

8. Sustainability Statement

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1 Introduction

- 1.1.1 This statement has been prepared in support of the outline planning application for the Proposed Development at Surrey Canal within the London Borough of Lewisham. The planning application is for a mixed-use urban development consisting of up to 250,000 square metres (sqm) of development floor space (gross external area (GEA)) on the Application Site. Detail of the Proposed Development is contained in the Development Specification and shown on the Parameter Plans.
- 1.1.2 This document sets out the sustainability credentials of the Proposed Development and provides an assessment against relevant planning policy.
- 1.1.3 The importance of the sustainability focus in national, regional and local planning policies and planning guidance, as well as Renewal's own ambition, has been at the forefront of the design evolution of Surrey Canal. The following sustainable design and construction measures will be included at Surrey Canal.
- 1.1.4 In terms of re-using land and buildings, Surrey Canal sits in its entirety on previously developed land and existing buildings are integrated where appropriate.
- 1.1.5 With regards to conserving energy, materials, water and other resources, Surrey Canal will have high standards of energy and water efficiency, the use of a communal heat network connected to SELCHP and the intention to use sustainable construction materials. Promotion of sustainable forms of transport through provision for cycle parking, car clubs, electric vehicle charging and greater permeability, in particular the creation of a pedestrian friendly neighbourhood and significant improvements to public transport to encourage greater public transport use.
- 1.1.6 To make the most of natural systems both within and around the building, Surrey Canal has key principles of: high quality urban design; utilising Passive Solar Design; and making maximum use of natural ventilation and shading.
- 1.1.7 Surrey Canal aims to reduce the impacts of noise, pollution, flooding and micro-climatic effects. To account for future climate change and mitigate for the effects of the urban heat island all the raised courtyard roof areas will be a mixture of extensive and intensive green roofs. Street pattern and building volumes have been designed to create a sheltered internal environment. The public and private realm is designed to incorporate a high level of vegetation and trees which will assist in improving the micro-climate. Sustainable Drainage Systems (SuDS) are to be implemented within the surface water drainage arrangements to manage, store and treat surface water flows and volumes prior to discharge.
- 1.1.8 With regards to ensuring developments are comfortable and secure for users, Surrey Canal will meet the principles of inclusive design and will be 100% lifetime homes compliant. The passive surveillance of streets, communal spaces and parking will be incorporated. Intensive Green Roofs

will be provided at raised courtyard level as amenity space for residents. A privacy buffer is to be designed around residential accommodation at raised courtyard level.

- 1.1.9 To conserve and enhance the natural environment, particularly in relation to biodiversity, the Site wide planting design will increase the number of plant species that is currently found on site and will include native species and will promote site wide biodiversity.
- 1.1.10 To promote sustainable waste behaviour and support for local integrated recycling schemes, Surrey Canal makes use of a wide range of initiatives and new technologies to minimise environmental impact, and the waste hierarchy of reuse, recycle, recover and disposal is being followed. The ENVAC Automated Waste Collection System, an underground waste collection system, will be installed across the Site and connected to all homes and non-residential units, facilitating recycling and composting with a potential to double the current rate of recycling in the borough. Not only will the district heating system connection to SELCHP provide low carbon heat to Surrey Canal it will also add the potential to link up other nearby areas to the communal heat network in the future.
- 1.1.11 In terms of healthy and active lifestyles, sport and health are key foundations of the Proposed Development. The development concept is to create a centre for national and regional sporting excellence by working with Sport England, local colleges, national sporting associations, and building on the existing facilities on-site in the widest sporting and community sense.
- 1.1.12 In line with new government guidelines, targeting rising obesity levels to better the fitness of a growing population, Surrey Canal will become a precedent for communities with similar principles to grow and flourish elsewhere. Building communities with sport at their heart works to create an urban fabric that supports fit, happy and healthy people.
- 1.1.13 Surrey Canal is a contemporary urban addition to the plethora of villages that is Greater London – a place with a strong sense of community, hosting a myriad of local services and facilities within walking distance. The wide range of proposed uses and activities will offer up a myriad of employment options and provide opportunities for residents to work where they live.
- 1.1.14 Apart from establishing a strong sports related offer, the Proposed Development will in addition include a range of components that help build a diverse, vibrant and successful 21st century village, providing everyday convenience as well as those particularities that set Surrey Canal apart, be it the best chippy in Lewisham or an organic food festival.
- 1.1.15 In relation to the Draft Replacement London Plan, 2009, Surrey Canal exhibits the properties of **Sustainable Communities**. It is a place where people want to live and work, now and in the future; that meet the diverse needs of existing and future residents, are sensitive to their environment and contribute to a high quality of life.

2 Sustainability Policy, Regulations, and Guidance

The importance of sustainability is increasingly the focus of national, regional and local policies and planning guidance, as well as Renewal's own corporate policy. This section summarises the key policy and planning drivers affecting the Proposed Development.

2.1 National Planning Policy

Planning Policy Statement PPS1 - Delivering Sustainable Development, 2005

2.1.1 PPS1 sets out the Government's strategy on the delivery of sustainable development through the planning system. It states that development plans should aim to:

- reduce energy use;
- reduce pollution/carbon emissions (including reducing emissions from transport as well as buildings);
- promote the development of renewable energy resources;
- consider climate change impacts when reviewing the location and design of developments.

Planning Policy Statement; Planning and Climate Change-supplement to PPS1, 2007

2.1.2 PPS1 seeks to encourage the delivery of sustainable buildings and development and incorporates the following guidance:

- Secure the high viable resource, energy efficiency and reduction in emissions;
- Secure the fullest possible use of sustainable transport which overall reduces the need to travel, especially by car;
- Minimise vulnerability and provide resilience to climate change, in ways that are consistent with social cohesion and inclusion; Conserve and enhance biodiversity, recognising that the distribution of habitats and species would be affected by climate change;
- Encourages competitiveness and technological innovation in mitigation and adapting to climate change and responding to the concern of the business.

Planning Policy Statement PPS22 – Renewable Energy, 2004

2.1.3 PPS22 recognises that renewable energy sources will play a key role in reducing carbon emissions, improving diversity/security of UK energy supply and diversification of employment opportunities. Regional and local planning authorities are required to be positive to the

development of renewable energy sources such as wind generation, hydropower, photovoltaics, passive solar design, biomass, energy crops and energy from waste.

2.2 National Regulations

Part L Building Regulations

- 2.2.1 The government's aspiration to create zero carbon new buildings is outlined within the 'Building a Greener Future' document (2007). This document contained a proposed timeline of tightened policy amendments, to be implemented via Part L of the Building Regulations (conservation of fuel and power), culminating in the requirement for all new homes submitted to Building Regulations approval after 2016 to be 'zero carbon'. The proposals included steps to improve carbon emissions to be implemented in 2010 and 2013 updates to Part L. A similar aspiration for non-domestic buildings exists, culminating in all new non-domestic buildings to be zero carbon from 2019, but the plans for how this is to be achieved in policy is less advanced. The revision implemented in October 2010 details - on average - a 25% reduction in carbon dioxide emissions on the previous 2006 revision, which in turn was around a 25% reduction on the 2002 version. It is expected that the future revision scheduled for 2013 will aim to reduce carbon emissions from new buildings by at least 25%.

2.3 Regional Sustainability Strategy

The London Plan: Spatial Development Strategy for Greater London, consolidated with Alterations since 2004 (February 2008)

- 2.3.1 The London Plan is the strategic plan for setting an integrated social, economic and environmental framework for the future development of London over the next 15 to 20 years.
- 2.3.2 Policy 4A.3 -Sustainable design and construction of the London Plan states that the Mayor will and boroughs should ensure future developments meet the highest standards of sustainable design and construction and reflect this principle in DPD policies. It also states that the Mayor will and the boroughs should require all applications for major developments to include a statement on the potential implications of the development on sustainable design and construction principles. This statement should address demolition, construction and long-term management.

The Mayor's Energy Strategy, 2004

- 2.3.3 The Energy Strategy sets the Mayor's proposals to change the way energy is supplied and used within London over the next 10 years and aims to create a sustainable energy system by 2050. It aims to reduce London's CO₂ emissions and thus help to mitigate climate change. It hopes to achieve this by reducing the use of fossil fuels, encouraging greater energy efficiency and promoting renewable energy.

- 2.3.4 Developers are encouraged to integrate energy efficiency improvements and efficient supply technologies such as combined heat and power (CHP).

The Mayor's Biodiversity Strategy, 2002

- 2.3.5 The objectives of the Biodiversity Strategy, which are applicable to Surrey Canal include:

- To ensure all Londoners have ready access to wildlife and natural green spaces;
- To provide local climatic benefits through amelioration of ambient noise and absorption of some pollutants;
- To deliver quality open spaces together with green footpaths and cycle ways.

Mayor of London's Supplementary Planning Guidance on Sustainable Design and Construction, May 2006.

- 2.3.6 This Supplementary Planning Guidance (SPG) has been produced to provide additional information to support the implementation of the Mayor's London Plan (the Spatial Development Strategy). As an SPG this document cannot set new policy. However the SPG can be taken into account as a further material consideration so has weight as a supplement to the London Plan. The SPG is applicable to all development types and associated spaces, with specific information on different building types provided where relevant.

- 2.3.7 London Plan Policy 4B.6 relates to sustainable design and construction and sets the context for this SPG. The SPG provides guidance on the way that the seven measures identified in the policy can be implemented to meet the London Plan objectives and therefore the SPG is structured around these seven factors of including measures to:

- Re-use land and buildings;
- Conserve energy, materials, water and other resources;
- Ensure designs make the most of natural systems both within, in and around the building;
- Reduce the impacts of noise, pollution, flooding and micro-climatic effects;
- Ensure developments are comfortable and secure for users;
- Conserve and enhance the natural environment, particularly in relation to biodiversity; and
- Promote sustainable waste behaviour in new and existing developments, including support for local integrated recycling schemes, CHP schemes and other treatment options.

The Draft Replacement London Plan (October 2009)

- 2.3.8 The Draft Replacement London Plan was issued for consultation in 2009. It has six detailed objectives, embodying the concept of sustainable development and giving more detail about how it

should be implemented, and linking it to the detailed policies in the following chapters. These objectives are ensuring London is:

2.3.9 1) **A city that meets the challenges of economic and population growth** in ways that ensure a sustainable, good and improving quality of life for all Londoners and helps tackle the huge issue of inequality among Londoners, including inequality in health outcomes.

2.3.10 2) **An internationally competitive and successful city** with a strong and diverse economy and an entrepreneurial spirit that benefit all Londoners and all parts of London; a city which is at the leading edge of innovation and research and which is comfortable with – and makes the most of – its rich heritage and cultural resources.

2.3.11 3) **A city of diverse, strong, secure and accessible neighbourhoods** to which Londoners feel attached, which provide all of its residents, workers, visitors and students – whatever their origin, background, age or status – with opportunities to realise and express their potential and a high quality environment for individuals to enjoy, live together and thrive.

2.3.12 4) **A city that delights the senses** and takes care over its buildings and streets, having the best of modern architecture while also making the most of London's built heritage and which makes the most of and extends its wealth of open and green spaces and waterways, realising its potential for improving Londoners' health, welfare and development.

2.3.13 5) **A city that becomes a world leader in improving the environment** locally and globally, taking the lead in tackling climate change, reducing pollution, developing a low carbon economy and consuming fewer resources and using them more effectively.

2.3.14 6) **A city where it is easy, safe and convenient for everyone to access jobs, opportunities and facilities** with an efficient and effective transport system which actively encourages more walking and cycling and makes better use of the Thames, and supports delivery of all the objectives of this Plan.

2.3.15 It also contains some important relevant definitions:

- **Sustainable development:** This covers development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
- **Sustainable Residential Quality:** The design-led approach and urban design principles by which dwellings can be built at higher density, while maintaining urban quality and fostering sustainable development.
- **Sustainable Communities:** places where people want to live and work, now and in the future; that meet the diverse needs of existing and future residents, are sensitive to their environment and contribute to a high quality of life. They are safe and inclusive, well planned, built and run, and offer equality of opportunity and good services for all.

- 2.3.16 It states that new buildings should achieve the highest standards of environmental, social and economic sustainability by meeting the standards of sustainable design and construction set out in Chapter 5 and by being consistent with the existing or planned future capacity of social, transport and green infrastructure. In particular Policy 5.3 (Sustainable design and construction) is based on principles intended to ensure that buildings minimise carbon dioxide emissions; are efficient in resource use; protect the environment; recognise the uniqueness of locations; are healthy and adaptable; and make the most of natural systems including, for example, the use of passive solar design or local ecosystems.
- 2.3.17 The draft plan has just undergone an Examination in Public (EiP) and the EiP panel report is awaited. The Draft Replacement London Plan is expected to be published in late 2011, however, it is relevant to consider it at this stage.

2.4 Local Sustainability Strategy

London Borough of Lewisham, Unitary Development Plan (UDP) (2004)

- 2.4.1 The UDP provides the land use planning framework for guiding physical change and improvement in the borough. The Council will aim to stabilise and improved the environment by:
- Encouraging energy and natural resource conservation and promote environmentally acceptable forms of energy generation, in particular renewable forms of energy and resource consumption.
 - Using the planning system, where appropriate, to facilitate improvement and decontamination of poor quality, degraded and contaminated land.

London Borough of Lewisham, LDF Core Strategy Submission Document (October 2010)

- 2.4.2 The Lewisham Core Strategy is a Development Plan Document and sets out the vision, objectives, strategy and policies that will guide public and private sector investment to manage development and regeneration in the borough over the next 15 years. The Core Strategy is the key planning document in the Lewisham Local Development Framework (LDF). It sets out the overall ambitions and priorities for the borough, a set of proposals, and a means for making sure that they are delivered. The consultation period for this document closed in April 2010 and was submitted to the Secretary of State in October 2010. It will now be the subject of an Examination in Public conducted by an independent Planning Inspector. This is expected to commence in February 2011.
- 2.4.3 Core Policy 8 is relevant to sustainable development, including the following:
- Sustainable Development
 - Creation of acceptable noise and air quality environments for future occupiers
 - Water and waste water infrastructure capability

- Energy Use.
 - Include an assessment of energy to show how CO₂ emissions will be minimised
 - Maximising the opportunity of supplying energy efficiently by prioritising decentralised energy generation (clean) for any existing or new developments according to the requirements of London Plan policy, and in the Regeneration and Growth Areas using SELCHP (South East London Combined Heat and Power Plant) as an energy source
 - New residential developments to achieve levels 4 on Code for Sustainable Homes and BREEAM 'Very Good' for non-residential elements.

2.4.4 Core Policy 8 also states that applications for all new major developments (with a floorspace of 1000 sq. m or 10 or more residential units) will be required to: submit a Sustainability Statement according to the requirements of London Plan policy and the London Plan SPG on Sustainable Design and Construction to demonstrate how sustainability issues have been taken into account at all levels of design and construction.

2.4.5 Of particular relevance is Strategic Site Allocation 3 (Surrey Canal Triangle) which states: "Take opportunities to use power energy generated by the South East London Combined heat and Power Station (SELCHP) for district heating or other suitable sources of decentralised energy."

3 Response to Policy

3.1 Re-use of Land and Buildings

3.1.1 This section formally outlines how the Proposed Development will practically meet the objectives of Section 2.1 (Re-use of land and buildings) of the Mayor of London's Supplementary Planning Guidance on Sustainable Design and Construction, May 2006.

Mayor's Essential Standard

3.1.2 Re-use of land - 100% of development on previously developed land, unless very special circumstances can be demonstrated

3.1.3 Development Density, Open Space Provision, Public Transport Capacity - Development density should be maximised based on local context (Policy 4B.7) design principles (Policy 4B.1) open space provision (Policy 3D.10) and public transport capacity (Policy 3D.10)

3.1.4 Existing Building Re-use - Existing buildings are re-used where practicable, where the density of development and residential amenity are optimised and where the building conforms or has the potential to meet the standards for energy, materials, biodiversity and water conservation set out in the SPG.

Surrey Canal

3.1.5 Re-use of Land – Surrey Canal is on one of Greater London's many brownfield sites promoted for new development, and the Proposed Development sits in its entirety on previously developed land in accordance with the Mayor's Essential Standard.

3.1.6 Development Density, Open Space Provision – The planning application proposes a high density development that reflects local context, design principles and private and publicly accessible open space provision.

3.1.7 Public Transport Capacity – The Site will benefit from good public transport accessibility. National Rail services are available from South Bermondsey Station, and London Overground services are available from Surrey Quays and in future from the proposed Surrey Canal Road Station. Bus services will be enhanced to serve the Site, providing connections to Canada Water and Central London.

3.1.8 Existing Buildings Re-use - Existing buildings (the Millwall FC Stadium and Excelsior Plots 2 & 5) are integrated into the Proposed Development.

3.2 Maximisation of the Use of Natural Systems

3.2.1 This section formally outlines how the Proposed Development will practically meet the objectives of Section 2.2 (Maximisation of the use of natural systems) of the Mayor of London's Supplementary Planning Guidance on Sustainable Design and Construction, May 2006.

Mayor's Essential Standard

3.2.2 Principles of Good Design - All developments to follow the principles of good design set out in London Plan policy 4B.1

3.2.3 Minimise mechanical building services systems - Minimise need for and use of mechanical ventilation, heating and cooling systems.

Surrey Canal

3.2.4 The Proposed Development includes the standard's key principles of: high quality urban design; utilising Passive Solar Design; and making maximum use of natural ventilation and shading.

3.2.5 Built form has been developed to create a sheltered internal environment and a comfortable site microclimate. Tall buildings have a slender profile and are generally located towards the north of the Site and towards the embankments to avoid overshadowing.

3.2.6 Where possible dwellings will be dual aspect thus giving good natural daylight penetration and the opportunity for cross ventilation. This, and other features such as high levels of insulation, shading from balconies and good air tightness, will help to minimise the energy demand of the buildings through reducing the requirement for mechanical building services systems.

3.2.7 The Proposed Development will be designed to achieve a minimum BREEAM 'Very Good' rating for non-residential areas and a Code for Sustainable Homes –Level 4, as a minimum, for all dwellings.

3.3 Adapting to climate change

Mayor's Essential Standard

3.3.1 Building Flexibility / Future proofing - Buildings provide for flexibility of uses during their projected operational lives.

3.3.2 Climate Change Mitigation - Buildings adapt to and mitigate for the effects of the urban heat island and the expected increases in hot dry summers and wet mild winters.

3.3.3 Cyclists / Electric Vehicle Provision – Design-in facilities for bicycles and electric vehicles

Surrey Canal

3.3.4 Building Flexibility / Future proofing – Generous floor to floor heights are proposed to allow for a wide range of uses at ground and raised courtyards.

- 3.3.5 Climate Change Mitigation – All the raised courtyard roof areas will be a mixture of extensive and intensive green roofs. The mix is identified on the Parameter Plans.
- 3.3.6 Extensive green and brown roofs will be located on the taller building elements and will be inaccessible to residents. Plant species will be selected for their suitability to the Site conditions and to promote biodiversity.
- 3.3.7 Intensive Green Roofs will be provided at raised courtyard level as amenity space for residents. A privacy buffer is to be designed around residential accommodation at raised courtyard level.
- 3.3.8 Responsive façades to assist in adjustment to changing climate.
- 3.3.9 Cyclist facilities – A comprehensive cycle network will serve the Site. On-site cycle routes will connect to existing and proposed local and sub-regional cycle routes. Cycle parking will be provided for residents at a minimum ratio of 1 cycle space for each 1-2 bed residential unit and 2 spaces for each 3-4 bed residential unit. Further cycle parking at a minimum of 286 spaces will be provided for visitors and staff within the areas of publicly accessible open space as defined on Parameter Plan 11.
- 3.3.10 Electric Vehicle provision – A minimum of 20% of all residential and non-residential car parking spaces will be provided with charging points for electrical vehicles and a further 20% of spaces will be designed so that charging points can be easily added in the future in each of the proposed car parking areas. Car Club facilities will be provided on site and electric vehicle provision will be made within this facility.

3.4 Conservation of Energy, Water, and Other Resources

- 3.4.1 This section formally outlines how the Proposed Development will practically meet the objectives of Section 2.3 (Conserve energy, water and other resources) of the Mayor of London's Supplementary Planning Guidance on Sustainable Design and Construction, May 2006.

Energy

Mayor's Essential Standard

- 3.4.2 Reduce Demand - Carry out an energy demand assessment.
- 3.4.3 Energy Efficiency - Maximise energy efficiency.
- 3.4.4 Low carbon and renewable energy systems. Major commercial and residential developments to demonstrate that consideration has been given to the following ranking method for heating and where necessary, cooling systems:
- Passive Design;
 - Solar Water Heating;

- Combined Heat and Power for heating and cooling (i.e. tri-generation), preferably fuelled by renewables;
- Community Heating and Cooling;
- Heat Pumps;
- Gas Condensing Boilers.

3.4.5 CO2 emissions - Carbon emissions from the total energy needs (heat, cooling and power) of the development should be reduced by at least 20% by on-site generation renewable energy.

3.4.6 Light Pollution - Wherever on site outdoor lighting is proposed as part of a development, it should be energy efficient, minimising light lost to sky.

Mayor's Preferred Standard

3.4.7 Low carbon and renewable energy systems - All developments to demonstrate that consideration has been given to the following ranking method for heating and where necessary for cooling systems and should incorporate the highest feasible of the following options:

- Solar water heating;
- Combined Heat and Power for heating and cooling (i.e. trigeneration), preferably fuelled by renewables;
- Community Heating (New developments should always be connected to existing community heating networks preferably fuelled by renewables where feasible.)

3.4.8 Building Services Controls - Lighting, heating and cooling controls should enable services to operate efficiently under different loadings and allow for localised control.

3.4.9 Zero Carbon Emission Development - Major developments should be zero carbon emission developments (ZEDs).

3.4.10 Hydrogen Fuel Cell Technology - Major developments should make a contribution to London's hydrogen and / or fuel cell technologies and infrastructure.

3.4.11 Light Pollution - Wherever outdoor lighting or other electrically powered street furniture is proposed on site, it should be solar powered and minimise light lost to the sky.

Surrey Canal

3.4.12 The Energy Strategy describes the detailed assessment of reducing energy demand and the use of energy efficient and renewable technologies using the energy hierarchy approach as described in the London Plan. This hierarchy is: use less energy ("lean"), supply energy efficiently through CHP ("clean") and use renewable energy ("green").

3.4.13 Energy efficiency and reduced demand – The cornerstone of the energy hierarchy is to reduce demand for energy consumption before the consideration of integrating low carbon energy sources, since controlling demand is the most effective way of reducing carbon dioxide emissions.

For this “lean” element of the hierarchy, a high level of energy efficiency will be included, and would reduce total CO₂ emissions to a level equivalent to baseline using the 2010 Building Regulations, this would represent a reduction of around 20% on 2006 Building Regulation baseline.

3.4.14 For residential this would require high levels of insulation, airtightness, and effective demand management. For non-residential the energy efficiency measures are closely related to the specific uses and due to the outline nature of the current design this is not fully defined. Nevertheless it has been assumed in general that thermal envelope improvements would reduce space heating demand as well as reduce cooling demand where it is used.

3.4.15 The approaches and strategies that would be included where appropriate to improve energy efficiency will be:

- Low U-values for walls, glazing, roofs and floors to exceed the requirements of Building Regulations;
- High standards of airtightness;
- Heat recovery within balanced mechanical ventilation systems;
- Energy efficient lighting, including external lighting systems;
- High efficiency appliances;
- Ventilation control to reduce fan energy;
- High efficiency motors incorporated into all building services;
- High efficiency boiler plant; and
- Improved pipework and ductwork thermal insulation.

3.4.16 Low-carbon and renewable energy systems - The nearby SELCHP (South East London Combined Heat and Power Plant) energy from waste facility (EfW) is currently only providing power not CHP as there is no heat network. Nevertheless, its steam turbine can provide extraction of heat at useful temperatures and approximately 40 MW of heat could be available. On average this could supply heat demands of around 10,000 standard UK homes. Various studies have been performed to investigate connecting it to a heat network and have shown the carbon emission reduction benefit it could bring. The GLA, LB Southwark and LB Lewisham are keen to promote the connection to SELCHP.

3.4.17 For the “clean” element of the hierarchy, the preferred approach is to take advantage of SELCHP’s nearby location and utilise its waste heat as the source for a community heat network connected to all buildings where appropriate. This would further reduce CO₂ emissions by around 29%. Renewal is currently working with SELCHP to determine the best way to take this solution forward.

3.4.18 The delivery of a district heating connection to SELCHP is exciting and the construction of the East London Line Phase 2 (ELL2) has acted as a catalyst to ensure the issues are mitigated with passive installation for pipes post completion of ELL2 in 2012. As a result, SELCHP, London

Overground, TfL, and Network Rail have worked together in ensuring that the ELL construction design now incorporates a culvert chamber that facilitates the installation of district heating pipes under ELL2 post completion in 2012/2013. In the event that a district heating connection to SELCHP does not proceed, a gas-fired combined heat and power (CHP) installed in a single energy centre would be provided.

- 3.4.19 For easier compatibility with the SELCHP heat supply and to not reduce its viability, the “green” element should be met through technologies that supply electricity not heat, such as photovoltaic panels. Initial estimates have shown that these could contribute to around 0.5% (PV) – 5% (Wind) of further CO₂ emission reductions even assuming a maximum implementation of capacity. Building mounted wind turbines are considered particularly difficult to integrate due to the noise, flicker, visual impact and structural concerns and the lack of reliable output data, therefore they are not being proposed on the Application Site. The viability of PV is heavily reliant on the current feed-in tariffs which may be removed in 2013 in the feed-in tariff review. At this stage it is proposed that renewable energy provision is to be met through a minimum of 2,200 sq m of photovoltaic panels or equivalent carbon reduction through other renewable energy systems.
- 3.4.20 Building Services Controls – The communal heating system will use controls such as weather compensation, optimised start and variable speed pumping. Other building services controls will be designed to enable services to operate efficiently under different loads and allow for localised control.
- 3.4.21 Zero Carbon Emission Development –the Proposed Development will not be a Zero Carbon Emission Development but is designed to be energy efficient and low carbon. The use of a centralised communal system will allow for easier future introduction of zero carbon technologies.
- 3.4.22 Hydrogen Fuel Cell Technology – A fuel cell is not proposed in the Surrey Canal site development energy strategy due to the prototype nature of this technology. The use of a centralised communal system will allow for easier future introduction hydrogen technologies.
- 3.4.23 Light pollution – All external lighting will be arranged to ensure that it is all down-facing and therefore reduces risk of light pollution. Daylight sensor and timer controls will also be provided for all external lighting to ensure that it can be automatically switched off when not required. This will further help to prevent any light pollution.

Materials

Mayor’s Essential Standard

- 3.4.24 Sustainable Timber - 50% timber and timber products should be sourced from Forest Stewardship Council (FSC) source and balance from a known temperate source.
- 3.4.25 Ozone Depletion - Insulation materials containing substances known to contribute to stratospheric ozone depletion or with the potential to contribute to global warming must not be used.

Mayor's Preferred Standard

- 3.4.26 Embodied Energy - neither construction nor specification of material with high-embodied impact to be used (as defined by the summary ratings in the Green Guide to specification), unless a compelling whole life energy or technical case for its use exists.
- 3.4.27 Sustainable Timber - 90% timber and timber products from Forest Stewardship Council (FSC) source and balance from a known temperate source.
- 3.4.28 Minimise Natural Resource Depletion - No peat or natural weathered limestone used in buildings or landscaping.
- 3.4.29 Maximise Recycling of Demolition Material - Prior to demolition, appraisal of maximising recycling of materials by use of ICE's Demolition Protocol.
- 3.4.30 Specification of locally sourced materials - 50% of construction materials by mass used in the development to be sourced from a factory/plant/ quarry/wharf railhead or recycling centre within 35 miles of site wherever feasible.
- 3.4.31 Aggregate Resource Depletion - Minimise the use of new aggregates.
- 3.4.32 Recycled Content of Materials - 10% total value of materials used to be derived from recycled and reused content in products and materials selected.

Surrey Canal

- 3.4.33 Sustainable Timber – This is an outline planning application and construction materials have not yet been determined. Nevertheless, the potential for timber and timber products from sustainable temperate sources will be investigated for incorporation into the design where suitable. Preference will be given to the selection of FSC certified timber and PEFC certified timber. Where possible timber and wood products will be sourced from sustainable sources or will utilise reused or recycled timber.
- 3.4.34 Ozone Depletion – This is an outline planning application and construction materials have not yet been determined, the final selection of insulation materials will aim at choosing those with a zero Ozone Depletion Potential (ODP) and a Global Warming Potential (GWP) of less than 5 based on manufacture AND installation.
- 3.4.35 Embodied Energy – This is an outline planning application and construction materials have not yet been determined. However, a review of the materials specified for Surrey Canal will be undertaken using the Green Guide to Specification and those with high ratings will be preferred. The use of lower embodied energy materials, such as modern methods of construction (MMC), will be encouraged.
- 3.4.36 Minimise Natural Resource Depletion – Peat and natural weathered limestone in buildings or landscaping will be avoided.

- 3.4.37 Maximise Recycling of Demolition Materials where appropriate –all heating, water pipework and general metal contained within the buildings will be carefully removed and taken away for recycling prior to the main demolition. Similarly all timber and plasterboard will be set aside in separate waste containers and will be taken away for recycling. Items such as roller shutter doors, gas radiant heaters and high bay lighting can be reclaimed for reuse on other sites dependant on market demand. If there is a commercial market demand then the portal frames may be carefully taken down and reused elsewhere.
- 3.4.38 All masonry where appropriate will be crushed on site to a grade 6F2 or similar. This material can be reused for general fill across the Site. The concrete slabs will be crushed and may be suitable for reuse on site as part of a piling mat and all reinforcing bars will be removed for recycling.
- 3.4.39 Specification of locally sourced materials– This will be investigated in further detail during detailed design.
- 3.4.40 Specification of natural materials – Preference will be given to the selection of internal finishes and external landscaping manufactured using natural materials such as timber instead of MDF as they are non toxic, have a low embodied energy and are biodegradable.
- 3.4.41 A monitoring mechanism will be put in place to ensure that the above principles will be applied.
- 3.4.42 Aggregates – opportunities to minimize the use of new aggregates will be explored during the detailed design.

Water

Mayor's Essential Standard

- 3.4.43 Water consumption: Residential developments to achieve average water use in new dwellings of less than 40 m³ per bedspace per year (approx. 105 litres / head / day).
- 3.4.44 Water metering - 100% metering of all newly built property.

Mayor's Preferred Standard

- 3.4.45 Water consumption: Residential developments to achieve average water use in new dwellings of less than 25 m³ per bedspace per year (approx. 70 litres / head / day).
- 3.4.46 Greywater Recycling - Use of greywater for all non potable uses.

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- 3.4.47 Water Consumption – The water consumption in the residential units will be 105 litres/person/day in order to meet the mandatory requirements Code for Sustainable Homes Levels 3 and 4 criteria and the Mayor's Essential Standard. This will be achieved through the specification of water efficient appliances. These will include low-flush toilets; low flow taps and showerheads and water efficient white goods, where provided.

- 3.4.48 Designing low water use landscaping and gardens – Planting species will be selected for their suitability to the growing conditions on site. Where used, the irrigation systems will be designed to minimise the amount of water wastage through the use of climate responsive controls. Reasonable effort will be made to use rainwater for irrigation.
- 3.4.49 Water metering - 100% water metering of all newly built properties (residential and non-residential) will be provided.
- 3.4.50 Water Recycling – As this is not a commitment at this stage due to the uncertainty of the level of runoff from roofs (particularly green/brown) to supply sufficient rain water for the Proposed Development. It is expected that rainwater tanks could provide some WC flushing and irrigation demand. Rainwater harvesting could be of most use for non-residential toilets.
- 3.4.51 Grey water recycling is not a commitment at this stage due to the uncertainty of its impact in terms of carbon, space, management and financial costs. At this stage the intention would be to meet the Code for Sustainable Homes target through water efficiency measures with rainwater harvesting for commercial toilets where suitable. Nevertheless, provision can be made, particularly in later phases, to allow the inclusion of grey water systems where suitable.

3.5 Reduction of the Impacts of Noise, Pollution, Flooding, and Microclimatic Effects

- 3.5.1 This section formally outlines how the Proposed Development will practically meet the objectives of Section 2.4 (Reduce the impacts of noise, pollution, flooding and microclimatic effects) of the Mayor of London's Supplementary Planning Guidance on Sustainable Design and Construction, May 2006.

Noise

Mayor's Essential Standard

- 3.5.2 Demonstrate that adverse impacts of noise have been minimised, using measures at source or between source and receptor (including choice and location of plant or method, layout, screening and sound absorption) in preference to sound insulation at the receptor, wherever practicable.

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- 3.5.3 The Noise and Vibration Chapter of the Environmental Statement assesses the potential noise and vibration effects associated with the Proposed Development. In particular it examines the effects on existing noise sensitive receptors within the vicinity of the Site, which may arise during the construction period and subsequent operation of the completed development. The assessment also considers the suitability of the Site for residential development. The main effects from the operation are: changes to road traffic flows as a result of the Proposed Development and noise from fixed plant provided as part of the Proposed Development. The effect from increases in road

traffic noise is not considered to be significant. The Development Specification requires all fixed plant to be designed to achieve a rating level of 5 dB below the lowest measured background noise level. Plant noise levels of this magnitude would not produce a significant effect.

- 3.5.4 Planning of buildings and rooms has been designed in order to reduce noise problems and suit the requirements of the Building Regulations.
- 3.5.5 Windows and ventilation systems will incorporate acoustic features to address noise, especially at night.
- 3.5.6 Building services such as air intakes and extract points will be positioned away from sensitive locations.
- 3.5.7 Mitigation measures will be investigated during design and construction phase to ensure that the baseline ambient noise levels are not negatively affected by the buildings and to evaluate how the plant noise can be attenuated.

Air Pollution

Mayor's Essential Standard

- 3.5.8 All new gas boilers should produce low levels of NOx.
- 3.5.9 Incorporate measures to reduce and mitigate exposure to air pollution.

Mayor's Preferred Standard

- 3.5.10 Developments should be designed to minimise the impact on air quality, with respect to plant, vehicles and other sources of pollution

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- 3.5.11 Gas boilers/CHP plant - Advanced combustion control on any boilers and CHP will be incorporated into the specification to minimise NOx emissions. In addition the design and location of the flues will aim to maximise dispersion of the emissions and reduce local air quality effects as far as is practicable. All plant will be subject to a regular service agreement to maintain operational efficiency and to minimise harmful emissions.
- 3.5.12 Road traffic - Private car use will be discouraged via the low ratio of residential parking spaces provided, and through Travel Plan/s. In the Air Quality Assessment concentrations of nitrogen dioxide, PM10 and PM2.5 associated with road traffic emissions have been predicted across the study area, and within the Proposed Development itself. The effects are negligible and are considered to be insignificant.
- 3.5.13 Construction - measures in line with the GLA: Best Practice Guidance for the Control of Dust and Emissions from Construction and Demolition will be applied.
- 3.5.14 Internal air pollution – Air intakes/outlets will avoid major sources of external pollution in order to avoid internal air pollution. For the most part the air intakes for the ventilation systems will be a

roof levels. Many dwellings will include mechanical ventilation with heat recovery systems (MVHR), particularly those along main roads and railways, this will improve control of air quality.

- 3.5.15 Air Quality Assessment – the results of the air quality assessment are provided in the Environmental Statement. In summary: concentrations of nitrogen dioxide, PM10 and PM2.5 associated with road traffic emissions have been predicted across the study area, and within the Proposed Development itself. The effects are negligible and are considered to be insignificant. Emissions arising from the energy centre and the SELCHP plant would have a negligible effect, and are judged to be insignificant. The Proposed Development would not materially affect the Air Quality Management Area, nor would it interfere with the Council's Air Quality Action Plan. It is consistent with all local, regional and national policies. With the proposed mitigation it is concluded that there are no air quality constraints to the Proposed Development.

Water Pollution and Flooding

Mayor's Essential Standard

- 3.5.16 Use Sustainable Drainage Systems (SDS) measures, wherever practical. Achieve 50% attenuation of the undeveloped site's surface water run off at peak times.

Mayor's Preferred Standard

- 3.5.17 Achieve 100% attenuation of the undeveloped site's surface water run off at peak times.

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- 3.5.18 The hard standing on site will not increase as part of the proposals, however in line with both the Mayor's Standard and the Lewisham and Thames Strategic Flood Risk Assessment the surface water runoff rates are to be reduced by at least 50% when compared to the existing situation with appropriate attenuation provided.
- 3.5.19 The Development Specification sets out Renewal's commitments to achieve this goal by introduction of extensive sustainable drainage (SUDS) techniques into the design of the development. SUDS seek to reduce the quantity and rate of runoff using natural drainage techniques, which also bring advantages in runoff quality improvement and ecological and amenity value of the drainage features.
- 3.5.20 The techniques proposed in the Development Specification are as follows:
- 3.5.21 Extensive use of green and brown roofs: The use of green and brown roofs is the ultimate in source control, replicating the effects of rainfall falling on natural ground but at high level. The green and brown roofs will reduce both the quantity and the volume of rainfall runoff from roof areas, whilst also providing the opportunity for rooftop gardens with their ecological and amenity benefits.
- 3.5.22 Permeable Paving: Permeable paving will be minimised where possible to collect runoff from paved areas instead of conventional gullies and channels. The paving will drain to a granular

substrate that will provide alternative storage and remove oils and hydrocarbons from the runoff, or where appropriate, will drain through the base of the substrate by infiltration into the underlying ground. In areas where ground conditions are not suitable for infiltration drainage, the permeable pavement structure will be wrapped in a sealed membrane and outflows collected through low capacity fin drains, which will then discharge to the piped drainage system and combined sewers.

- 3.5.23 Open Water Features: The design of the public realm will accommodate open water features interconnected with the SUDS drainage system where appropriate reflecting the canal heritage of the Site. These features will be designed as SUDS systems, focused on providing attenuation storage and amenity value to the system. Ecological and water quality improvement features will be incorporated to the extent appropriate for the particular public realm setting.
- 3.5.24 The combination of these SUDS measures will provide the Proposed Development with an effective drainage system that meets the planning policy requirements set out in the SFRA and adds significant value to the amenity and ecology of the public realm and roofscape. This will contribute to the enhancement of the Proposed Development and is not necessarily a requirement to overcome the likely significant effects of the Proposed Development.

Microclimate

Mayor's Essential Standard

- 3.5.25 Mitigate any negative impact on the microclimate of existing surrounding public realm and buildings to meet the Lawson criteria for wind comfort and safety.

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- 3.5.26 The Daylight and Sunlight Microclimate chapter of the Environmental Statement assesses the likely significant effects of the Proposed Development on the environment with regard to daylight and sunlight availability to nearby receptors. It also addresses the overshadowing effects to nearby existing open spaces. The baseline Site conditions, which features many low rise buildings and open, unobstructed areas due to the presence of wide railway tracks means that the Proposed Development which aims to achieve the regeneration and associated significant development for which the Site is allocated will inevitably result in some effect on daylighting/sunlighting to the neighbouring properties. The Proposed Development seeks to mitigate effects on daylight and sunlight availability to neighbouring properties by the positioning reduced bulk and massing to the south of the Site, where the most sensitive environmental receptors are located. Advice has been given on the evolving design process, in order to assist in balancing the dual concerns of achieving the significant regenerative development for which the site is allocated against the need to consider the daylight, sunlight and overshadowing to adjacent existing properties.
- 3.5.27 The Wind Microclimate Chapter of the Environmental Statement assesses the likely significant environmental effect of the Proposed Development on the wind microclimate within and around the

Site. The assessment has highlighted opportunities for further development of the wind mitigation measures at detailed design to further enhance wind conditions for proposed pedestrian activities. With development and implementation of the further mitigation measures, it is expected that suitable conditions would be created for planned recreational activities and the residual effects of the Proposed Development would be negligible.

3.6 Ensuring Developments are Comfortable and Secure for Users

3.6.1 This section formally outlines how Surrey Canal will practically meet the objectives of Section 2.5 (Ensure developments are comfortable and secure for users) of the Mayor of London's Supplementary Planning Guidance on Sustainable Design and Construction, May 2006.

Mayor's Essential Standard

3.6.2 Indoor comfort – Inert or low emission finishes, construction materials, carpets and furnishings should be used wherever practical. All plant and machinery should be accessible for easy maintenance.

3.6.3 Design inclusive environments – All developments should meet the principles of inclusive design, adopting the principles of SPG 'Accessible London: achieving an inclusive environment'. All residential development should meet Lifetime Home Standards and 10% should meet wheelchair accessibility standards (London Plan Policy 3A.4).

3.6.4 Secure design – Developments should incorporate principles of 'secured by design'.

Mayor's Preferred Standard

3.6.5 Indoor comfort – Design buildings for indoor comfort of users.

3.6.6 Design inclusive environments – All residential developments should be designed to meet wheelchair accessibility standards or be easily adaptable to meet wheelchair standards. Developments should be fully e-enabled.

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3.6.7 Indoor comfort – This is an outline planning application, and finishes and materials have not yet been determined. Nevertheless, preference will be given to the selection of paints, floor finishes, adhesives and varnishes with a low volatile organic content (VOC). Preference will be given to the specification of inert materials such as glass, ceramics and stone as they are non toxic and easily re-used or recycled.

3.6.8 Designing inclusive environments –the Proposed Development will meet the principles of inclusive design, All residential apartments will be 100% lifetime homes compliant and the wheelchair units will be wheelchair accessible or easily adaptable for wheelchair users, and will accord with the standards set out in the South East London Housing Partnership Wheelchair Homes Design Guide

(2009). The following measures have also been introduced to ensure that those with mobility difficulties can access all areas of Surrey Canal:

- pedestrian friendly environment;
- wheelchair accessible lifts;
- step free access to all buildings;
- pavements with tactile surfacing;
- carefully designed landscaping.

3.6.9 Secure design – The Proposed Development will be in accordance with the principles of ‘Secure by Design’, in particular passive surveillance of streets, communal spaces and parking will be incorporated. The proposed buildings by their nature are inherently secure.

3.6.10 Access to plant – All plant and machinery will be easily accessible for maintenance.

3.7 Conservation and Enhancement of the Natural Environment and Biodiversity

3.7.1 This section formally outlines how Surrey Canal will practically meet the objectives of Section 2.6 (Conserve and enhance the natural environment and biodiversity) of the Mayor of London’s Supplementary Planning Guidance on Sustainable Design and Construction, May 2006.

Open Space

Mayor’s Essential Standard

3.7.2 No net loss of publicly accessible open space.

3.7.3 Create appropriate new open, green, publicly accessible spaces where these can redress identified areas of deficiency of public space

Mayor’s Preferred Standard

3.7.4 Net gain of publicly accessible open space.

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3.7.5 Open space – The proposals will not result in a net loss of publicly accessible open space and will add an amount of new high quality publicly accessible open space.

3.7.6 To ensure that Surrey Canal becomes a vibrant new neighbourhood it has been important to consider the relationship between the buildings and the public realm, which encompasses the streets, squares and open spaces. The public realm strategy for Surrey Canal will: improve permeability through the development and strengthen the connectivity across the site and to the surrounding local destinations; create a sequence of high quality open spaces that will run through

the site and be a positive resource for the neighbourhood and surrounding areas; respond to the flux in population between match days and non match days; ensure that the spaces around the buildings are designed to allow access and enjoyment for everyone, safely and without prejudice; contribute and provide a catalyst to wider urban regeneration and create a sustainable public and private realm incorporating SUDS and biodiverse planting.

3.7.7 Currently Bridgehouse Meadows is an open space that contains no quality amenities for local residents. It is difficult to access, especially for those in wheelchairs, lacks overlooking and natural surveillance, and is poorly lit. As a result the area is little used and feels unsafe.

3.7.8 Renewal are committed to enhance Bridgehouse Meadows, creating a new park environment for the public that will address the above issues and create a new and meaningful resource for the public to enjoy. Routes through the park will be identified in order to link cycle and pedestrian routes creating better links from north to south and east to west.

Natural Environment and Biodiversity

Mayor's Essential Standard

3.7.9 No net loss of biodiversity and access to nature on the development site. Reduction in areas of deficiency in access to nature.

Mayor's Preferred Standard

3.7.10 Net gain of biodiversity and access to nature on the development site.

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3.7.11 New trees and shrub planting would be present throughout the Proposed Development, with key areas including Bolina Gardens, Timber Wharf, roadside verges and boundary features. New tree / shrub planting within the Proposed Development would be based around native species and those of known value to a range of faunal species.

3.7.12 The planting design will enhance the design of the public spaces and help to define the routes. Plants will be selected for their ability to thrive in the growing conditions on site and will include a mixture of evergreen and herbaceous plants. The Site wide planting design will increase the number of plant species that is currently found on site and will include native species and will promote site wide biodiversity.

3.7.13 The new planting associated with the Proposed Development will link with habitat associated with the railway embankments, widening and enhancing the vegetated corridor for the benefit of wildlife in general.

3.7.14 Green / brown roofs will be present on the vast majority of buildings. These will provide a significant increase in the extent and quality of wildlife habitat within the Site. Eighteen areas of green / brown roof are proposed which will be focussed upon providing valuable benefits to wildlife including invertebrates and birds, especially Black Redstart. The extent of these areas is shown on

Parameter Plan number 012 titled “landscape and Open Space Plan – Roofs”. The remaining balance of the green roof areas will deliver additional open space provision for new residents, but will also include for planting of benefit to faunal species including birds and invertebrates.

- 3.7.15 A detailed Ecological Management Plan would be produced and agreed with London Borough of Lewisham. This would detail the necessary management prescriptions for all habitats within the Proposed Development and with special regard to enhancements for bats, birds (including Black Redstart) and invertebrates.

3.8 Promoting Sustainable Waste Behaviour

- 3.8.1 This section formally outlines how Surrey Canal will practically meet the objectives of Section 2.7 (Promoting sustainable waste behaviour) of the Mayor of London’s Supplementary Planning Guidance on Sustainable Design and Construction, May 2006.

Waste

Mayor’s Essential Standard

- 3.8.2 Minimise, reuse and recycle demolition waste
- 3.8.3 Specify use of reused or recycled construction materials
- 3.8.4 Provide facilities to recycle or compost at least 25% of household waste by means of separated dedicated storage space. By 2010 this should rise to 35%.
- 3.8.5 Recycling facilities should be as easy to access as waste facilities

Mayor’s Preferred Standard

- 3.8.6 Use prefabricated and standardised modulation components to minimise waste. If this is not feasible use low waste fabrication techniques
- 3.8.7 Provide facilities to recycle or compost at least 35% of household waste. By 2015 this should rise to 60%.
- 3.8.8 Provide facilities to recycle 70% of commercial and industrial waste by 2020.
- 3.8.9 Incorporation of or access to new waste recovery facilities (anaerobic digestion, pyrolysis/gasification) especially to provide a renewable source of energy eg methane or hydrogen.

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- 3.8.10 Demolition waste – where appropriate all metal, timber and plasterboard contained within the buildings will be carefully removed and taken away for recycling prior to the main demolition. All masonry, where appropriate, will be crushed on site and can be reused for general fill across the

Site. The concrete slabs will be crushed and may be suitable for reuse on site as part of a piling mat and all reinforcing bars will be removed for recycling.

- 3.8.11 Recycling facilities - The Proposed Development makes use of a wide range of initiatives and new technologies to minimize environmental impact, and the waste hierarchy of reuse, recycle, recover and disposal is being followed. The ENVAC Automated Waste Collection System, an underground waste collection system, will be installed across the Site and connected to all homes and non-residential units, facilitating recycling and composting with a potential to double the current rate of recycling in the borough. The system will be directly connected to a central waste collection station. Refuse would then ideally be transported to SELCHP for disposal and materials for recycling would be taken to external reprocessors. The system will reduce the number of refuse vehicle collection trips, minimize carbon dioxide emissions and maximise diversion from landfill.
- 3.8.12 With regards to internal storage of recyclable waste, residents would be responsible for segregating and temporarily storing their refuse and recycling within their properties. To help to maximise the Proposed Development's segregation of recyclable materials, sufficient internal storage space would be designed within each unit's kitchen or utility area. The home user guide will encourage residents to increase reuse and recycling. To promote reuse the addition of an on-site 'Swap Shop' is being considered.
- 3.8.13 Modern methods of construction will be preferred for construction to reduce site waste. A Site Waste Management Plan will be developed to reduce and recycle construction waste in line with best practice standards.

3.9 Sustainable Construction

- 3.9.1 This section formally outlines how Surrey Canal will practically meet the objectives of Section 3 (Sustainable Construction), of the Mayor of London's Supplementary Planning Guidance on Sustainable Design and Construction May 2006.

Mayor's Essential Standard

- 3.9.2 Reduce waste during construction and demolition.
- 3.9.3 Reduce risk of statutory nuisance to neighbouring properties as much as possible through site management.
- 3.9.4 All developers should consider and comply with the Mayor and ALG's London BPG on the control of dust and emissions during construction and demolition.
- 3.9.5 Comply with protected species legislation.
- 3.9.6 All developers should sign up to the relevant Considerate Constructors Scheme or in the City of London to the Considerate Contractor Scheme.

Mayor's Preferred Standard

- 3.9.7 All contractors should be required by tender requirements to sign up to the Mayor and ALG's London BPG on the control of dust emissions during construction and demolition.
- 3.9.8 All contractors should be required by tender requirements to sign up to the relevant Considerate Constructors Scheme or in the City of London to the Considerate Contractor Scheme.

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- 3.9.9 A Site Waste Management Plan/s will be produced and implemented. This will require the monitoring of waste generated onsite and the setting of targets to promote resource efficiency in accordance with the relevant guidance. The Site Waste Management Plan/s will include:
- Procedures and commitments for reducing waste generated on site in accordance with the relevant guidance; and
 - Procedures and commitments to sort, reuse and recycle construction waste either on-site or through a licensed external contractor.
- 3.9.10 Demolition – It is expected that all metal, timber and plasterboard contained within the buildings will be carefully removed and taken away for recycling prior to the main demolition. It is anticipated that all masonry will be crushed on site and can be reused for general fill across the Site. The concrete slabs will be crushed and may be suitable for reuse on Site as part of a piling mat and all reinforcing bars will be removed for recycling.
- 3.9.11 It is anticipated that all major demolition works will be undertaken using a long reach excavator machine and that all works will be undertaken with sufficient consideration to minimise the impact of demolition on the environment. All demolition works will also be undertaken in accordance with the guidelines set out in the Mayor of London's Best Practice Guidance entitled "The Control of dust and emissions from construction and demolition".
- 3.9.12 The Main Contractors who are appointed for the construction works to the various development plots will be required to register to and adopt the construction best practices associated with the Construction Confederation's Considerate Constructors Scheme. Their performance will be monitored by the Estate Management team and will also be assessed as part of the Main Contractor's contractual obligations to deliver the works to the Code for Sustainable Homes Level 4.
- 3.9.13 Noise – The Noise and Vibration Chapter of the Environmental Statement assesses the potential noise and vibration effects from demolition and construction to be local, moderate and temporary.
- 3.9.14 Dust and mud – Construction activities will be subject to a Site Wide Code of Construction Practice (COCP) which will be prepared in consultation with London Borough of Lewisham.

3.9.15 The purpose of the COCP will be to ensure compliance with environmental and other relevant legislation and best practice standards. It is intended that the general principles to be applied across all phases of the Proposed Development will be set out in a Site Wide COCP.

3.9.16 The COCP will include the following environmental management control measures:

- Dust suppression and air quality controls
- Noise and vibration techniques
- Waste management and recycling strategy
- Results of site investigations and proposals to deal with environmental issues
- Site management requirements to deal with environmental issues
- Construction logistic proposals
- Ecology proposals

3.9.17 The Main Contractor for each development plot will be responsible for providing appropriate wash down facilities and easily cleaned hard standings for vehicles entering or leaving their site. This will minimise any mud or detritus being deposited on the public highways. All vehicle cleaning will be undertaken within the construction site. The Main Contractor for each site will also be responsible for undertaking regular roadsweeping on the roads which are immediately adjacent to the Site.

4 Further Sustainability Aspects

4.1 Healthy & Active Life Styles

Sports as the driver

- 4.1.1 Lewisham's Local Development Framework Core Strategy identifies five strategic sites in the north of the Borough. Four of these are designated as Mixed Use Employment Locations with an emphasis on offices, workshops and other industrial and commercial uses. The sites are considered strategic as their redevelopment will collectively help to transform the physical and economical environment in one of the Borough's most deprived areas; with a significant number of new homes, a wide range of economic, employment and training opportunities and improvements to the public infrastructure.
- 0.2 With 50,000 sq metres of non-residential space to work with, Renewal knew that the key to creating a successful, viable and self sustainable mixed use development lay in creating a unique identity with a distinct offer, which was developed out of its specific location and local needs.
- 0.3 Considering Millwall Football Club's long history in the area it seemed almost logical to start exploring the extension and expansion of the sporting offer. The idea of the Sports Village was borne about some years ago when Millwall Football Club started to look at the comprehensive redevelopment of the Stadium and the surrounding area.
- 0.4 Renewal's research showed that this part of the Borough of Lewisham and indeed this part of South East London was lacking in sporting facilities available to the public. Thus sporting participation rates were well below the London and National averages.
- 0.5 Renewal approached a number of representatives from the National Governing Bodies of Sport, all of whom were very interested in being represented in this area. In close partnership with London Borough of Lewisham and Sport England, Renewal commissioned a Needs and Evidence report for the location of Indoor sporting facilities at this location which showed that:
- There is little provision of sporting facilities in the North of the Borough
 - Participation levels were being severely restricted by the lack of facilities
 - Sports participation in North Lewisham is below the national average (18% vs. 22%)
 - Facility satisfaction levels are 56% vs. a national of 68%
 - There is a high level of demand for indoor sports facilities
- 0.6 The Sports facilities needed in this area coincided with the LB Lewisham and LB Southwark Focus Sports.
- 0.7 Since the report was published, Renewal have been actively working in close partnership with the London Borough of Lewisham, Sport England and the National Governing Bodies of Sport, to

jointly deliver a major new regional indoor centre for sport to serve the local community, local schools, local clubs as well as the wider areas of Southeast London and beyond.

0.8 The sports focusing lies on are basketball, netball, badminton, football, cricket, climbing, boxing, gymnastics and table tennis. Other facilities will include a leisure centre with pool and a day spa.

0.9 Above the new sporting facilities, Renewal is committed to working in partnership with Millwall Football Club, in order to create a better setting for the football club, with improved access and new transport links.

4.1 Sustainable Community

4.1.1 The Surrey Canal Site is a complex organism. Here sustainability is not only about the reduction of energy, CO₂, water consumption and waste. Sustainability is also about beauty, safety, security and happiness. Sustainability is a socially, economically and environmentally conscious balance from a short to medium to long term perspective.

4.1.2 The purpose of a masterplan with a strategic vision for the Site is to ensure positive change. From a long term perspective it is known that the priorities of the Site will almost certainly change over the lifetime of the site and its buildings. But we have to make an informed, educated and consensual guess at what the fundamental objectives are which are likely to prevail.

4.1.3 The Proposed Development will carefully negotiate the objectives of the long term vision and consider the social, economic and environmental implications. The proposal aims at delivering:

- A balance of social, economic and environmental needs.
- The creation of an open, beautiful, robust, healthy and just environment.
- The creation of sustainable employment opportunities.
- The creation of a clear and distinct cultural identity for the new neighbourhood, embedded in its larger context.
- The development of buildings and places which are inherently flexible to meet the continuously changing needs and requirements of its population.
- The consideration of long term management and maintenance of all places and buildings
- The evaluation of opportunities for the refurbishment of existing buildings.
- The development of site responsive passive design for buildings considering the orientation to the sun, the relation of building height to depth and overshadowing, the relation of buildings to open space, etc.

- A thermal and energy masterplan, promoting self-sufficiency and aiming at minimizing carbon emissions and the waste of heat and energy.
- A landscape plan which pays respect to the site, green corridors and the natural habitat.
- The improvement of permeability, links, connectivity and provision of public transport.

4.2 Job Creation

4.2.1. From the outset, Renewal had the vision to create a new piece of London, a truly energetic, mixed use development where jobs are really self-sustainable.

4.2.2 In considering the vitality and viability of this new place in London and the time zones of activity across the scheme the retail environments were carefully explored with our approach having three clear stages:

Design

4.2.3 The retail space provides engaging active frontages to the prime connections and public spaces but equally needs to work financially and operationally. Units will be designed to provide 6m – 12m unit depths with flexible frontages to cater for a wide range of potential occupiers. Where possible units will be served from a commercial corridor at the rear of the units, accessed through the car park zones to limit commercial vehicle activity within the public landscape to a minimum.

Uses

4.2.4 In the process of build out, sales and letting, many schemes seek merely to fill the space. At Surrey Canal the creation of the space will come second to the creation of a sustainable retail micro community across each of the phases and identities of the scheme. The mix of uses captured in our proposal has been derived from all the 'A' Class uses and fed into the larger macro retail community that compliments the sports, health, and business uses. We carefully considered the users' needs without losing the identity of each zone but maintaining a balance of activity that compliments its primary use.

4.2.5 The Renewal vision is formed by a real life approach, imagining a 'person on the street' walking through each space, either as a resident or as a visitor. Renewal carefully considered the users' needs without losing the identity of each zone but maintaining a balance of activity that complement its primary use. For example:

- Station Square – As one of the main arrival points, the retail within Excelsior Works provide for all of the commuter community, the creative community, and the residential community with a potential mix of occupiers including a café, shoe repairers, locksmith, florists, newsagents, dry cleaners, taxi office and estate management centre along with a mid size super market, that sit comfortably with the proposed creative industry hub. The

retail provides active frontages internally to the square and onto Surrey Canal Road and serves the Multi Faith Centre.

- Excelsior Court – Driven by the excellent arts department at Goldsmiths University and the work of Deptford X Arts festival, the areas of Deptford and New Cross have a rapidly expanding artistic community, many of whom are in desperate need of specialist artistic incubation space which is at a premium in this area. Renewal, having talked to organisations such as Cockpit Arts, saw the potential of Surrey Canal for an arts incubation centre utilising some of the older buildings on the site and creating an attractive creative quarter.
- Stadium Square – A focal point of the Proposed Development, alive from early in the morning to late at night where the retail sits adjacent to the entrances to the sports facilities, where the Stadium and Stadium Avenue with the hotel, business start up centre and the Multifith Centre at Orion generate a high level of pedestrian flow. As such Renewal has focused on a continued leisure theme and maximised active frontage uses provided by restaurants, bars, possible takeaways, delicatessen, café, and sports retail.
- Bolina Gardens – A continuation of the sports health and wellbeing ethos but quieter and more relaxed with the retail uses being complimentary to the health and nursery including uses such as hairdressers, coffee shop, boutique retail, estate agents that engage with Bolina Gardens as a primary family landscape and meeting place ensuring a safe environment. To the north of Bolina Gardens there is again provision of similar arrival retail for South Bermondsey Station, for example, a newsagents, café, small convenience store that also serves the residential community.

5 Conclusion

5.1.1 The importance of the sustainability focus in national, regional and local planning policies and planning guidance, as well as Renewal's own ambition, has been at the forefront of the design evolution of the Proposed Development. The following sustainable design and construction measures will be included in the Proposed Development:

Re-use land and buildings

5.1.2 Surrey Canal sits in its entirety on previously developed land and some existing buildings are integrated into the Proposed Development.

Conserve energy, materials, water and other resources

5.1.3 The Proposed Development will have high standards of energy and water efficiency, the use of a communal heat network connected to SELCHP and the intention to use sustainable construction materials. Promotion of sustainable forms of transport through provision for cycle parking, car clubs, electric vehicle charging and greater permeability, in particular the creation of a pedestrian friendly neighbourhood and addition of a new station to encourage greater public transport use.

Ensure designs make the most of natural systems both within and around the building

5.1.4 The Proposed Development has key principles of: high quality urban design; utilising Passive Solar Design; and making maximum use of natural ventilation and shading. The majority of dwellings will be dual aspect thus giving good natural daylight penetration.

Reduce the impacts of noise, pollution, flooding and micro-climatic effects

5.1.5 To account for future climate change and mitigate for the effects of the urban heat island all the raised courtyard roof areas will be a mixture of extensive and intensive green roofs. Street pattern and building volumes have been designed to create a sheltered internal environment. The public and private realm is designed to incorporate a high level of vegetation and trees which will assist in improving the micro-climate. Sustainable Drainage Systems (SuDS) are to be implemented within the surface water drainage arrangements to manage, store and treat surface water flows and volumes prior to discharge.

Ensure developments are comfortable and secure for users

5.1.6 The Proposed Development will meet the principles of inclusive design and will be 100% lifetime homes compliant. The passive surveillance of streets, communal spaces and parking will be incorporated. Intensive Green Roofs will be provided at raised courtyard level as amenity space for residents. A privacy buffer is to be designed around residential accommodation at raised courtyard level.

Conserve and enhance the natural environment, particularly in relation to biodiversity

- 5.1.7 The Site wide planting design will increase the number of plant species that is currently found on site and will include native species and will promote site wide biodiversity.
- 5.1.8 The Proposed Development makes use of a wide range of initiatives and new technologies to minimize environmental impact, and the waste hierarchy of reuse, recycle, recover and disposal is being followed. The ENVAC Automated Waste Collection System, an underground waste collection system, will be installed across the Site and connected to all homes and non-residential units, facilitating recycling and composting with a potential to double the current rate of recycling in the borough. Not only will the district heating system connection to SELCHP provide low carbon heat to the Proposed Development it will also add the potential to link up other nearby areas to the communal heat network in the future.

Healthy & Active Life Styles

- 5.1.9 Sport and health are key foundations of the Proposed Development. A centre for national and regional sporting excellence is proposed and Renewal are to work with Sport England, local colleges, national sporting associations, and building on the existing facilities on-site in the widest sporting and community sense.
- 5.1.10 In line with new government guidelines, targeting rising obesity levels to better the fitness of a growing population, Surrey Canal will become a precedent for communities with similar principles to grow and flourish elsewhere. Building communities with sport at their heart works to create an urban fabric that supports fit, happy and healthy people.

Convenience of proximity

- 5.1.11 The Proposed Development is a contemporary urban addition to the plethora of villages that is Greater London – a place with a strong sense of community, hosting a myriad of local services and facilities within walking distance. The wide range of proposed uses and activities will offer up a myriad of employment options and provide opportunities for residents to work where they live.
- 5.1.12 Apart from establishing a strong sports related offer, the Proposed Development will in addition include a range of components that help build a diverse, vibrant and successful 21st century village, providing everyday convenience as well as those particularities that set Surrey Canal apart, be it the best chippy in Lewisham or an organic food festival.
- 5.1.13 In relation to the Draft Replacement London Plan, Surrey Canal exhibits the properties of **Sustainable Communities**. It is a place where people want to live and work, now and in the future; that meet the diverse needs of existing and future residents, are sensitive to their environment and contribute to a high quality of life.