZZ-RP-YS-0400_Blue Sky Thinking Workshop) outlining the workshop outcomes;
- In addition to the design note, BuroHappold produced a technologies matrix. The purpose of this was to provide the Club with a high level analysis of a range of possible technological interventions which may be incorporated within the stadium design to support the delivery of sustainability outcomes. The technology matrix was issued to the Club as a Design Note (BMD01-BHE-ZZ-ZZZ-RP-YS-0400_Blue Sky Thinking Workshop); and
- Development of preliminary performance indicators based on the outcomes of Workshop Two. This was initially done by BuroHappold's sustainability team, independent of the design team. Following this initial review BuroHappold have facilitated workshop with each of the disciplines working on the project to review and refine the proposed performance indicators.

Outcomes

It was agreed the following six overarching themes would be adopted for the sustainability framework:

1. Natural resources
2. Access and mobility
3. Sustainable reuse of site
4. Transitioning to the future
5. User experience
6. Community integration.

The outcomes of the importance 'vs' influence mapping are out in design note BMD01-BHE-ZZ-ZZZ-RP-YS-0400_Blue Sky Thinking Workshop. During the exercise the client and design team where split into separate groups and asked to map a range of sustainability issues in terms of importance and the ability to influence positive outcomes through the development proposals. The outcomes provided a comparison of what the two groups view as priority outcomes. Based on this information, BuroHappold were able to develop a series of performance indicators under each overarching theme. These form the basis of the sustainability framework and have been aligned to the Five Capitals model of sustainability and United Nations Sustainable Development Goals.

Deliver

Purpose

During this stage, BuroHappold sought to finalise the performance indicators with the Club, enabling the sustainability framework and supporting documents to be produced.

Key activities

- Facilitation of Workshop Three focused on refining the performance indicators previously proposed. During this workshop BuroHappold further sought to engage the client with the development of the energy strategy. This involved setting out the various opportunities and constraints to the Club, with the intent of agreeing a pathway from which to move forward;
- Series of follow up calls with the Club to further refine and finalise the proposed performance indicators. These were finalised in July 2019; and
- Production of supporting information to inform the design development.

Outcomes

- Finalised KPIs and Sustainability performance tracker.

Evaluate

Purpose

During this stage, BuroHappold sought to support the team in embedding the requirements of the Sustainability Performance tracker in the design development.

Key activities

- A series of focused design team workshops, to review progress, coordinate design development, mitigate risks and identify opportunities for further performance improvement; and
- Production of tender information to ensure sustainability requirements are embedded within the Employer Requirements.

Outcomes

Coordinated design development in line with project sustainability commitments.

Appendix B Sustainability performance tracker

The Peoples Project Sustainability Performance Tracker

BUROHAPPOLD ENGINEERING

PURPOSE

The purpose of the Sustainability Framework is to ensure that the Club's sustainability aspirations for the project are embedded within The Peoples Project. Through drawing on a robust evidence base, the Sustainability Framework should empower the client and project team to make informed decisions throughout the project lifecycle.

The successful implementation of the Sustainability Framework will support the Club to:

1. Progress their journey to becoming a more sustainable organisation through informing and aligning to their 11 Principles of Development;
2. To inform the sustainable development of The Peoples Project;
3. To set meaningful, aspirational but achievable targets;
4. To measure, track and document progress against these targets as the design develops;
5. To help integrate the various design team members in a way that allows different disciplines to best utilise their skills to deliver against the sustainability outcomes;
6. Align The Peoples Project sustainability strategy with that of funders and wider stakeholders; and
7. Inform the development of future targets and requirements for sustainability performance across the Clubs future capital projects and operations.

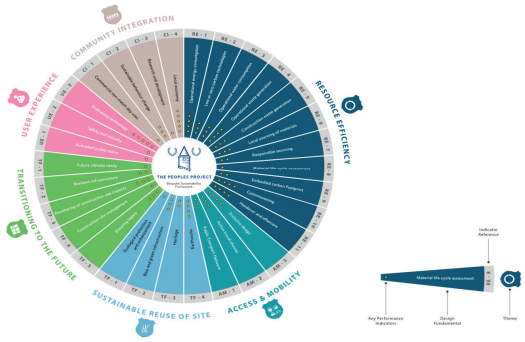
VISION, THEMES & OBJECTIVES

Vision: the vision creates purpose and identity, it is key in establishing the direction and road map to the future. The sustainability vision for the NCF is set out within the VAO document and was informed by the written responses received from workshop attendees during the 'unconstrained dream' session of Workshop One. The VAO document reflects the breadth and diversity of sustainability issues identified and discussed during this session.

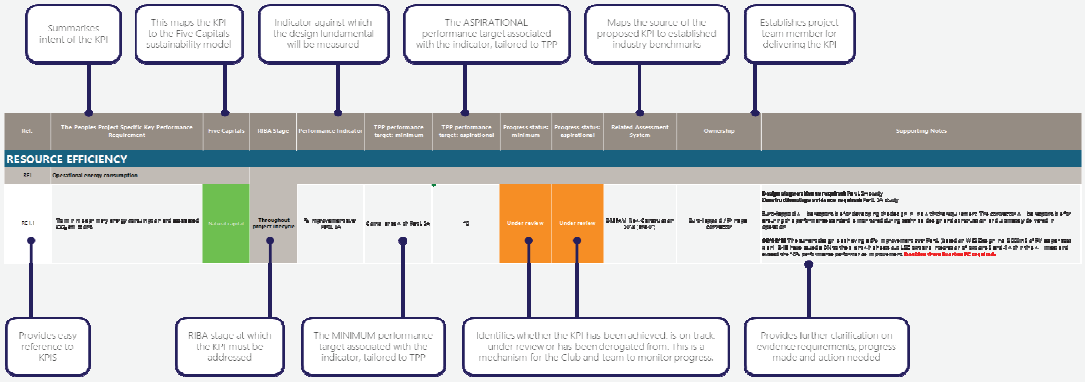
Overarching framework themes: these are the top level categories against which sustainability progress and performance will be reported both within the project and client team as well as to external stakeholders. The overarching themes are bespoke to the Club and their aspirations for The Peoples Project.

Design fundamentals: establishes the priority outcomes to be driven through each overarching theme. For example, Resource Efficiency will be made up of several design fundamentals including operational energy consumption, water usage and waste management.

Key Performance Indicators: each design fundamental contains a number of KPIs. The KPIs are the mechanism through which successes (and challenges) will be monitored throughout the project life cycle. The targeted KPIs have been selected based on the contribution of these to the overarching themes. KPIs are a mixture of quantitative and qualitative targets dependent upon the nature performance indicator.



STRUCTURE



USE

The person responsible for the Sustainability Performance Tracker will need to monitor progress against the KPIs shown in the Tracker tab during each design stage. Credits can be either 'In progress', 'Completed' or 'Derogation'; the latter means that the project can no longer achieve this credit. As the design progress discussions should continue with the Design Team and the NGS to ensure that the KPIs are ambitious but achievable.

The Dashboard tab provides charts which illustrate current progress against the NCF specific KPIs under each overarching theme. Additionally the BREEAM assessment tracker is linked to this tab so progress against BREEAM targets can be checked in parallel.

PROJECT DETAILS

Project Name	The Peoples Project
Client Name	Everton Football Club
Project Location	Liverpool, UK
Project Stage	RIBA Workstage Three

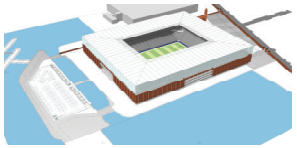
PROJECT TEAM DETAILS

Architect	MEIS	**Waste Consultant**	BuroHappold Engineering
Project Manager	Gardiner & Theobald	**Lighting Designer**	BuroHappold Engineering
Sustainability Engineer	BuroHappold Engineering	**Security Specialist**	BuroHappold Engineering
MEP Engineer	BuroHappold Engineering	**Transport Consultant**	BuroHappold Engineering
Structural Engineer	BuroHappold Engineering	**ICT Consultant**	BuroHappold Engineering
Civil Engineer	BuroHappold Engineering	**Landscape Architect**	Planit-ie
Acoustician	BuroHappold Engineering	**Cost Consultant**	RLB
Access Consultant	BuroHappold Engineering	**Planning Consultant**	CBRE

The Peoples Project Sustainability Performance Tracker

BUROHAPPOLD ENGINEERING

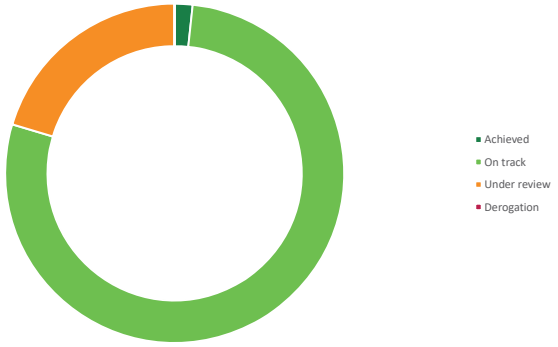
Project Name	The Peoples Project
Project Location	Liverpool, UK
Project Stage	RIBA Workstage Three



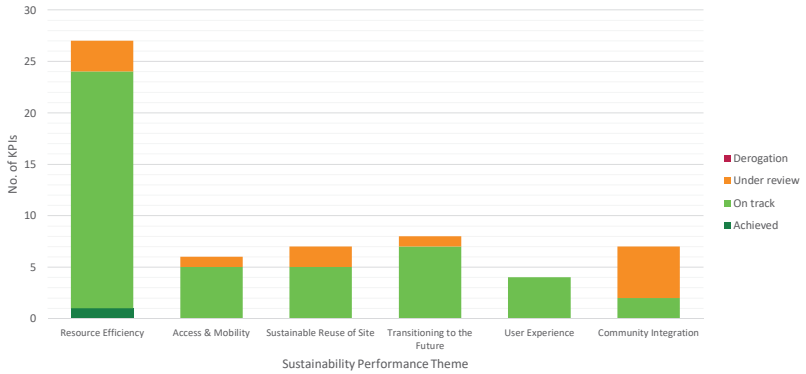
TPP Sustainability Performance Tracker - Progress Dashboard

Minimum performance standards

OVERALL PROJECT PERFORMANCE

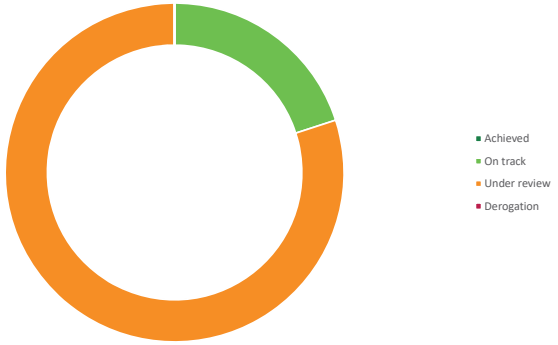


OVERARCHING THEME PERFORMANCE

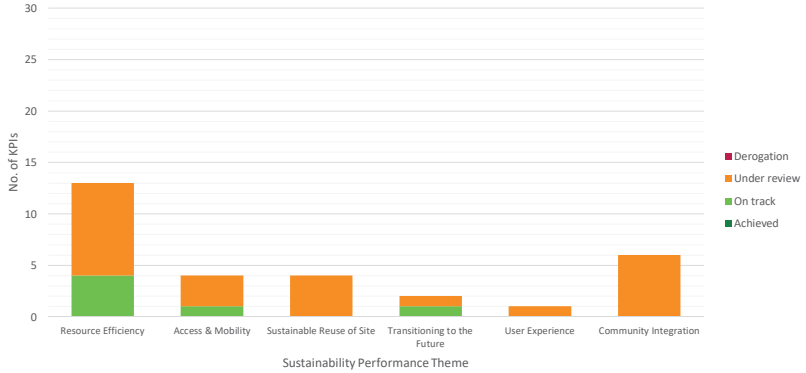


Stretch performance standards

OVERALL PROJECT PERFORMANCE



OVERARCHING THEME PERFORMANCE



The Peoples Project Sustainability Performance Tracker

BUROHAPPOLD ENGINEERING

Ref.	The Peoples Project Specific Key Performance Requirement	Five Capitals	RIBA Stage	Performance Indicator	TPP performance target: minimum	TPP performance target: stretch	Progress status: minimum	Progress status: aspirational	Related Assessment System	Ownership	Supporting Notes
RESOURCE EFFICIENCY											
RE1	**Operational energy consumption**										
RE1.1	To minimise primary energy consumption and associated CO_2 emissions	Natural capital	**Throughout project lifecycle**	% improvement over PartL 2A	Compliance with PartL 2A	10	**On track**	**Under review**	BREEAM New Construction 2018 (Ene 01)	BuroHappold / Principal contractor	**Design stage evidence required:** PartL 2A study **Construction stage evidence required:** PartL 2A study BuroHappold will be responsible for developing the design in line with the requirement. The contractor will be responsible for ensuring this performance standard is monitored during technical design and construction, and ultimately delivered in operation. **06/08/19** The current design is achieving a 6% improvement over PartL (based on WS2 Design inc. 2,000m2 of PV, as per cost plan). BHE have issued a DN to the client which sets out LZC options; integration of options 2 and 4 within this will meet and exceed the 10% performance performance improvement. Decision from Everton FC required.
RE1.2	Undertake operational energy modelling during the design stage following CIBSE TM54 method	Natural capital	**Throughout project lifecycle**	Consultant appointment and study output	-	Production of study and implementation of recommendations	**Not applicable**	**Under review**	BREEAM New Construction 2018 (Ene 01)	BuroHappold / Principal contractor	**Design stage evidence required:** tbc **Construction stage evidence required:** tbc
RE1.3	Provide a BEMS with monitoring infrastructure (i.e. all building energy meters connected) to allow building users to view, log and export energy consumption data by building zone and by end use.	Natural capital	**Throughout project lifecycle**	Engineering specifications and metering schematics	Embedded in specifications / witnessed at completion	-	**On track**	**Not applicable**	Industry best practice	BuroHappold / Principal contractor	**Design stage evidence required:** tender specification **Construction stage evidence required:** as built schematic and witnessing **08/06/19** Part B10 of the BHE Mechanical Specification Section B sets out the BMS requirements. The contractor is required tod esign in accordance with the specification and should make a cost allowance for this within their proposals for this.
RE1.4	Review actual in use performance against predicted energy performance from the TM54 study.	Natural capital	**7**	kWh/m2	-	Target to be set based on outcomes pf TM54 study	**Not applicable**	**Under review**	BREEAM New Construction 2018 (Ene 01)	BuroHappold / Principal contractor	**Design stage evidence required:** tbc **Construction stage evidence required:** tbc
RE2	**Low or zero carbon technologies**										
RE2.1	Undertake a feasibility study to inform the selection of the most appropriate low or zero carbon technologies	Natural capital	**2**	LZC feasibility study and engineering specification	Production of study	-	**Achieved**	**Not applicable**	BREEAM New Construction 2018 (Ene 04)	BuroHappold	**Design stage evidence required:** LZC feasibility study **Construction stage evidence required:** n/a **17.10.12** BHE presented LZC analysis as part of detailed energy workshop with Club **02/08/19** BHE issued further design note with developed PV options. Decision from Everton FC required.
RE2.2	Provide local energy metering for low or zero carbon technologies so onsite consumption and export can be easily determined and link this data to an energy management system	Natural capital	**Throughout project lifecycle**	Engineering specifications and metering schematics	Embedded in specifications / witnessed at completion	-	**On track**	**Not applicable**	BREEAM New Construction 2018 (Ene 01)	BuroHappold / Principal contractor	**Design stage evidence required:** tender specification **Construction stage evidence required:** as built schematic and witnessing **08/06/19** Part B10 of the BHE Mechanical Specification Section B sets out the BMS requirements. This covers seperating metering of renewable energy systems. The contractor is required to design in accordance with the specification and should make a cost allowance for this within their proposals for this.
RE2.3	Monitor energy performance of low or zero carbon technologies and achieve targeted on or near site energy generation after Year 1	Natural capital	**7**	% of total annual demand p.a.	5	15	**On track**	**On track**	BREEAM New Construction 2018 (Ene 01)	BuroHappold / Principal contractor / Client	**Design stage evidence required:** PartL 2A report **Construction stage evidence required:** PartL 2A report **12/09/19** As above, options have been presented by BuroHappold as to how both targets could be achieved. A client and project team decision is required in order inform the selected approach.
RE3	**Operational water consumption**										
RE3.1	Achieve reduction in operational water consumption through specification of sanitaryware in line with BREEAM 2018	Natural capital	**Throughout project lifecycle**	% reduction specified	25	40	**On track**	**On track**	BREEAM New Construction 2018 (Wat 01)	MEIS / Tricon / BuroHappold	**Design stage evidence required:** tender specification **Construction stage evidence required:** as built schematic and witnessing **08/08/19** Pattern advised that sanitaryware performance standards should be included in BuroHappold's sustainability specification: this has been included. The contractor will be required to install the sanitaryware as per these recommendations. The requirements are as follows: • WC: effective flush volume of 3.75 litres, • Wash-hand basin taps: 5 litres/min, • Showers: 6 litres/min, • Urinal: 1.5 litres/bowl/hour, • Kitchen tap (kitchenette): 6 litres/min, • Kitchen tap (pre-rinse spray nozzles only): 7.3 litres/min, • Commercial sized dishwashers: 5 litres/rack, • Commercial or industrial sized washing machines: 7.5 litres/kg. Specialist uses are excluded from assessment (e.g. player ice / hot baths). **08/08/19** BHE requested Tricon to confirm compliance with requirements above. Response outstanding (chased by BHE 12/09/19).
RE3.2	Undertake feasibility study and life cycle cost analysis to determine feasibility of specifying rainwater recycling	Natural capital	**2 - 3**	Feasibility study and engineering specification	Production of study	-	**Under review**	**Not applicable**	Industry best practice	BuroHappold	**Design stage evidence required:** rainwater feasibility study **Construction stage evidence required:** n/a If the Club wish to pursue this, BuroHappold will undertake a feasibility study and incorporate the findings of this within the design development. The contractor will be responsible for following these proposals.
RE3.3	Provide water metering sufficient to enable the water supply to be monitored and leaks detected	Natural capital	**Throughout project lifecycle**	Engineering specifications and metering schematics	Embedded in specifications / witnessed at completion	-	**On track**	**Not applicable**	BREEAM New Construction 2018 (Wat 02 & 03)	BuroHappold / Principal contractor	**Design stage evidence required:** tender specification **Construction stage evidence required:** as built schematic and witnessing **08/06/19** Part B10 of the BHE Mechanical Specification Section B sets out the BMS requirements. Monitoring water consumption within building required. Part B10.11.31 confirms meter of supply to water. The contractor is required tod esign in accordance with the specification and should make a cost allowance for this within their proposals for this.
RE4	**Operational waste generation**										
RE4.1	Establish effective waste management strategy based on principles of waste hierarchy	Natural capital	**2 - 3**	Strategy document	Production of study	-	**On track**	**Not applicable**	Industry best practice	BuroHappold / Principal contractor	**Design stage evidence required:** operational waste management strategy **Construction stage evidence required:** as built drawings and witnessing '**07/08/19** Strategy outlined in Section 3.9 (Harnessing the Environment) of BHE's RIBA Workstage Two report
RE4.2	Undertake supply chain audit to review the potential for removing single use plastics from operations	Natural capital	**3 - 5**	Design study	-	Production of study	**Not applicable**	**Under review**	Industry best practice	Client / BuroHappold	**01/07/19** Club confirmed during a review call that whilst they do not wish to start this modelling now it is important to them and should be reviewed and (possibly) commissioned at the next project stage.

Ref.	The Peoples Project Specific Key Performance Requirement	Five Capitals	RIBA Stage	Performance Indicator	TPP performance target: minimum	TPP performance target: stretch	Progress status: minimum	Progress status: aspirational	Related Assessment System	Ownership	Supporting Notes
RE4.3	Assess opportunities for improving the quality of recyclate generated within the stadium (e.g. 'streamlining' food and drink packaging)	Natural capital	3 - 5	Design study	-	Production of study	Not applicable	Under review	Industry best practice	Client / BuroHappold	**01/07/19** Club confirmed during a review call that whilst they do not wish to start this modelling now it is important to them and should be reviewed and (possibly) commissioned at the next project stage.
RE4.4	Commit waste contractors to monitoring and inspecting the final destination of sorted waste material	Natural capital	7	Tender documentation	-	Embedded in specifications / witnessed at completion	Not applicable	Under review	Industry best practice	Client	-
RE5	**Construction waste generation**										
RE5.1	Complete a pre-demolition audit of any existing buildings, structures or hard surfaces being considered for demolition.	Natural capital	Throughout project lifecycle	Design study	Production of study	-	On track	Not applicable	BREEAM New Construction 2018 (Wst 01)	MEIS / Pattern / Planit	**Design stage evidence required:** pre-demolition audit **Construction stage evidence required:** n/a **10/06/19** Pattern have undertaken a design study which sets out reuse options for the Hydrolic Tower **07/08/19** Refer to Planit hardworks package, outlines reuse of existing granite sets
RE5.2	Meet or improve upon the targeted construction resource efficiency benchmark	Natural capital	4 - 7	tonnes / 100m2	6.5	3.2	On track	On track	BREEAM New Construction 2018 (Wst 01)	Principal Contractor	**Design stage evidence required:** employers requirements **Construction stage evidence required:** resource management plan, monthly waste records 'Forms part of the Employer Requirements. A Resource Management Plan must be produced. This should aim to promote resource efficiency and to prevent illegal waste activities. Resource efficiency includes minimising waste at source and ensuring that clients, designers and principal contractors assess the use, reuse and recycling of materials and products on site and off site. The plan must define: a target benchmark for resource efficiency, procedures and commitments to minimise non-hazardous waste in line with the target benchmark, and procedures to minimise hazardous waste.
RE5.3	Meet the diversion from landfill benchmark	Natural capital	4 - 7	Percentage diversion from landfill (non-demolition, demolition, excavation)	80% / 90% / 95%	90% / 95% / 95%	On track	On track	BREEAM New Construction 2018 (Wst 01)	Principal Contractor	**Design stage evidence required:** employers requirements **Construction stage evidence required:** resource management plan, monthly waste records 'Forms part of the Employer Requirements. Sort waste materials into separate key waste groups either on-site or through a licensed contractor for recovery.
RE6	**Local sourcing of materials**										
RE6.1	The project must incorporate place-based solutions and contribute to the expansion of a regional economy rooted in sustainable practices, products, and services.	Financial capital	Throughout project lifecycle	% of the materials construction budget (by cost) sourced from within 150km boundary	15	30	Under review	Under review	Living Building Challenge 3.1 (Petal 13)	BuroHappold / Principal contractor	**Design stage evidence required:** cost plan with sourcing details (where known), employers requirements **Construction stage evidence required:** cost plan with sourcing details Contractors should outline what they believe is achievable in order to inform the development of an appropriate target. This feature excludes the extraction of raw materials; the percentage of materials relates to location of manufacturer from which products are ~~sourced~~
RE6.2	Identify opportunities for the reuse of materials from the Bramley Moor Dock site and associated demolition/earth works.	Natural capital	2 - 3	Design study	Production of study	-	Under review	Not applicable	Project specific opportunity	MEIS / Pattern / Planit-ie / BuroHappold	**Design stage evidence required:** production of study **Construction stage evidence required:** witnessing implementation of proposals The design team will identify opportunities associated with the substructure, superstructure, landscape and fit-out. The contractor will be required to follow recommendations of the design team.
RE7	**Responsible sourcing**										
RE7.1	% of timber used that is responsibly sourced	Natural capital	Throughout project lifecycle	%	100%	-	On track	Not applicable	BREEAM New Construction 2018 (Mat 03)	Pattern / MEIS / Planit-ie / Principal contractor / BuroHappold	**Design stage evidence required:** performance specification **Construction stage evidence required:** certification for timber products installed All timber and timber-based products used on the project must be legally harvested and traded, and sourced in accordance with the UK Government's Timber Procurement Policy (CPET, 5th Edition). Additionally, all timber used on the project site is 'legally harvested and traded', sourced in accordance with the UK Government's Timber Procurement Policy (CPET, 5th Edition). Site timber includes any timber used for site set-up (e.g. hoarding, signage, barriers) and temporary works (e.g. formwork). The contractor should provide evidence of how this has been met on previous projects and processes through which this will be monitored and achieved on TPP.
RE7.2	% of building materials have responsible sourcing certification covering key process and/or supply chain extraction process	Natural capital	Throughout project lifecycle	% by material cost	75%	95%	On track	Under review	BREEAM New Construction 2018 (Mat 03)	BuroHappold / MEIS / Planit-ie / Principal contractor	**Design stage evidence required:** performance specification **Construction stage evidence required:** certification for installed products Key building materials includes: Ceiling (including ceiling finishes), Door/windows, Floor (including floor finishes), Insulation, Internal partition/internal walls (including finishes), Roof (including roof finishes), Structure, primary and secondary (e.g. Structural frame, foundation/substructure), External wall (e.g cladding, lining, render, including finishes), Building service, and Hard landscaping Contractors should outline what they believe is achievable in order to inform the development of an appropriate target.
RE8	**Embodied carbon footprint**										
RE8.1	Calculate projects embodied carbon footprint	Natural capital	3	Design study	Production of study	-	On track	Not applicable	Living Building Challenge 3.1 (Petal 11)	BuroHappold	**Design stage evidence required:** analysis outputs **Construction stage evidence required:** n/a
RE8.2	Based on the outcomes of the study, identify a range of opportunities that may be feasibly explored in the subsequent stage of design development to reduce the embodied impact of the sub and super structure.	Natural capital	3	Design study	Production of study	-	On track	Not applicable	BREEAM New Construction 2018 (Mat 01)	BuroHappold / MEIS / Pattern / Planit-ie	**Design stage evidence required:** analysis outputs **Construction stage evidence required:** n/a
RE8.3	Desk based analysis to understand cost of a one-time carbon offset from an approved carbon offset provider for calculated project footprint	Natural capital	3	Design study	Production of study	One payment to offset embodied emissions	On track	Under review	Living Building Challenge 3.1 (Petal 11)	BuroHappold / Client	**Design stage evidence required:** analysis outputs **Construction stage evidence required:** n/a
RE9	**Commissioning**										
RE9.1	Prepare a schedule of commissioning and testing. The schedule identifies the appropriate standards for all commissioning activities to be conducted.	Natural capital	3, 7	Contractor tender returns	Embedded in specifications / witnessed at completion	-	On track	Not applicable	BREEAM New Construction 2018 (Man 04)	BuroHappold / Principal contractor	**Design stage evidence required:** performance specifications **Construction stage evidence required:** as built drawings and witnessing The schedule identifies and includes a suitable timescale for commissioning and re-commissioning of all complex and non-complex building services and control systems and for testing and inspecting building fabric. The purpose of this activity should be to optimise the operational performance of the stadium, driving down resource consumption on both match and non-match days.

Ref.	The Peoples Project Specific Key Performance Requirement	Five Capitals	RIBA Stage	Performance Indicator	TPP performance target: minimum	TPP performance target: stretch	Progress status: minimum	Progress status: aspirational	Related Assessment System	Ownership	Supporting Notes
RE9.2	Test all building services under match day and non match day conditions	Natural capital	6 - 7	Contractor tender returns and site inspection	Embedded in specifications / witnessed at completion	-	On track	Not applicable	BREEAM New Construction 2018 (Man 05)	Principal contractor	**Design stage evidence required:** performance specifications **Construction stage evidence required:** as built drawings and witnessing 'The purpose of this activity should be to optimise the operational performance of the stadium, driving down resource consumption on both match and non-match days.
RE9.3	Undertake seasonal commissioning	Natural capital	6 - 7	Contractor tender returns and site inspection	Embedded in specifications / witnessed at completion	-	On track	Not applicable	BREEAM New Construction 2018 (Man 05)	Principal contractor	**Design stage evidence required:** performance specifications **Construction stage evidence required:** as built drawings and witnessing 'The purpose of this activity should be to optimise the operational performance of the stadium, driving down resource consumption on both match and non-match days.
RE9.4	Re-commission systems as appropriate and incorporate any revisions in operating procedures into the operations and maintenance (O&M) manuals.	Natural capital	6 - 7	Contractor tender returns and site inspection	Embedded in specifications / witnessed at completion	-	On track	Not applicable	BREEAM New Construction 2018 (Man 05)	Principal contractor	**Design stage evidence required:** performance specifications **Construction stage evidence required:** as built drawings and witnessing Incorporate any revisions in operating procedures into the operations and maintenance (O&M) manuals. The purpose of this activity should be to optimise the operational performance of the stadium, driving down resource consumption on both match and non-match days.
RE10	**Handover and aftercare**										
RE10.1	Provide aftercare support to the building occupiers in line with requirements of BSRIA Soft Landings Framework.	Natural capital	7	Contractor tender returns and site inspection	Embedded in specifications / witnessed at completion	-	On track	Not applicable	BREEAM New Construction 2018 (Man 05)	Principal contractor	**Design stage evidence required:** performance specifications **Construction stage evidence required:** programme of aftercare activities Conduct initial aftercare review meetings, confirm that systems and controls are working in the initial period of aftercare, feedback and record all fine tuning, record user comments related to functionality and effectiveness, record comments about how well specific products or elements perform, consider any operating costs that have arisen that were not predicted and maintain records to inform
RE10.2	Provide enhanced handover measures to the client, this should include (but not limited to) a video library of controls, equipment etc.	Natural capital	6 - 7	Contractor tender returns and site inspection	Embedded in specifications / witnessed at completion	-	On track	Not applicable	Industry best practice	Principal contractor	**Design stage evidence required:** performance specifications **Construction stage evidence required:** video libary detailing operations and controls of key systems and equipment The contractor should set out and cost appropriately for enhanced handover measures. Evidence of where such initiatives have been delivered on other projects should be provided.
RE10.3	Prior to handover, develop two separate building user guides. One no. for technical users and one no. for non-technical users.	Natural capital	6 - 7	Contractor tender returns and site inspection	Embedded in specifications / witnessed at completion	-	On track	Not applicable	BREEAM New Construction 2018 (Man 05)	Principal contractor	**Design stage evidence required:** performance specifications **Construction stage evidence required:** non-technical building user guide, technical building user guide This is in addition to the standard building user guides created for the purpose of BREEAM and is intended to be an easily accessible, engaging and understandable document for non-technical building users
RE10.4	During the first 12 months of occupation monitor and evaluate a range of environmental measures, reporting back after year one. Identify gaps between design intent and in-use performance.	Natural capital	7	Consultant appointment	Embedded in specifications / witnessed at completion	-	On track	Not applicable	BREEAM New Construction 2018 (Man 05) / WELL Communities (Community, POC)	Client / appointed consultant	**Design stage evidence required:** appointment of consultant **Construction stage evidence required:** POE study outputs The POE should cover resource use and related issues. Where appropriate, indoor environmental quality should also be gathered.
ACCESS & MOBILITY											
AM1	**Sustainable mobility**										
AM1.1	Develop a travel plan (staff focused) and transport strategy (match day focused) based on a site-specific travel assessment or statement	Natural capital	2 - 3	Production of travel plan	Production of study and integration of recommendations	-	On track	Not applicable	BREEAM New Construction 2018 (Tra 01)	Mott MacDonald	**Design stage evidence required:** transport strategy **Construction stage evidence required:** witnessing of installed recommendations
AM1.2	Develop a sustainable transport information strategy which delivers interventions focused on encouraging staff, spectators and visitors to choose sustainable modes of travel	Natural capital	6 - 7	Strategy identified and incorporated within tender submission	Production of transport information strategy	-	Under review	Not applicable	BREEAM New Construction 2018 (Tra 02)	Client	**Design stage evidence required:** transport strategy **Construction stage evidence required:** witnessing of installed recommendations The transport information strategy should seek to encourage and incentivise (as appropriate) both low carbon (e.g. car sharing) and zero carbon (e.g. active) travel measures. Providing transparency and information on carbon emissions associated with travel choices
AM1.3	Provide electric vehicle recharging stations of a minimum of 3kw	Natural capital	Throughout project lifecycle	% of total car parking capacity that are dedicated for electric vehicles	5	10	On track	Under review	BREEAM New Construction 2018 (Tra 02)	BuroHappold	**Design stage evidence required:** performance specification, design drawings **Construction stage evidence required:** as built drawings, witnessing of installed infrastructure **01/04/19** £120k budget included in latest cost plan for EV charging points
AM2	**Active travel choices**										
AM2.1	Provide secure and covered bicycle parking within an accessible distance of the building entrance	Human capital	Throughout project lifecycle	% cycle spaces based on no. of non-match day staff	5	10	On track	On track	FitWel (Building Access, 2.3) / BREEAM New Construction 2018 (Tra 02)	MEIS / Planit-ie / Motts	**Design stage evidence required:** performance specification, design drawings **Construction stage evidence required:** as built drawings, witnessing of installed cycle spaces
AM2.2	Provide at least compliant cyclists' facilities for the building users (Showers, Changing facilities, Lockers, Drying spaces)	Human capital	Throughout project lifecycle	No. of facilities provided	2	5	On track	Under review	FitWel (Building Access, 2.4)	MEIS / Planit-ie / Motts	**Design stage evidence required:** Design and Access Statement **Construction stage evidence required:** as built drawings, witnessing of installed facilities '**08/07/19** The Club have confirmed that staff will have access to two changing rooms within the stadium, providing access to wash and drying facilities
AM3	**Inclusive design**										
AM3.1	Meet and exceed good practice to deliver equality of experience	Social capital	Throughout project lifecycle	Design strategy	Production of study and integration of recommendations	-	On track	Not applicable	Industry best practice	BuroHappold / MEIS / Planit-ie	**Design stage evidence required:** inclusive design strategy, drawings **Construction stage evidence required:** as built drawings, witnessing of installed recommendations **07/08/19** Strategy outlined in Section 3.5 (The Peoples Club) of BHE's RIBA Workstage Two report.
AM3.2	Develop and implement an operational and management strategy that supports the objectives of the Equality Act 2010 and Premier League Equality Standard	Social capital	7	Equality impact assessment	-	Production of study and integration of recommendations	Not applicable	Under review	Industry leading practice	Client / BuroHappold	-
SUSTAINABLE REUSE OF SITE											
SR1	**Ecological protection and enhancement**										

Ref.	The Peoples Project Specific Key Performance Requirement	Five Capitals	RIBA Stage	Performance Indicator	TPP performance target: minimum	TPP performance target: stretch	Progress status: minimum	Progress status: aspirational	Related Assessment System	Ownership	Supporting Notes
SR1.1	Prioritise the specification of native plant species and/or pollinating species	Natural capital	**Throughout project lifecycle**	% of planting species that are native and/or pollinating species	50	75	**On track**	**Under review**	Industry best practice	Planit-ie / Ecologist	**Design stage evidence required:** soft landscape works plan **Construction stage evidence required:** as built drawings, witnessing on-site '07/08/19 Softworks plan has specified: Acer pseudoplatanus (non-native but naturalised through GB woodlands, pollinator), Alnus cordata (non-native), Pinus sylvestis (native), Salix alba (native), Stipa tenuissma (non-native, non-pollinator), Karl Foerster (unknown, non-pollinator), Helictotrichon sempervirens (native, non-pollinator) 20/09/19 Softworks plan updated - 50% of species native
SR1.2	Adopt a biodiversity net gain approach through habitat creation or enhancement after avoiding or mitigating harm as far as possible	Natural capital	**Throughout project lifecycle**	Change in site biodiversity value	Production of net gain study to assess impact and opportunities	Demonstrate net gain	**Under review**	**Under review**	Industry best practice / DEFRA Net Gain consultation	Ecologist	**Design stage evidence required:** biodiversity net gain strategy including recommendations **Construction stage evidence required:** as built drawings, witnessing on-site
SR1.3	Develop and adopt an external management and maintenance plan (20 year design life)	Natural capital	**7**	Strategy document	-	Production of strategy document	**Not applicable**	**Under review**	Industry best practice	Client	**Design stage evidence required:** n/a **Construction stage evidence required:** landscape management and maintenance plan
SR2	**Blue and green infrastructure**										
SR2.1	A narrative describes the planting and placement of streetscape greenery along roadways within the project boundary	Human capital	**3 - 4**	Design narrative	Production of design narrative	-	**On track**	**Not applicable**	WELL Communities (Mind BLT, SCE)	BuroHappold / MEIS / Planit-ie	**Design stage evidence required:** design strategy **Construction stage evidence required:** as built drawings, witnessing on-site '**07/08/19** Refer to softworks plan. All planting is placed within the entrance to fan plaza.
SR2.2	A point-by-point narrative demonstrates the designation of scenic views within the project boundary	Human capital	**3 - 4**	Design narrative	Production of design narrative	-	**On track**	**Not applicable**	WELL Communities (Mind BLT, SCE)	BuroHappold / MEIS / Planit-ie	**Design stage evidence required:** design strategy **Construction stage evidence required:** as built drawings, witnessing on-site
SR3	**Heritage**										
SR3.1	Ensure the historic value of the site is retained throughout the design development	Manufactured capital	**Throughout project lifecycle**	Design narrative	Production of design narrative	-	**On track**	**Not applicable**	Industry best practice	MEIS / Planit-ie / KMH	**Design stage evidence required:** design strategy **Construction stage evidence required:** as built drawings, witnessing on-site '**10/06/19** Pattern issued feasibility report for reuse of Hydrolic Tower **07/08/19** Refer to hardworks plan. Reclaimed sets are wonven throughout fan plaza.
SR3.2	Ensure the historic value of the site is protected during the construction process	Manufactured capital	**4 - 7**	Design narrative	Embedded in specifications / witnessed at completion	-	**On track**	**Not applicable**	Industry best practice	MEIS / Planit-ie / KMH / Principal Contractor	**Design stage evidence required:** design strategy **Construction stage evidence required:** construction strategy, witnessing on-site Contractors should put forward their proposals to achieve this KPI.
SR3.3	Develop communication material which demonstrates to external stakeholders how SR3.1 and SR3.2 have been integrated	Manufactured capital	**Throughout project lifecycle**	Design narrative	-	Production and disemination of information	**Not applicable**	**Under review**	Industry best practice	MEIS / Planit-ie / KMH	-
SR4	**Earthworks**										
SR4.1	Adopt measures which minimise the embodied impacts associated with the dock infill	Natural capital	**Throughout project lifecycle**	Design narrative	Embedded in specifications / witnessed at completion	-	**On track**	**Not applicable**	Industry best practice	BuroHappold	**Design stage evidence required:** design strategy **Construction stage evidence required:** as built drawings, witnessing on-site **07/08/19** Based on the RIBA WS3 proposals existing dock deposits will be left in place, capped with a separation geotextile and marine-won sand fill placed on top. This strategy will avoid the need to dredge and dispose of 50,000m3 of dock deposits, reduce the total volume of fill by approximately 25,000m3 and reduce marine vehicular movements
TRANSITIONING TO THE FUTURE											
TF1	**Future climate ready**										
TF1.1	Based on analysis of the public realm, develop and implement interventions to ensure pedestrian comfort	Social capital	**2 - 3**	Design study	Production of study and integration of recommendations	-	**On track**	**Not applicable**	Industry best practice	BuroHappold	**Design stage evidence required:** design strategy **Construction stage evidence required:** as built drawings, witnessing on-site Wind tunnel testing is being undertaken to inform this.
TF1.2	Maximise asset resilience and value through consideration of the likely impacts of future climate change on the building fabric	Manufactured capital	**2 - 3**	Design study	Production of study and integration of recommendations	-	**Under review**	**Not applicable**	BREEAM New Construction 2018 (Wst 05)	BuroHappold	**Design stage evidence required:** cliamte resilience analysis **Construction stage evidence required:** as built drawings, witnessing on-site Undertake a study during the design development and integrate the findings within the performance specification. The contractor will be required to develop the scheme in line with these recommendations.
TF1.3	Ensure resilience to future sea level rises across the projects design life	Manufactured capital	**2 - 3**	Design life (years) applied to the flood risk calculations and interventions	100	-	**On track**	**Not applicable**	BREEAM New Construction 2018 (Wst 05)	BuroHappold	**Design stage evidence required:** design study **Construction stage evidence required:** as built drawings, witnessing on-site **07/08/19** Based on the RIBA WS3 proposals site levels will be raised within the footprint of the stadium and surrounding access routes to provide protection against flooding during extreme storm events. River Mersey flood levels for 2115 have been selected to account for close to 100 years of sea level rise. Beyond 2115 adaptation measures will be possible to mitigate flood risk into the future.
TF2	**Monitoring of construction site impacts**										
TF2.1	Establish process for monitoring site energy use, water consumption and transport emissions (associated with transport of materials and site workforce)	Natural capital	**4 - 7**	Contractor tender returns and site inspection	Embedded in specifications / witnessed on site	-	**On track**	**Not applicable**	BREEAM New Construction 2018 (Man 03)	Principal contractor	**Design stage evidence required:** employers requirements **Construction stage evidence required**: monthly reports Energy: total $kgCO_2$/project value | Water: m3 used | Transport: km travelled and $kgCO_2$-eq
TF2.2	Report energy use, water use and transport emissions on site, benchmarking these against industry best practice	Natural capital	**4 - 7**	Contractor tender returns and site inspection	Embedded in specifications / witnessed on site	-	**On track**	**Not applicable**	BREEAM New Construction 2018 (Man 03) + industry best practice	Principal contractor	**Design stage evidence required:** employers requirements **Construction stage evidence required:** monthly reports benchmarked against industry best practice

Ref.	The Peoples Project Specific Key Performance Requirement	Five Capitals	RIBA Stage	Performance Indicator	TPP performance target: minimum	TPP performance target: stretch	Progress status: minimum	Progress status: aspirational	Related Assessment System	Ownership	Supporting Notes
TF2.3	The principal contractor ensures that site operatives are trained during the site induction regarding their role in reducing energy and water consumption and carbon emissions	Natural capital	4 - 7	Contractor tender returns and site inspection	Embedded in specifications / witnessed on site	-	On track	Not applicable	Industry best practice	Principal contractor	**Design stage evidence required:** employers requirements **Construction stage evidence required:** record of training Training should cover: minimising impacts (safety, disruption) arising from vehicles approaching and leaving the development, access routes and operational proceedures (e.g. loading/unloading), pollution management, site tidiness, health and wellbeing of site operatives and security processes
TF3	**Construction site management**										
TF3.1	Minimise impacts of construction on local community and receiving environment	Natural capital	4 - 7	Achieved Considerate Construction Score	35 - 39 (7 points min. in each section)	40 (7 points min. in each section)	On track	On track	Industry best practice	Principal contractor	**Design stage evidence required:** employers requirements **Construction stage evidence required:** certificate
TF3.2	Identify opportunities for innovative use of technology during the construction process to deliver environmental, social and economic opportunities	Manufactured capital	4 - 7	Contractor tender returns and site inspection	Request for contractors to put forward proposals embedded in specifications	Implementation and witnessing on-site	On track	Under review	Industry best practice	Principal contractor	**Design stage evidence required:** employers requirements **Construction stage evidence required:** proposals put forward by contractor, implementation (where commissioned)
USER EXPERIENCE											
UE1	**Activated public realm**										
UE1.1	Set out proposals for how the project aims to activate the public realm in different modes of operation	Social capital	2 - 3	Design study	Production of design narrative	-	On track	Not applicable	WELL Communities (Fitness PED, Community CEL)	MEIS / Planit-ie	**Design stage evidence required:** design study, drawings demonstrating incorporation **Construction stage evidence required:** as built drawings, site witnessing The strategy should identify strategies on match days, non-match days and other events and the key end users. Strategies should aim to enhance the user experience as well as add social value for the local community through the creation of a year round asset.
UE2	**Safety and security**										
UE2.1	Identification and mitigation of security risks in line with the principles of Secure by Design and Crime Prevention Through Architectural Design	Social capital	Throughout project lifecycle	Threat risk assessment and security strategy, integration of recommendations	Production of study and integration of recommendations	-	On track	Not applicable	BREEAM New Construction 2018 (Hea 06)	BuroHappold / MEIS	**Design stage evidence required:** design study, drawings demonstrating incorporation **Construction stage evidence required:** as built drawings, site witnessing BuroHappold will develop the strategy and design in line with this requirement. The contractor will be responsible for ensuring this performance standard is monitored during technical design and construction, and ultimately delivered in operation.
UE3	**Embracing technology**										
UE3.1	Plan for highly accessible and flexible technology infrastructure and systems to enable client developed community and spectator digitial services	Social capital	2 - 3	ICT strategy	Incorporation with basis of design report	-	On track	Not applicable	Wired Score (assessment parameter 17) / WELL Communities (DIG)	BuroHappold	**Design stage evidence required:** design study, performance specifications **Construction stage evidence required:** as built drawings, site witnessing Digital platforms should enhance engagement amongst the whole community and their entire journey, underpin the venue and club operations in creating and supporting safe and trouble free events and adapts as people and technology change. BuroHappold will embed these in the design development
UE3.2	Demonstrate how the proposed technology strategy can support the Club in encouraging pro-environmental sustainable behaviour change within fans	Natural capital	2 - 3	ICT strategy	Production of opportunities study	-	On track	Not applicable	Industry leading practice	BuroHappold	**Design stage evidence required:** design study, performance specifications **Construction stage evidence required:** as built drawings, site witnessing BuroHappold will be responsible for developing the design in line with the requirement. The contractor will be responsible for ensuring this performance standard is monitored during technical design and construction, and ultimately delivered in operation.
UE3.3	Demonstrate consideration of, and measures taken to mitigate, lifecycle impacts associated with proposed technology systems	Natural capital	2 - 3	ICT strategy	-	Incorporation of requirements in design specifications	Not applicable	Under review	Industry leading practice	BuroHappold	**Design stage evidence required:** design study, performance specifications **Construction stage evidence required:** as built drawings, site witnessing BuroHappold will be responsible for developing the design in line with the requirement. The contractor will be responsible for ensuring this performance standard is monitored during technical design and construction, and ultimately delivered in operation.
COMMUNITY INTEGRATION											
CI1	**Communications and engagement**										
CI1.1	Through innovative approaches to the site hoardings use visual communication to raise awareness of project sustainability initiatives	Social capital	4 - 7	Site inspection	Embedded in specifications / witnessed on site	-	On track	Not applicable	Industry best practice	Client / Principal contractor	**Design stage evidence required:** design study, performance specifications **Construction stage evidence required:** as built drawings, site witnessing
CI1.2	Identify key opportunities within the stadium to create point of use signage encouraging pro-environmental behaviour changes	Social capital	Throughout project lifecycle	Design & Access Statement	Embedded in specifications / witnessed on site	-	On track	Not applicable	Industry best practice	Pattern / MEIS	**Design stage evidence required:** design study, performance specifications **Construction stage evidence required:** as built drawings, site witnessing
CI2	**Research and development**										
CI2.1	Through partnerships with local institutions, use the stadium development as an opportunity to undertake research into a relevant and novel issue linked to building performance	Social capital	Throughout project lifecycle	Partnership and commissioned study	-	Commission of study	Not applicable	Under review	Project specific	Client	**Design stage evidence required:** commitment from Club **Construction stage evidence required:** formalised partnership, study outputs
CI3	**Local economy**										
CI3.1	Number of construction employees from local areas	Social capital	4 - 7	TBC		TBC	Under review	Under review	Industry best practice (national social value acts)	Client / G&T	Contractors are asked to outline their proposals for how this KPI will be supported. An appropriate target will be negotiated between the Club and contractor based on responses.
CI3.2	Number of apprenticeships created through construction contract	Social capital	4 - 7	TBC		TBC	Under review	Under review	Industry best practice (national social value acts)	Client / G&T	Contractors are asked to outline their proposals for how this KPI will be supported. An appropriate target will be negotiated between the Club and contractor based on responses.
CI3.3	Number of community site visits facilitated (during construction)	Social capital	4 - 7	TBC		TBC	Under review	Under review	Industry best practice (national social value acts)	Client / G&T	Contractors are asked to outline their proposals for how this KPI will be supported. An appropriate target will be negotiated between the Club and contractor based on responses.

Ref.	The Peoples Project Specific Key Performance Requirement	Five Capitals	RIBA Stage	Performance Indicator	TPP performance target: minimum	TPP performance target: stretch	Progress status: minimum	Progress status: aspirational	Related Assessment System	Ownership	Supporting Notes
CI3.4	Where possible, prioritise the local suppliers when procuring goods to be bought / sold in the stadium	Social capital	4 - 7	TBC		TBC	Under review	Under review	Industry best practice (national social value acts)	Client / G&T	Contractors are asked to outline their proposals for how this KPI will be supported. An appropriate target will be negotiated between the Club and contractor based on responses.
CI3.5	Number of apprenticeships created through Club operations	Social capital	4 - 7	TBC		TBC	Under review	Under review	Industry best practice (national social value acts)	Client / G&T	Contractors are asked to outline their proposals for how this KPI will be supported. An appropriate target will be negotiated between the Club and contractor based on responses.

The Peoples Project Sustainability Performance Tracker

BUROHAPPOLD ENGINEERING

Project Name	The Peoples Project
Project Location	Liverpool, UK
Project Stage	RIBA Workstage Three

Revision log

Date	Authour	Details
29/08/2019	FA	RE 6.2 Local sourcing of materials: requirement for contractors to priroitise local sourcing acknowledged to be adding little value without quantifable target. Removed.
29/08/2019	FA	RE8 Material life cycle assessment: Requirement removed. Due to fast paced design development LCA of sub and super structure options was undertaken. Undertaking the analysis at this points offers little value as strutural design developed.
29/08/2019	FA	AM1: titled changed from "Public transport network" to "Sustainable mobility"
29/08/2019	FA	AM1.2: the 'sustainable transport information strategy' will not be produced until RIBA Workstage 6 or 7. A consultant has not yet been appointed to do this. Ownership amended to Club. RIBA Stage amended to 6/7 (from 3).
29/08/2019	FA	AM1.3: requirements integrated within AM1.2. AM1.3 requirements removed.
29/08/2019	FA	AM2.3: requirements integrated within AM1.2. AM2.3 requirements removed.
29/08/2019	FA	CI2.3: removed and incorporated within AM1.2.
12/09/2019	FA	RE6.1 Local sourcing of materials: target amended (minimum: 25% by cost from with 50km | stretch: additional 30% by cost from within 100km) based on review with team. Requirement highly dependant on local supply chain being able to provide project requirements.
12/09/2019	FA	RE6.2 Local sourcing of materials: reuse of materials from Goodison Park removed. Acknowledged reuse of materials is challenging due to project programme. Fit out opportunities are limited by quality of stripped out materials.
12/09/2019	FA	SR1.2 Ecological protection and enhancement: biodiversity strategy 2020 requirement rmoved, opportunities are limited by exposured nature of site and outcomes of surveys undertaken. Native species will be prioritised through SR1.1.
12/09/2019	FA	TF2 Resilient infrastructure: this requirement has been removed. Life safety and match day resilience will be incorporated as part of the project requirements. Sustainability is not a key driver.
12/09/2019	FA	TF5 Ensuring legacy: requirement removed. This focused on 'engaging fans with the future of the site'. Key developments within the BMD site such as the museum will do this but it is thought that there is limited further opportunity for the design team to influence this.
16/09/2019	FA	UE3.4 Identify opportunities to encourage dwell times and commercial revenue on match days: this requirement has been removed. This is focused on digital services rather than infrastructure, creating such opportuinities will be the clubs responsibility and it is believed the scope of the issue is best addressed elsewhere.
16/09/2019	FA	UE3.5 Identify opportunities for implementing intelligent BMS to improve operational efficiency and reduced energy consumption: requirement removed. It is believed this is addressed within RE1.3.

Appendix C Selection of Key Performance Indicators

KPI Ref.	Justification for inclusion	Proposed minimum performance target	Proposed aspirational performance target	Source of performance target
RE1 Operational energy consumption	The intent of this performance target is to minimise operational energy demand, primary energy consumption and CO_2 emissions. Managing energy in use has been cited as a key priority of the Club and has a vital role to play in addressing the climate emergency. Beyond complying with PartL 2A, effective management of energy in use requires a robust management platform. An energy management system will support a robust process of continual performance improvement. To further support this aspiration, undertaking dynamic thermal modelling (TM54) to further reduce the potential building performance gap has been highlighted as an opportunity.	Compliance with PartL 2A	10% improvement over PartL 2A	BREEAM New Construction 2018 (Ene 01)
		-	Production of TM54 study and implementation of recommendations	BREEAM New Construction 2018 (Ene 01)
		Specification of BEMS infrastructure to allow building users to view, log and export energy consumption data by building zone and by end use.	-	Industry best practice
		-	Energy use (kWh/m2) benchmarked against TM54 study	BREEAM New Construction 2018 (Ene 01)
RE2 Low or zero carbon technologies	Harnessing the environment local to the site has been a key priority of the Club. This performance standard aims to ensure that the project team identify and embed low and zero carbon (LZC) opportunities afforded by the sites unique context in the design development. Many buildings with LZC technologies do not have local meters installed by contractors, to enable better energy management local metering is required.	Production of LZC study	-	BREEAM New Construction 2018 (Ene 04)
		Provide local energy metering for low or zero carbon technologies	-	BREEAM New Construction 2018 (Ene 01)
		5 % of total annual demand p.a.	10 % of total annual demand p.a.	BREEAM New Construction 2018 (Ene 01)
RE3 Operational water consumption	Water is a precious resource. The intent of this performance target is to reduce the consumption of potable water for sanitary use in new buildings through the use of water efficient components and water recycling systems. BREEAM has established is a widely understood methodology for achieving this and as such has been adopted. Monitoring and leak detection will be key in supporting efforts to minimise potable water wastage.	25% reduction in operational water consumption through specification of sanitaryware in line with BREEAM 2018	40% reduction in operational water consumption through specification of sanitaryware in line with BREEAM 2018	BREEAM New Construction 2018 (Wat 01)
		Production of rainwater harvesting feasibility study	-	Industry best practice
		Provide water metering sufficient to enable the water supply to be monitored and leaks detected	-	BREEAM New Construction 2018 (Wat 02 & 03)
RE4 Operational waste generation	Stadiums are challenging waste environments given the significant volume of waste that is generated in relatively short periods of time. An operational waste management strategy will ensure efficient stadium operations but further facilities and management strategies that encourage recycling. The Club has identified their ability to control waste streams and influence the supply chain, a series of aspirations to engage the supply chain with the principles of the waste hierarchy and circular economy have been identified.	Establish effective waste management strategy based on principles of waste hierarchy	-	Industry best practice
		-	Undertake supply chain audit to review the potential for removing single use plastics from operations	Industry best practice
		-	Assess opportunities for improving the quality of recyclate generated within the stadium (e.g. 'streamlining' food and drink packaging)	Industry best practice
		-	Commit waste contractors to monitoring and inspecting the final destination of sorted waste material	Industry best practice
RE5 Construction waste generation	Alongside resource efficiency, embodied impact was identified by the client team as one of the highest priority issues. The construction sector is one of the largest contributors to waste generation in the UK, Drawing on the guidance produced BREEAM, the intent of this credit is to reduce construction waste by encouraging reuse, recovery and best practice waste management practices to minimise waste going to landfill.	Complete a pre-demolition audit of any existing buildings, structures or hard surfaces being considered for demolition.	-	BREEAM New Construction 2018 (Wst 01)
		Construction resource efficiency benchmark 6.5 tonnes / 100m2	Construction resource efficiency benchmark 3.2 tonnes / 100m2	BREEAM New Construction 2018 (Wst 01)
		Percentage diversion from landfill (80% non-demolition, 90% demolition, 95% excavation)	Percentage diversion from landfill (90% non-demolition, 95% demolition, 95% excavation)	BREEAM New Construction 2018 (Wst 01)
RE6 Local sourcing of materials	In addition to resource efficiency, social value is a key outcome for the Club. The intent of this credit to support efforts to minimise supply chain miles whilst incorporating place-based solutions that contribute to the expansion of a regional economy. Goodison Park is viewed as an asset and, where possible, opportunities for the reuse of material should be identified and embedded.	15% of materials (by cost) sourced from within a 150km	30% of materials (by cost) sourced from within a 100km	Living Building Challenge 3.1 (Petal 13)
		Identify opportunities for the reuse of materials from the Bramley Moor Dock site and associated demolition/earth works	-	Project specific opportunity
RE7 Responsible sourcing	Construction projects are characterised by complex supply chains. Each component selected has impacts (social, environmental, economic), positive and negative, across their lifetime (extraction, processing, manufacture). In line with the values of the Club and Everton in the community, this performance requirement aims to promote the selection of products with lower negative impacts.	100% of timber used on site is responsibly sourced	-	BREEAM New Construction 2018 (Mat 03)
		75% of materials specified have responsible sourcing certification covering key process and/or supply chain extraction process	95% of materials specified have responsible sourcing certification covering key process and/or supply chain extraction process	BREEAM New Construction 2018 (Mat 03)

KPI Ref.	Justification for inclusion	Proposed minimum performance target	Proposed aspirational performance target	Source of performance target
RE8 Embodied carbon footprint	The carbon footprint of construction projects are significant and complex. Improvements in operational energy efficiency mean that the carbon embodied within building materials is of increasing significance. This has been highlighted as an issue of importance to the Club and as such this performance requirement aims to identify opportunities for minimising this. The requirement aims to bring transparency to the projects embodied carbon footprint, strategies that may be employed to reduce this further and provide the Club with the information necessary to decide whether this impact is to be offset.	Calculate projects embodied carbon footprint	-	Living Building Challenge 3.1 (Petal 11)
		Identify a range of opportunities that may be feasibly explored in the subsequent stage of design development to reduce the embodied impact of the sub and super structure.	-	BREEAM New Construction 2018 (Mat 01)
		Calculate cost of a one-time carbon offset	Pay for a one-time carbon offset	Living Building Challenge 3.1 (Petal 11)
RE9 Commissioning	The 'performance gap' – the gap between designed and actual performance – is well documented. Commissioning has significant role to play in delivering those resource efficiency objectives set out above. The intent of this requirement is to ensure appropriate commissioning of the installed services.	Prepare a schedule of commissioning and testing.	-	BREEAM New Construction 2018 (Man 04)
		Test all building services under match day and non match day conditions	-	BREEAM New Construction 2018 (Man 05)
		Undertake seasonal commissioning	-	BREEAM New Construction 2018 (Man 05)
		Re-commission systems as appropriate		BREEAM New Construction 2018 (Man 05)
RE10 Handover and aftercare	The 'performance gap' – the gap between designed and actual performance – is well documented. A key factor contributing to this is the way in which building occupants actually use buildings and their understanding of key systems. Through providing aftercare and a library of materials this performance requirement aims to address the contribution of such challenges to the energy performance gaps.	Provide aftercare support to the building occupiers in line with requirements of BSRIA Soft Landings Framework.	-	BREEAM New Construction 2018 (Man 05)
		Provide enhanced handover measures to the client, this should include (but not limited to) a video library of controls, equipment etc.	-	Industry best practice
		Prior to handover, develop two separate building user guides.	-	BREEAM New Construction 2018 (Man 05)
		During the first 12 months of occupation monitor and evaluate a range of environmental measures, reporting back after year one.	-	BREEAM New Construction 2018 (Man 05) / WELL Communities (Community, POC)
AM1 Public transport network	On match days, thousands of people will travel to the site and as such transport was identified by the Club to be of significant importance. The focus of the performance requirement is to ensure that opportunities for encouraging sustainable modes of travel and safe access for all is embedded within the design. This focuses on the interventions within the control of the Club.	Develop a travel plan based on a site-specific travel assessment or statement	-	BREEAM New Construction 2018 (Tra 01)
		Develop a sustainable transport information strategy		BREEAM New Construction 2018 (Tra 02)
		5% of total car parking capacity that are dedicated for electric vehicles	10 % of total car parking capacity that are dedicated for electric vehicles	BREEAM New Construction 2018 (Tra 02)
AM2 Active travel choices	TPP will have a permanent staff base. Whilst the vast majority of fans may not travel by bike, those using the site daily may. As such, to encourage sustainable and healthy modes of travel this performance requirement aims to provide appropriate cycle storage and facilities.	5 % cycle spaces based on no. of non-match day staff	10 % cycle spaces based on no. of non-match day staff	FitWel (Building Access, 2.3) / BREEAM New Construction 2018 (Tra 02)
		2 no. cyclist facilities provided	5 no. cyclist facilities provided	FitWel (Building Access, 2.4)
AM3 Inclusive design	Inclusive design was ranked among the top priorities of the Club and indeed is firmly embedded within their principles. Inclusive design is a complex topic and does not solely focus on the needs of those with physical disabilities but a diverse range of inclusive needs.	Meet and exceed good practice to deliver equality of experience	-	Industry best practice
		-	Develop and implement an operational and management strategy that supports the objectives of the Equality Act 2010 and Premier League Equality Standard	Industry leading practice
SR1 Ecological protection and enhancement	The site currently has relatively low terrestrial ecological value, however the existing dock may provide a habitat for a number of marine and insect species. The intent of this requirement is to ensure that landscaping proposals adopt best practice approaches and that opportunities to achieve net gain are explored. Longer term management will be necessary to ensure the protection of habitats created.	50% of planting which native or a pollinator	75% of planting which native or a pollinator	Industry best practice
		Production of net gain study to assess impact and opportunities	Achieve net gain	Industry best practice / DEFRA Net Gain consultation
		-	Develop and adopt an external management and maintenance plan (20 year design life)	Industry best practice
SR2 Blue and green infrastructure	The sites unique context offers (i.e. connection to the Mersey) offers potentially restorative qualities which can be further supported by the integration of greenery. The intent of this performance requirement is to ensure that these opportunities are identified and embedded within the design.	A narrative describes the planting and placement of streetscape greenery along roadways within the project boundary	-	WELL Communities (Mind BLT, SCE)
		A point-by-point narrative demonstrates the designation of scenic views within the project boundary.	-	WELL Communities (Mind BLT, SCE)
SR3 Heritage	The site is situated within a UNESCO World Heritage Site. As such, heritage is of the up most importance. The heritage value must be retained within the design proposals and features should be protected during construction.	Ensure the historic value of the site is retained throughout the design	-	Industry best practice

KPI Ref.	Justification for inclusion	Proposed minimum performance target	Proposed aspirational performance target	Source of performance target
	The sites heritage will be of significance to many local stakeholders and efforts to protect this should be clearly articulated.	development.		
		Ensure the historic value of the site is protected during the construction process.	-	Industry best practice
		-	Develop communication material which demonstrates to external stakeholders how SR3.1 and SR3.2 have been integrated	Industry best practice
SR4 Earthworks	Unique to the project context is the dock infill. This could have potentially significant embodied impacts and as such the intent of this performance requirement is to minimise these as far possible.	Adopt measures which minimise the embodied impacts associated with the dock infill.	-	Industry best practice
TF1 Future climate ready	The impacts of a changing climate are well documented: increasing temperatures, rising sea levels, more frequent and severe weather events. Ensuring the development is resilient to the anticipated changes in future climate is key, both to minimise risk, maximise safety, enhance user experience as well as reduce the need for maintenance and replacement (and associated resource use).	Based on analysis of the public realm, develop and implement interventions to ensure pedestrian comfort	-	Industry best practice
		Maximise asset resilience and value through consideration of the likely impacts of future climate change on the building fabric	-	BREEAM New Construction 2018 (Wst 05)
		100 year design life applied to the flood risk calculations and interventions	-	BREEAM New Construction 2018 (Wst 05)
TF2 Monitoring of construction site impacts	Construction sites utilise significant amounts of natural resources. The aim of this performance requirement is to ensure that resource use associated with site activities is accurately and transparently collected and reported. Benchmarking against industry best practice will incentivise a process of continuous performance improvement.	Establish process for monitoring site energy use, water consumption and transport emissions	-	BREEAM New Construction 2018 (Man 03)
		Report energy use, water use and transport emissions on site, benchmarking these against industry best practice	-	BREEAM New Construction 2018 (Man 03) + industry best practice
		ensures that site operatives are trained during the site induction regarding their role in reducing energy and water consumption and carbon emissions	-	Industry best practice
TF3 Construction site management	In addition to resource use, construction sites can be source of nuisance and pollution. The intent of this performance requirement is to ensure that the contractor is a high quality steward of the site and of it is local community.	Achieved Considerate Construction Score: 35 - 39 (7 points min. in each section)	Achieved Considerate Construction Score: 40 (7 points min. in each section)	Industry best practice
		Contractors to identify opportunities for innovative use of technology within proposals.	Implementation of proposals on site.	Industry best practice
UE1 Activated public realm	The stadium is a unique and new asset to the city. On non-match days this provides the city with a key piece of social infrastructure for the local community and those who wish to visit. This performance requirement aims to ensure that the space is both accessible to the general public but also that it includes key features which encourage outdoor gathering, social exchange and other community uses.	Set out proposals for how the project aims to activate the public realm in different modes of operation	-	WELL Communities (Fitness PED, Community CEL)
UE2 Safety and security	Safety and security is paramount. The intent is to provide a strategy that creates a truly accessible environment for all, on both match and non-match days.	Threat risk assessment and security strategy, integration of recommendations	-	BREEAM New Construction 2018 (Hea 06)
UE3 Embracing technology	Technology has a fundamental role in the stadium experience as well as its efficiency of operation. Stadium users are interacting with technology in a rapidly evolving way on match days and sporting events create a unique opportunity to engage fans with the Club sustainability ambitions. At the same time the embodied impact of technology can be significant, with many components relying on precious and hard to extract materials. This performance requirement aims to respond to these points.	Plan for highly accessible and flexible technology infrastructure and systems to enable client developed community and spectator digital services	-	Wired Score (assessment parameter 17) / WELL Communities (DIG)
		Demonstrate how the proposed technology strategy can support the Club in encouraging pro-environmental sustainable behaviour change	-	Industry leading practice
		Demonstrate consideration of, and measures taken to mitigate, lifecycle impacts associated with proposed technology systems	-	Industry leading practice
CI1 Communications and engagement	Beyond technology, signage during construction and operation creates a unique opportunity to engage a range of match and non-match day users with sustainability interventions or influence the behaviour of fans toward sustainable outcomes. This performance requirement aims to embed these in the design development and construction.	Utilise site hoardings use visual communication to raise awareness of project sustainability initiatives	-	Industry best practice
		Integrate point of use signage encouraging pro-environmental behaviour change	-	Industry best practice
CI2 Research and development	Liverpool has a significant knowledge economy underpinned by strong institutions. This performance requirement	Research partnership with local institution	-	Project specific

KPI Ref.	Justification for inclusion	Proposed minimum performance target	Proposed aspirational performance target	Source of performance target
	aspires to use the stadium as a 'living lab' to support research into building performance, supporting Liverpool's knowledge economy whilst delivering purposeful outcomes for the Club.	linked to building performance		
CI3 Local economy	Maximising social value is a key principle of the Club and indeed Everton in the community. Construction projects offer a unique opportunity for training and skills development within the local community as well as awareness raising through site visits. In operation, there is significant opportunity to support local businesses as well as the creation of further apprenticeship opportunity.	TBC	TBC	Industry best practice (national social value acts)
		TBC	TBC	Industry best practice (national social value acts)
		TBC	TBC	Industry best practice (national social value acts)
		TBC	TBC	Industry best practice (national social value acts)
		TBC	TBC	Industry best practice (national social value acts)

Appendix D Sustainability Performance Tracker

Scope of the policy review

To better understand the sustainability drivers for this development and set the policy context, a summary of sustainable development policies at a national and local level has been provided.

National policy context

The UK Sustainable Development Strategy '*Securing the Future*' sets out the UK Government's approach to delivering sustainable development, defined as follows:

"The goal of sustainable development is to enable all people throughout the world to satisfy their basic needs and enjoy a better quality of life, without compromising the quality of life of future generations"

National Planning Policy Framework (NPPF) ensures that local planning systems contribute to the achievement of this. Underpinning planning policy at a national level is the National Planning Policy Framework (NPPF), as published by the Department for Communities and Local Government (March, 2012). The key objectives of this are summarised in Figure A4.1.

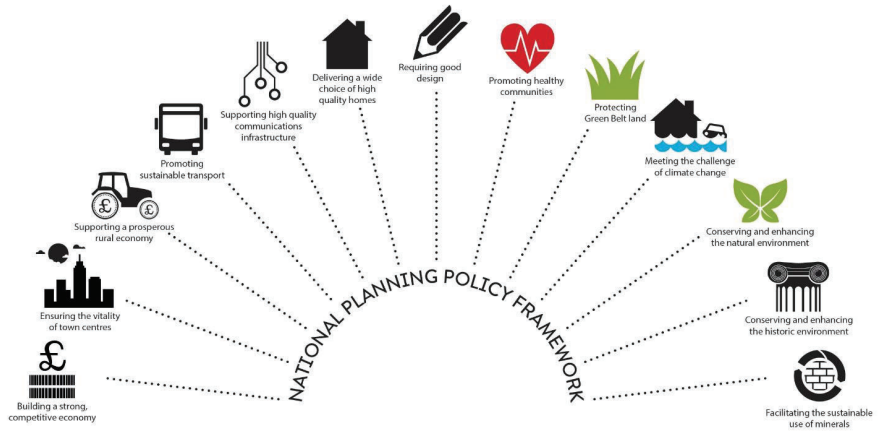


Figure 2.1 : Core objectives of the NPPF

Sub-regional policy context

Liverpool City Region Devolution Agreement

The Liverpool City Region Combined Authority Devolution Agreement was agreed on 17th November 2015. The Agreement provides for the transfer of significant powers for economic development, transport, housing and planning and employment and skills.

A new, directly elected Liverpool City Region Mayor will act as Chair to the Liverpool City Region Combined Authority and will exercise the following powers and functions devolved from central government:

- Responsibility for a devolved and consolidated local transport budget, with a multi-year settlement to be agreed at the Spending Review.
- Responsibility for franchised bus services, which will support the Combined Authority's delivery of smart and integrated ticketing across the Combined Authority.
- Powers over strategic planning, including the responsibility to create a Single Statutory City Region Framework, a Mayoral Development Corporation and to develop with government a Land Commission and a Joint Assets Board for economic assets.

Liverpool City Region Local Enterprise Partnership

The Liverpool City Region Local Enterprise Partnership (LEP) was formed in March 2012. It is a public-private partnership which aims to deliver the following:

- Growth: in terms of absolute output (GVA) and also in jobs;
- Increased Productivity: this means being more innovative and effective in how the LCR does business and increasing competitiveness on both the national and international stage; and
- A rebalanced economy: with a reduced emphasis and dependency on public sector jobs through a renewed focus on encouraging private sector growth and job creation.

The LEP identifies the key sectors for growth as:

- Super-port ;
- Low Carbon Economy;
- Visitor Economy;
- Advanced Manufacturing;
- Life Sciences;
- Digital and Creative Business; and
- Professional Services.

Liverpool City Region Growth Plan and Strategic Economic Plan

The Liverpool City Region Growth Plan and Strategic Economic Plan (SEP) provides the strategic framework for interventions to drive new job creation and growth in the City Region. The Growth Plan and SEP articulate the ambitions of the City Region in terms of stimulating job creation as well as providing the rationale for intervention with a particular emphasis placed on enabling private sector investment and growth.

Five transformational strategic projects are identified:

- Liverpool City Centre as a global brand, visitor and business destination;
- The Liverpool City Region Freight and Logistics Hub that builds on our natural assets and the changing nature of the international and national logistics industry;
- LCR2Energy which will facilitate the transition of the City Region's energy supply need to a more low carbon supply by capitalising on off-shore wind energy and marine energy generation with associated supply-chain business growth benefit;
- Increasing access and capacity of the Port of Liverpool is a medium-term project which is absolutely necessary if the economic opportunity of the City Region is to be obtained; and
- A City Region Capital Investment Fund to include local funds from Growing Places Fund and European Programme, alongside Government monies, to co-invest in key capital schemes that will deliver new jobs.

Other relevant policies

- Liverpool City Region Spatial Investment Plan
- Liverpool City Region Local Investment Plan
- Merseyside Local Transport Plan (LTP)
- A Transport Plan for Growth
- Joint Waste Local Plan (2013)

Local policy

Currently the Unitary Development Plan (adopted November 2002) guides development within Liverpool. The Unitary Development Plan will gradually be replaced when the Liverpool Local Plan is adopted, however, until then the Unitary Development Plan policies will still be used to determine planning applications. The new draft Liverpool Local Plan was approved for public consultation by the City Council's Cabinet on 19th August 2016. Public consultation then took place between 16th September 2016 and 11th November 2016. The emerging Local Plan has been submitted to the Secretary of State for examination.

Unitary Development Plan

The Unitary Development Plan (UDP) provides the statutory framework to guide development and protect and enhance the environment of the City.

Part I of the UDP sets out the strategy of the Plan. In essence, these are the City Council's strategic planning objectives which provide the framework for the detailed policies and proposals found in Part II of the Plan.

The strategic planning objectives are summarised below:

- Economic regeneration (Gen 1);
- Open environment (Gen 2);
- Heritage and design in the built environment (Gen 3);
- Housing (Gen 4);
- Shopping (Gen 5);
- Transportation (Gen 6);
- Community facilities (Gen 7);
- Environmental protection (Gen 8); and
- Liverpool city centre (Gen 9).

'Environmental protection (Gen 8)' sets out the environmental standards for development in policies EP1 to EN17:

Environmental protection policies
EP1 Vacant, derelict and neglected land
EP2 Contaminated land
EP7 Recycling
EP9 Waste storage
EP10 Hazardous substances
EP11 Pollution
EP12 Protection of water resources
EP13 Flood protection
EP16 Renewable energy

The adoption of the Merseyside and Halton Waste Local Plan (18th July 2013) means that UDP Policies EP3 through to EP8 are no longer in operation. Further, it is acknowledged that Sustainable Development cuts across all the objectives. Whilst 'Environmental protection (Gen 8)' focuses specifically on environmental impact, the following objectives and policies are also recognised as important issues that contribute to the sustainability of a such a development:

Environmental protection policies
HD8 Preservation and enhancement of conservation areas
HD9 Demolition of buildings in conservation areas
HD11 New development in conservation areas
HD14 Streetworks in conservation areas
HD 19 Access for all
HD21 Energy conservation
HD22 Existing trees and landscaping
HD 23 New trees and landscaping
HD24 Public art
HD28 Light spillage
OE5 Protection of nature conservation sites and features
OE6 Development and nature conservation
OE7 Habitat creation and enhancement
OE11 Protection of green space
OE12 Enhancement of green space
T6 Cycling
T7 Walking and pedestrians
T8 Traffic management
T12 Car parking provision in new developments
T13 Car parking for the disabled
T15 Traffic impact assessment
C7 The football clubs

The UDP is supported by a number of Supplementary Planning Document (SPD) notes. SPDs of particular relevance to TPP are:

- World heritage site;
- Ensuring a choice of travel;
- Design for access for all;
- Refuse storage and recycling facilities; and
- Car and cycle parking standards.

Liverpool Local Plan

All Local Planning Authorities are required to prepare a local plan to guide the long term, strategic spatial development of their area. Once adopted the Local Plan will provide a long-term spatial vision, strategic priorities and policies for future development in the City over the next 15-20 years. The Local Plan will be supported by an Infrastructure Delivery Programme (IDP) which will identify future infrastructure requirements (including physical, social and green infrastructure), to support population change and housing and employment growth.

The following vision is set out within the local plan:

"*By 2033 Liverpool will be a sustainable, vibrant and distinctive global city at the heart of the City Region. Development opportunities will have been maximised to create an economically prosperous city with sustainable communities and an outstanding environment.*"

Building on the Vision and taking account of the key issues within Liverpool a number of strategic priorities have been identified for the City:

- Strengthen the city's economy;
- Create residential neighbourhoods that meet housing needs;
- Vital and viable centres;
- A high quality historic environment;
- Attractive and safe city with a strong local identity;
- High quality green infrastructure;
- Use resources efficiently;
- Maximising sustainable accessibility; and
- Maximising social inclusion and equal opportunities.

The strategic priorities are will be delivered by the policies in the Local Plan. Those which are relevant to the development of a sustainability framework for project Blue are summarised below:

Policy	Summary of requirements
STP2 Sustainable Growth Principles and Managing Environmental Impacts	New development should seek to avoid negative impacts on the environment through the adoption of best practice. Any adverse impact should be mitigated through appropriate measures. New development should promote social inclusion, make improvements to health and well-being, contribute to a net gain in biodiversity, be located where accessible by sustainable transport and be well adapted to the effects of climate change.
STP4 Presumption in Favour of Sustainable Development	Adheres to the requirement within the NPPF to approve development which accords with the Local Plan without delay. Where the Local Plan is out of date or silent, the City Council will grant permission unless material considerations indicate otherwise.
CC10 Waterfront design requirements	Development on the Waterfront should be of a high-quality design that respects its sensitive historic surroundings, whilst making adequate provision for access, parking and servicing and not undermining local amenity and operations of businesses. Conservation and high-quality, sustainable design are at the heart of this policy. Specific reference is made to pedestrian / cycle movement routes and green infrastructure.
UD4 Inclusive design	All development proposals, by virtue of their location and physical features, should meet the highest standards of accessibility and inclusion so that all potential users, regardless of mental or physical ability, age or gender can use the development safely and easily.
UD5 New buildings	All new buildings should be designed to the highest design standards, based on a clear rationale, and aesthetic based on the characteristics of the area. The building is highly sustainable, including re-cycling and renewables. Buildings are robust and adaptable.
HD1 Heritage assets: Listed Buildings, Conservation Areas; Registered Parks an Gardens; Scheduled Ancient Monuments	Consent or permission will not be granted for applications which are not fully justified and accompanied by full information necessary to assess the impact of the proposals on the heritage asset. Also, development or works which are unsympathetic to the heritage asset and/or its setting in terms of its architectural, historic, cultural or artistic significance will not be consented.
HD2 Liverpool Maritime Mercantile City World Heritage Site	The City Council will support proposals which conserve or, where appropriate, enhance the Outstanding Universal Value of the Liverpool Maritime Mercantile City World Heritage Site.
GI1 Green infrastructure	The recreational function, visual amenity, historic and structural quality and value of the City's green infrastructure resource will be protected and enhanced.
GI4 Water spaces	The City Council will support proposals for increasing opportunities to allow for greater access to, interaction with, and recreational use of water spaces in the City, whilst ensuring the spaces and their settings are protected and enhanced. Proposals for new development adjacent to a water space should demonstrate that account has been taken of its setting.
GI5 Protection of biodiversity and geodiversity	Development which may result in a likely significant effect on an internationally important site must be accompanied by sufficient evidence to enable the Council to make a Habitats Regulations Assessment. Adverse effects should be avoided and/or mitigated to ensure that the integrity of internationally important sites is protected.
GI7 New planting and design	All new development should make an appropriate contribution to the enhancement of the City's green infrastructure resource. As a minimum, proper provision should be made on site for the planting and successful growth of new trees and landscaping, including any replacement planting provided as compensation for loss due to development.
GI9 Green infrastructure enhancement	Development proposals should be designed to / will be expected to incorporate new and/or enhanced green infrastructure or green spaces of an appropriate type, standard, size and which reflect the needs of the area. These may include improving the recreational function of open spaces, addressing deficiencies in access to open space.
R1 Air, light and noise pollution	Planning Permission will not be granted for development which has the potential to create unacceptable air, water, noise or other pollution or nuisance.
R3 Flood risk and water management	All proposals for development must follow the sequential approach to determining the suitability of land for development, directing new development to areas at the lowest risk of flooding and where necessary apply the exception test, as outlined in national planning policy. Developers will be required to demonstrate, where necessary, through an appropriate Flood Risk Assessment (FRA) at the planning application stage, that development proposals will not increase flood risk on site or elsewhere, and should seek to reduce the risk of flooding. New development will be required to include or contribute to flood mitigation, compensation and/or protection measures, where necessary, to manage flood risk associated with or caused by the development.
R4 Coastal Protection	All development proposals must not increase the risk of tidal flooding or coastal erosion, impair the ability of the coast to form a natural sea defence or adversely affect the integrity of designated sites of European and/or International nature conservation importance.
R5 Rivers, canals, watercourses and culverts	Planning permission will not be granted for any development which, in the opinion of the City Council following consultation with the Environment Agency, would adversely affect the quality or supply of surface water or groundwater.
R7 Decentralised energy networks	Proposals for renewable and low carbon energy generating and distribution networks at all scales of development will be supported, including community-led projects and district heat and power schemes. Where a decentralised network has been or is programmed to be constructed, future development within the network area will be required to connect as part of a planning obligation unless it can be demonstrated that this would not be viable. All major development proposals should seek to integrate low carbon energy and decentralised energy networks into the proposal.
R9 Solar panels	The installation of solar panels for energy generation will be supported, in particular for building- mounted installation subject to other Local Plan policies. Proposals for solar panel development will need to be appropriately sited, and should take account of the wider cultural and heritage landscape; and minimise impact on visual amenity.
R10 Non-fossil fuel energy sources	The adoption of non-fossil fuel technologies to generate locally sourced energy will be supported as part of the transition to a low carbon economy, subject to other Local Plan policies. Proposals must demonstrate that; it is appropriately sited; any cultural and heritage landscape issues are addressed; there will be no adverse impact on biodiversity; impact on visual amenity is minimised; and where it would be appropriate to do so, it has been subject to community engagement and has community support.
TP1 Improving accessibility and managing demand for travel	Development proposals should make the best use of existing transport infrastructure. Where this cannot be achieved, development should be phased to coincide with new transport infrastructure provision.
TP5 Cycling	Proposals for new development should demonstrate that they will have a positive impact on the cycling network and its users and provide appropriate cycle access and sufficient, secure cycle parking facilities.
TP6 Walking and Pedestrians	All new development proposals should protect, maintain and where appropriate improve the existing pedestrian infrastructure, not adversely impact on the pedestrian or the environment and provide appropriate pedestrian access, and improve the safety and security of pedestrians

Policy	Summary of requirements
TP9 Public transport	Public transport should be considered in the design of all development and it should be clear how the issue of ensuring public transport usage as a realistic alternative to private car trips has been addressed where it is material to do so.

Liverpool City Centre Strategic Investment Framework (2012)

The City Centre Strategic Investment Framework 2012 (SIF) was produced by Liverpool Vision and launched in November 2012. It provides a vision and ambition for the economic development and growth of Liverpool City Centre over the next 15 years. The SIF has 4 key principles embedded within it:

- Making Liverpool City Centre economically distinctive;
- Building on the significant progress that has been made over the past decade;
- Seeking to capitalise on Liverpool's distinctive public brand and image and its exceptional quality of place; and
- Making Liverpool a green city, putting climate change and renewable energy at its heart.

Liverpool City Council Climate Change Strategic Framework (2009)

In 2009 Liverpool City Council set a carbon reduction target which aims to reduce carbon emissions by 35% by 2024. This framework examines how climate change may affect the city, outlines the current impacts on the climate and the steps currently being taken to reduce this. It also sets out what we need to do next to measure and manage our activities to ensure a 35% reduction is delivered.

Fergus Anderson
Buro Happold Limited
17 Newman Street
London
W1T 1PD
UK

T: +44 (0)207 927 9700
F: +44 (0)870 787 4145
Email: fergus.anderson@burohappold.com