Environmental Statement

Non-Technical Summary addendum, July 2011

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PART A

1. Introduction

1.1 This Non-Technical Summary of the Environmental Statement (ES) has been prepared on behalf of Renewal New Bermondsey Two Ltd (Renewal) to accompany the outline planning application (Planning Application) to the London Borough of Lewisham (LBL) for the comprehensive redevelopment of the Surrey Canal Site (the Site). The Non-Technical Summary explains the likely significant environmental effects of the Proposed Development, as amended, as set out in the Environmental Statement prepared in support of the Planning Application,

1.2 The Planning Application has been submitted in outline, seeking approval for a series of Parameters and Principles for the Proposed Development. The detailed design of the Proposed Development will be the subject of reserved matters applications to LBL in the future.

1.3 The Application Site comprises 10.28 hectares of previously developed land. It is bounded by train lines and embankments to the north, east and west of the Site and Rollins Street to the south. The Application Site includes the Sites of Excelsior Works; Rollins Street Jewson's; The Orion Industrial Estate; a warehouse and land to the south of Stockholm Road; Enterprise Industrial Estate; the Bolina Industrial Estate; the Lions Centre, and Millwall Football Stadium and surrounding land to the south east and south west, within LB Lewisham.

1.3 The Proposed Development seeks outline planning permission for up to 240,000 sqm of mixed use development, as described in Part B below. The full description of the Proposed Development in its current outline form is set out in a document called The Development Specification (Technical Appendix 2.1A of the ES Addendum) and is shown on a series of 'Parameter Plans', both of which are submitted with this Planning Application.

2. Methodology

2.1 All consultants involved in the preparation of the Environmental Statement have sought to use the same terms in order to define the likely significant effects of the Proposed Development in order to ensure continuity of approach. In each chapter of the ES, a description of each effect is provided followed by a characterisation of the effect in terms of its nature and magnitude or physical extent. The magnitude or physical extent of effects has then been quantified wherever possible. The nature of predicted effects has been identified and described (as appropriate), using one or more of the following terms:

- Beneficial or adverse;
- Direct or indirect;
- Short, medium or long term;

- Permanent or temporary;
- Reversible or irreversible; and
- Cumulative.

2.2 Where an effect is quantified, thresholds are applied to determine the level of significance of an effect, unless otherwise stated. Where an effect cannot be quantified because of the nature or complexity of the effect, a subjective scale has been used to determine its significance.

2.3 The definition of the significance of an effect involves consideration, through data analysis, consultation and experience, of a number of aspects relating to the potential effect. The aspects which relate to the potential effect are as follows:

- Sensitivity of the effect;
- Magnitude of the effect;
- Frequency of the effect;
- Extent of the effect; and
- Timescale of the effect.

3. Application Site

3.1 The Application Site can be separated into 7 separate areas. These include:

- Land to the south east of Surrey Canal Road – Excelsior Works;
- Land to the south west of Surrey Canal Road – including Rollins Street Jewsons;
- Land to the north of Surrey Canal Road – The Orion Industrial Estate;
- Land to the south of Stockholm Road;
- Land to the north and west of Bolina Road – including Enterprise Industrial Estate;
- The Lions Centre, and
- Millwall Football Stadium and surrounding land to the south east and south west.

3.2 The Site is bounded by railway lines to the north, east and west and with the southern edge being defined by Rollins Street and part of Surrey Canal Road. The Site also straddles the planned East London Line phase 2 Extension from Dalston Junction to West Croydon and the proposed new station at Surrey Canal Road. Beyond the railway embankments to the north, lies the residential area of Silwood. To the west and south of the Site lies further residential development, interspersed with employment units within LB Southwark.

3.3 Historically, the Site and its surrounding area comprised an expanse of Victorian housing development associated with the industrial activity connected to the operation of the Grand Surrey Canal, which ran through the Site (along Surrey Canal Road), between Rotherhithe and Epsom.

3.4 The Site is now occupied by poor quality, low rise employment and warehousing units, some live/work and residential units to the south, Millwall FC Stadium (The New Den) and the Lions Centre which includes a sports hall and covered astro turf pitch and surface car parking.

Figure 1: Existing Site

PART B

4. Alternatives and Design Evolution

4.1 As part of the Environmental Impact Assessment (EIA) process, Renewal has considered various alternatives to the Proposed Development in order to ensure the most appropriate quantum and form of development is applied for as part of this Planning Application. The main alternatives which have been considered include the following:

- The 'no-development scenario';
- Alternative designs and site layouts for the Application Site; and
- Alternative sites for the Proposed Development.

4.2 The development of the Site forms part of the long term aims and objectives of the London Borough of Lewisham for comprehensive regeneration. The Site is allocated within the proposed Lewisham/Catford and New Cross Opportunity Area designation within the draft replacement London Plan 2009 and is a Strategic Site Allocation in the LB Lewisham LDF Core Strategy document (adopted June 2011).

4.3 There has been extensive consultation with regard to details of the development of the Site for a period of over two years culminating in the Proposed Development which is now defined within the aforementioned Parameter Plans and Development Specification Document. Various evolving design alternatives have been discussed over this period in consultation with planning officers at the London Borough of Lewisham, planning officers at the Greater London Authority, representatives of CABE, Millwall FC and at public exhibitions.

4.4 No alternative sites were considered for the Proposed Development having regard to the established regeneration objectives for this area of Lewisham through the various planning policy documents.

5. Description of Proposals

5.1 The Proposed Development seeks outline planning permission for the construction of up to 240,000 sqm of development. The floorspace will comprise of the following land uses:

- A1/A2 Retail: up to 3,000 sq m;
- A3/A4 Cafes/Restaurants and Drinking Establishments: up to 3,000 sq m;
- A5 Hot Food Takeways: up to 300 sq m;
- B1 Business: 10,000 sq m – 15,000 sqm;
- C1 Hotels: up to 15,000 sqm;
- C3 Residential: 150,000 sqm – 190,000 sqm (2,400 residential units);

- D1 Community: 400 sqm – 10,000 sqm; and
- D2 Leisure and Entertainment: 4,260 sq m - 15,800 sqm;

5.2 Each of the floorspace figures presented above are expressed in the Gross External Area (GEA). The total breakdown of floorspace presented above exceeds 240,000 sqm, however the actual development that will be constructed will not be over 240,000 sqm. This is to allow some flexibility in the relative mix of the Proposed Development as it comes forward over time. Also, notwithstanding the above, the total floorspace for non-residential uses will be no less than 37,000 sqm or 20% of the total floorspace provided, whichever is the lower.

5.3 The Proposed Development is proposed to be constructed over seventeen individual development plots of various sizes, as defined by the Parameter Plans. Each Plot will contain different land uses as also defined within the revised Parameter Plans.

5.4 The Proposed Development will incorporate areas of publicly accessible open space, including Bolina Gardens, which will be predominantly soft landscaped and Stadium Avenue to the south west of the Stadium which will be predominantly hard landscaped.

Figure 2: CGI of Proposed Scheme

6. Demolition and Construction

6.1 The demolition and construction processes to deliver the Proposed Development have been assessed in detail in terms of their likely significant effects. Chapter 6 of the Environmental Statement describes the construction processes. These include the following:

- The likely sequence of development;
- Description of the scheme construction works; and
- Proposed Demolition and Construction Commitments.

6.2 Phase 1 of the Proposed Development to be constructed is expected to be Orion (Phase 1A) and (Excelsior Buildings (Phase 1B). This is due to commence in early 2013 and post completion of East London Line Phase 2 works. The final date for completion of all construction works is around 2022.

6.3 Phase 1 has been assessed as being the "worst case" scenario with maximum impact on the sensitive receptors. An interim scenario (of a 'snapshot' in time during the construction of the Proposed Development) comprising the completed Phase 1 of the Proposed Development, with existing buildings retained across the remainder of the Application Site, has been assessed in detail in each ES chapters.

6.4 The construction works have been divided into five phases of construction and are summarised in the following table:

Phase	**Buildings**	**Infrastructure**	**Anticipated Commencement date**	**Anticipated Completion Date**
Phase 1A	Orion	New junction on to Surrey Canal Road and closure of existing crossover from Orion	Early 2013	Late 2014
Phase 1B	Excelsior 1-4	Road to east side of Excelsior and junction on to Surrey Canal Road	Early 2014	Late 2015
Phase 2	Timber Wharf 1	Road between Timber	Early 2016	Late 2017

	and 2	Wharf and Excelsior		
Phase 3	Stockholm 1 and 2	Table top junction across Surrey Canal Road linking Stockholm and Timber Wharf and new junction to east of Stockholm 2	Early 2017	Late 2018
Phase 4	Senegal 1 and 2 plus Stadium Avenue	Road through Stadium Avenue	Early 2018	Late 2019
Phase 5	Bolina North 1 and 2 and Bolina West	Bolina Road to be closed off and then reformed in new position	Early 2019	Late 2020
Phase 5A	Bolina East		Early 2021	Late 2022

PART C

7. Landscape, Townscape, Visual and Heritage

7.1 A Landscape, Townscape and Visual Impact Assessment (LTVIA) has been undertaken and this provides an assessment of the potential effects that the Proposed Development at Surrey Canal will have on the surrounding physical fabric of the area and on views of the Site from its surroundings. The assessment takes into account the skyline of London, conservation areas and sensitive aspects of the townscape, existing tall buildings and consented tall and large-scale developments that might also become visible in views in the future.

7.2 The Site's history and existing context has been appraised in relation to relevant policy and guidance. In summary, existing development within the Surrey Canal Site is fragmented and without a coherent urban character. Low-rise industrial buildings are separated visually and physically from their hinterland by high railway viaducts and embankments which enclose the north-east and west edges of the Site. Access to the Site through the railway viaducts is very limited and routes from the east, in particular, are dark, narrow and poorly overlooked. In the centre of the Site is the Millwall FC Stadium. The existing landscape is unexceptional and offers little beyond functional service spaces for the occupying industry and the Millwall FC Stadium. Millwall FC Stadium and two early 20th century industrial buildings on Rollins Street are to be retained within the Proposed Development.

7.3 There are no listed buildings or conservation areas in or adjoining the Site. Much of the character of the surrounding area is dominated by road and railway infrastructure. Areas of post-war high-rise estate housing, including the Silwood Estate, and more recent, low-rise housing of a suburban character, form much of the Site's context. Industrial uses around the Site are numerous, including the South East London Combined Heat and Power (SELCHP) plant; its 100m high chimney is one of few local landmarks. The area to the immediate south of the Site, where existing housing and the open space of Bridgehouse Meadows adjoin the southern edge of the Site, is the most sensitive to the scale and quality of the Proposed Development.

7.4 The suitability of the Proposed Development for this location has been tested using 30 different viewing positions, which were selected in consultation with the London Boroughs of Lewisham and Southwark. The views have been surveyed and verified, and computer generated outlines of the maximum and minimum parameters scheme have been inserted so that the massing, height and position of the proposals can be assessed. These views are assessed in the TVIA (Technical Appendices 7.1 and 7.1A of the ES) and the potential visual effect of the Proposed Development on London's skyline and the local streetscape is found to

be entirely beneficial overall. The degree of effect, having regard to each of the views assessed, ranges from neutral to major.

7.5 The TVIA demonstrates that the Proposed Development will relate well to local conservation areas and will not damage the setting of listed buildings in the vicinity. Where visible, the Proposed Development will improve or leave unharmed key views from local conservation areas, and will enhance considerably those views close to the Site, where the quality of the street environment is currently poor.

7.6 The placing of tall buildings on the Surrey Canal Site will improve the visibility of the Site from beyond the viaducts that currently screen it, marking Surrey Canal as a location of major regeneration and a regional centre of sporting excellence. Tall buildings at key points within the Proposed Development will create attractive landmarks for the existing and new stations and the Millwall FC Stadium, which will be visible from a distance within the Site and in the wider local area.

Figure 3: Illustrative Building Heights of the Proposed Scheme.

7.7 Public routes into and through the Site will be enhanced. The layout of the design for Surrey Canal will improve access north to the existing South Bermondsey Station and create new landscaped spaces linking South Bermondsey Station to the Millwall FC Stadium, the proposed Surrey Canal Overground Station and Bridgehouse Meadows. The permeability and connectivity of the Site will be increased.

7.8 The visual effect on existing residential areas to the south of the Site and the open space of Bridgehouse Meadows is appropriately scaled. Improved permeability into and through the Site will link the existing local community to the new facilities provided within the Application Site.

7.9 The Proposed Development is founded on sound urban design principles which will encourage the formation of a vibrant mixed-use neighbourhood. It has the potential to meet the highest architectural and urban design character and quality. The existing Site and its surroundings have a tough physical infrastructure-dominated character. The Proposed Development will create a new well-connected, mixed-use, sustainable neighbourhood with a distinctive character and sense of place.

7.10 Overall therefore it is considered that the Proposed Development will have a long term major beneficial effect in the long term.

7.11 A large number of trees on the Application Site will be lost to accommodate the Proposed Development. However, the Proposed Development involves a significant amount of new tree planting and because of the future use and permeability of the Site, these trees will be able to be more appreciated than as is the case with the existing development. Accordingly, there will be a moderate beneficial effect in the long term.

7.12 The most significant effects due to construction activities generally arise from the levelling and earthworks that would be undertaken in various parts of the Site and the construction of the Proposed Development and its associated infrastructure. These effects would be temporary and short term and will be reduced where possible through good site management and mitigated by the beneficial effects of the Proposed Development when built out.

8. Cultural Heritage

8.1 Assessments have been undertaken of the likely significant effects of the Proposed Development upon heritage assets (within a 1km radius of the Application Site) including built heritage and potential below ground archaeological remains.

8.2 The Assessments have considered the likely effects on heritage assets from all past periods of human activity up to the present day.

8.3 The archaeological assessment has established that there are no Scheduled Ancient Monuments or other designated archaeological remains located on or particularly near the Site. This Site is however located within an Archaeological Priory Zone (APZ), as identified by the Lewisham UDP Proposals Map.

8.4 The assessment concludes that the Application Site is considered to have a high potential for artefactual and palaeoenvironmental remains of the prehistoric periods. This potential derives from known peat deposits beneath the Site which are expected to date from the Bronze Age.

8.5 The demolition and construction phases (including during the interim ‘snapshot’ period) of the Proposed Development will impact on any such remains and the effect is considered to be of moderate/minor adverse significance.

8.6 It is therefore considered that the effects of the Proposed Development will be of significance and an archaeological mitigation strategy will be required. A phase of evaluation will be the first stage in any strategy to establish the date, character and condition of any archaeological remains present.

8.7 The built heritage assessment established there are no identified built heritage assets within the Site. There are 119 designated heritage assets within 1km of the Site boundary, both statutorily and locally listed. As part of the assessment, a selection of assets both designated and undesignated were indentified for particular study due to proximity to the Proposed Development, the grade of listing (applicable to listed buildings only) or relative significance of other assets and their intervisibility with the proposed tall buildings/Site.

8.8 The assessment concluded the majority of the above ground designated heritage assets which surround the Site will not be affected either directly or indirectly by the Proposed Development. However, a small number of heritage assets were identified as likely to undergo major/moderate impacts on significance.

8.9 As all impacts on below ground heritage would have occurred during the construction phase (no archaeological assets having been identified within the setting of the Site) archaeology is not considered with regard to operational effects.

8.10 The mitigation of harmful impacts on built heritage is largely achieved by means of design and community benefits arising. Of the assets assessed, only two will have any residual impacts - both minor. The remainder will sustain neutral impacts.

9. Microclimate – Sunlight and Daylight and Overshadowing

9.1 The baseline Site conditions feature many low rise buildings and open, unobstructed areas due to the abundant presence of wide railway tracks and low-rise buildings, which results in exceptional levels of daylight and/or sunlight in many cases, which will be reduced to levels more typical of context.

9.2 Advice has been given during the evolving design process and the lowest parts of the Development are located to the south of the Site, nearest the most sensitive environmental receptors.

9.3 During the demolition stages of phases 1A and 1B, there are likely to be increasing short-term beneficial daylight and sunlight effects on the identified sensitive receptors situated at Chilham House, Rollins House 9-24 Myers Lane and 1-18, 27-45, 49-57 and 58-69 Bridge Meadows. However, as they are short-term and temporary they are considered to be of minor beneficial significance. Once the demolition stages of phases 1A and 1B are complete, there are likely to be increasing adverse daylight and sunlight effects proportionate with the progressively larger bulk and mass of blocks Excelsior 1-4 and Orion built on the cleared Site

these adverse effects as a result of Site operations are predicted to be short-term and temporary and therefore considered to be of minor adverse significance.

9.4 In many cases, the effects to adjacent existing properties are considered to be negligible. The daylight assessments for the surrounding properties show greater effects to those windows situated in buildings which currently overlook low rise areas of the Site or which have deep overhanging balconies above which currently restricts their access to daylight and/or sunlight.

9.5 Overshadowing of Millwall FC Stadium has been assessed in the ES (January 2011) in terms of the BRE Report for the date of the 21 March. Further overshadowing assessments for the Millwall FC Stadium are provided in the ES Addendum which have been undertaken for both the 21 March and 21 December. The 21 December is the shortest day of the year and the day of the year when the sun is at its lowest elevation throughout the day. The shadows cast on this day are therefore considered to be the worst case scenario. The results exceed the BRE Guidelines recommendations and the effect of the Proposed Development on the permanent overshadowing to Millwall Football Club is considered to be negligible. When considering a football match played in the early afternoon, at 2pm or 3pm, the images for 21 December show that the pitch will already be nearly fully in shade by the existing Stadium structure. Any additional impact of the Proposed Development at this time is negligible.

Figure 4: Existing Stadium Overshadowing situation at 3pm 21 December

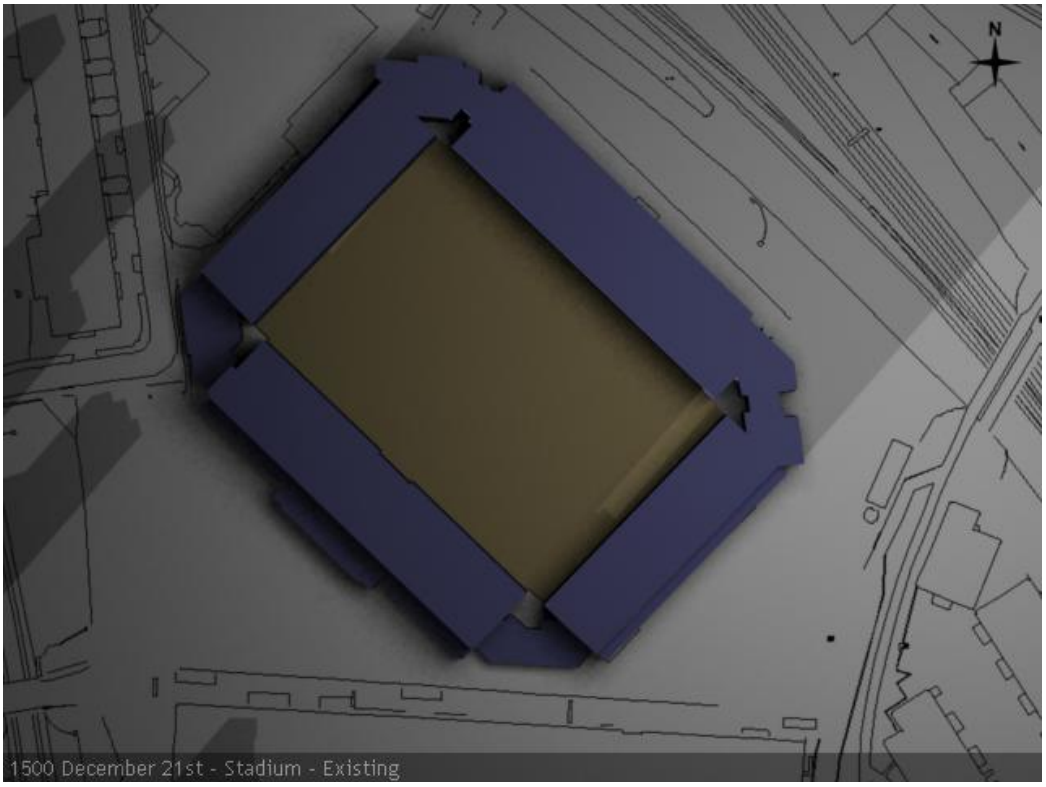
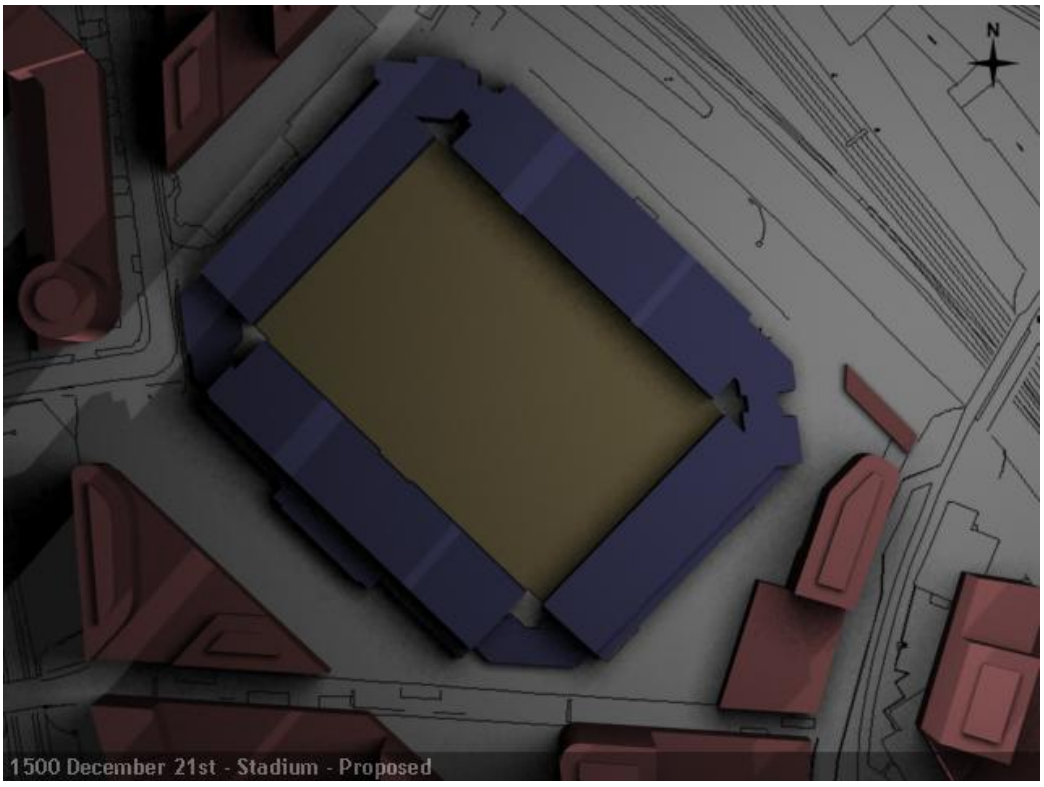


Figure 5: Proposed Development Stadium Overshadowing situation 3pm 21 December



9.6 No specific mitigation measures are necessary, as Guidelines consider that a greater level of reduction may be unavoidable in central urban areas and that different target values may be adopted, especially where neighbouring properties place an unfair burden.

9.7 It is also considered that the results need to be interpreted in the context of the wider and significant regenerative development and wider associated benefits which the Proposed Development aims to achieve.

10. Microclimate – Wind

10.1 Existing wind conditions in and around the Application Site are generally suitable for current pedestrian activities, comprising mainly pedestrian passage and access to existing buildings, including Millwall FC's Stadium, and would also be suitable for awaiting trains at the proposed Surrey Canal Road Station platforms.

10.2 Although the Proposed Development would introduce a number of tall buildings, the proposals presented in the revised Development Specification and Parameters Plans include features to alleviate potential significant environmental wind effects. These include substantial podiums, soft landscaping and rounded corner on key blocks. As a result, conditions across the Site would be suitable for pedestrian access to, and passage through, the Site in relation to recreational activities.

10.3 Building fronts currently envisaged as potential entrance locations would generally be suitable for pedestrian ingress/egress, and the potential environmental effect of the Proposed Development across much of the Site would thus not be significant. However, the potential residential entrances at the curved Southeast corner of Stockholm 1, the curved northwest corner of Stockholm 2, the western entrance to Senegal Way 2 and the southwest side of Orion would be suitable, ideally, only for leisurely strolling during winter. Although marginally windy for comfortable pedestrian ingress/egress during winter, conditions are expected to be tolerable for an entrance, Building fronts currently envisaged for active retail uses would generally be suitable for at least short periods of standing and would thus be suitable for window-shopping as well as pedestrian ingress/egress at entrances.

10.4 Within Bolina Gardens, conditions across the play area would be considered suitable for a children's play space. The remainder of the public space would be suitable for general recreational activities, including short periods of standing or sitting, from spring through to autumn, and would be suitable for a meeting point for example. The private open space on the North West side of Bolina West would be suitable for a children's play space or crèche, being suitable for recreational activities including short periods of standing or sitting from spring through to autumn. Along Stadium Avenue, between the Stadium Avenue plot and Millwall FC, wind conditions would be suitable for at least short periods of standing / sitting, and within the south-eastern half, would be suitable for prolonged periods of outdoor sitting

during at least summer if incidental seating were to be incorporated within the publicly accessible open space. Station Square would be suitable for general recreational activities, including short periods of standing or sitting, and would be suitable for a meeting point for example. The public space in front of Orion would be suitable for general recreational activities, including short periods of standing or sitting, from spring through to autumn, but may benefit from evolution of the detailed landscaping scheme to create similarly amenable conditions for a meeting point during winter.

10.5 With development and implementation of mitigation measures at detailed design, it is therefore expected that suitable conditions would be created for planned recreational activities.

10.6 The Proposed Development would have no significant environmental effects on wind conditions within the surrounding area during either construction or operation.

10.7 Additional potential cumulative environmental effects, with future surrounding development, would also be insignificant.

11. Socio-Economics and Population

Construction Effects

11.1 The construction of the Proposed Development will create new temporary, short-term jobs over an estimated construction period.

11.2 Measures have been implemented to ensure minimum negative impact on the operation of Millwall FC, and the effect of relocation of existing businesses has been assessed as negligible based on an assessment current vacancy in the local area and that re-provided on-site.

11.3 The socio-economic effects prior to mitigation on amenity, access and service disruption and environmental quality are considered to be of minor negative significance and temporary over the construction period.

11.4 At the interim ‘snapshot’ stage, following demolition and prior to construction, other existing employment uses will remain in operation as will the Millwall FC Stadium, although existing employment uses within land covered by phase one will have been lost, which comprise the Orion Industrial Estate and Excelsior Works (combined 87 surveyed jobs / 167 potential workspaces). The significance of the impacts at this point remain within the scale identified for the overall construction phase.

Operational Effects

11.4 Operational effects can be broken down into several different areas, as follows.

Demand for Housing

11.5 The Proposed Development includes the provision of up to 2, 400 residential units in a range of sizes and tenures. The provision of residential accommodation on the Site is therefore a major beneficial, long term effect of the Proposed Development.

Population

11.6 The resident population of the Proposed Development, following completion, will be up to approximately 3,849-4,205 people. The new population will create demand for community facilities, particularly primary health care and education.

Education

11.7 The increased residential population of the Proposed Development will result in an increase in demand for school places. This equates to approximately 70-205 primary aged children and 19-105 secondary aged children. The increase in demand for primary places is assessed to be a **minor adverse** effect at the local level.

11.8 The additional 19 - 105 secondary school aged children expected to be resident at the Proposed Development would be expected to be accommodated within the existing surplus of places across the Borough. The effect is assessed to be **negligible** at the district level and requires no mitigation.

Healthcare

11.8 The assessment indicates sufficient surplus within the local area to accommodate the additional demand generated by the Proposed Development. In addition, the Proposed Development will include an element of D1 Community floorspace dedicated to healthcare, which may include a GP surgery and sport-related medicine/physiotherapy.

Direct Operational Employment

11.9 It is expected that the Development represents an uplift of approximately 506-1,456 potential FTE workspaces across a range of floorspace uses, or a net uplift of 750-1,700 FTE jobs based on current surveyed employment on-site.

11.10 A significant proportion of the jobs will be provided by the new retail, hotel and leisure floorspace. These types of jobs can be expected to benefit existing communities in the local area as they tend to be occupied by local residents and can be expected to offer opportunities to people without high level qualifications.

11.11 This is assessed to be a major beneficial long-term effect at the local level and a moderate effect at a regional scale.

Additional Local Spending and Tourism

11.12 Overall, the spending calculated to be generated by the Proposed Development (household, employee and tourist/hotel), once operational, is in the region of up to around £45million per year. This is assessed to be a major beneficial long-term effect at the local level, moderate beneficial long-term effect at the district level and negligible at all other levels.

11.13 In addition to spending associated with the employees, visitors and tourists of the Proposed Development, there would also be an element of expenditure generated by the creation of Surrey Canal as a regionally-significant 'destination' for sports and leisure facilities, for example at local businesses and services both within the Proposed Development and nearby.

11.14 There is potential for the proposed hotel uses to draw in visitors and promote Surrey Canal as a regionally significant tourism destination and centre for leisure, sport and recreation, alongside the economic advantages associated with tourist spend and the provision of jobs.

Sport, Leisure and Recreation and Community

11.15 The Proposed Development at Surrey Canal will provide a significant amount of floorspace dedicated to formal sport and recreation, which will include (but is not limited to) a 6-lane cricket centre, 3-court basketball facilities, indoor 5-a-side football pitches, a leisure centre with swimming pool, gym, dance studios and day spa, gymnastics facilities, facilities for table tennis, a boxing club and museum and a climbing wall. The 2 x five a side pitches at the Millwall Community Scheme (Lions Centre) will be re-provided within the Site.

11.16 The Proposed Development includes the likely provision of a large Multifaith Centre on-site, which can have multiple social and cultural benefits.

11.17 This overall provision in an accessible, legible environment of public spaces can encourage residents and visitors to live healthier lifestyles and take part in community groups and events, helping to promote social inclusion and reduce health inequalities. As such, this element is expected to have a major beneficial effect on sport, recreation, leisure and community facilities in the local area.

Open Space and Playable Space

11.18 The Proposed Development offers a total of between 7,700 - 9,100 sqm of publicly accessible, safe and attractive open space, and between 9,645-13,695 sqm of private communal open space for residents. The public space includes an element of equipped play provision.

11.19 In addition, there are proposals to provide off-site provision for older children at Bridgehouse Meadows, around 100m to the south of the Site.

11.20 The provision of new, well-designed and equipped, safe and accessible areas for play is considered a moderate beneficial effect at the local scale.

Crime and Safety

11.21 Improvements to the Millwall FC Stadium building and surrounding public realm, and safeguarding of the long-term future of the area including significant community facilities such as the Millwall Community Scheme are considered beneficial aspects of the Proposed Development contributing to social inclusion, reduced fear of crime and an improved environment.

11.22 The Proposed Development marks a step change in the quality of the environment at Surrey Canal, with significant benefits in discouraging crime and reducing fear of crime. Collectively, these features to reduce opportunities for crime and improve perceptions of safety are assessed to be minor beneficial at the local level and negligible at all other levels.

12. Transport and Movement

12.1 The environmental effects of predicted changes in traffic volume have been assessed with the Proposed Development

12.2 In order to undertake a robust assessment of the environmental effects of the Proposed Development in transportation terms, Weekday and Saturday worst case land use scenarios were identified from the Development Specification. To compare the combined Baseline and Proposed Development with that of the Baseline, Proposed Development and Committed Developments, a number of development sites were defined as 'Committed Developments'.

12.3 An integral part of the Proposed Development will be the implementation of a Transport Strategy which has been prepared to ensure that sustainable modes of travel such as walking, cycling, public transport use and car sharing are encouraged and prioritised over single occupancy car travel.

Assessment of Environmental Effect

12.4 The IEA guidelines identify that the environmental effects which could arise from the Proposed Development relating to an increased vehicular travel demand would relate to:

- Severance;
- Driver delay;
- Pedestrian delay and amenity;
- Fear and intimidation;
- Accidents and road safety; and
- Dust and dirt.

12.5 Furthermore, additional demand for public transport services may also lead to increased levels of crowding on bus and rail services and this has been assessed.

12.6 The environmental effects have been assessed for each assessment criteria without mitigation, with mitigation and in terms of cumulative effect.

Without Mitigation

12.7 In terms of severance, the vehicle movement analysis indicates that the threshold level of increase will only be exceeded on Rollins Street and Ilderton Road north of the junction with the A2 Old Kent. Severance is also caused by the rail corridors to the east and particularly the west of the Site. The Proposed Development will see significant uplift in demand to use these routes resulting in natural surveillance. It is considered that the environmental effects relating to severance are minor adverse without the introduction of any mitigating measures.

12.8 It is considered that the environmental effects relating to driver delay on the study area are minor adverse based upon traffic generated by the Proposed Development.

12.9 The effects of the Proposed Development and layout on pedestrian delay and amenity will be minor beneficial. With regard to fear and intimidation the environmental effects of the Proposed Development are considered to be minor beneficial.

12.10 The increase in pedestrian and cycle trips created by the Proposed Development is expected to have a minor adverse effect on accidents and road safety within the vicinity of the Site.

12.11 The environmental effects of the Proposed Development, in relation to dust and dirt, can be classified as minor adverse.

12.12 Without mitigation the effects of the Proposed Development on public transport networks would be moderate adverse. This is because the Proposed Development will generate 67% of trips via walking/cycling and public transport with the majority of these trips predicted to be via public transport. This would place pressure on existing public transport which has a finite capacity in the peak hours.

12.13 The Site is accessed by a number of roads therefore construction impact is distributed across these routes. The effects of construction traffic are therefore categorised as moderate adverse.

Mitigation

12.14 Measures that are proposed to mitigate the adverse environmental effects of the Proposed Development on the transport networks have been identified. These include the delivery of a new station at Surrey Canal Road, walking and cycling improvements, new bus service, and a construction and logistics plan. The mitigation measures will mitigate the likely significant effect of the Proposed Development on the transport networks.

12.15 Measures to improve crossings on local roads and under the railway are considered to provide a significant improvement to existing pedestrian severance for existing and future

residents and for people working in the area. It is therefore considered that the residual environmental effects for severance are minor beneficial.

12.16 New crossing facilities on Surrey Canal Road and the potential enhancements to the routes via Bolina Road and the non-vehicular link adjacent to the East London Line extension improvements will create more attractive and direct connection to the surrounding area and nearby rails stations at South Bermondsey and Surrey Quays of foot. The environmental effect on pedestrian delay and amenity is therefore considered to be a moderate beneficial.

12.17 Walking and cycling measures and appropriate management to ensure that service vehicles will not use key pedestrian areas controlled via signage and local enforcement will reduce the vehicle dominance thus minimising fear and intimidation. It is concluded that with the proposed mitigation measures, the effects can be classified as a moderate beneficial for fear and intimidation.

12.18 Improved pedestrian and cycle connections between the Proposed Development and the wider routes surrounding the Application Site will increase their attractiveness to existing and future users. This will therefore reduce potential conflict between pedestrian, cyclists and traffic. Therefore, it is expected that the development mitigation measures will be minor beneficial relating to accidents and road safety.

12.19 Impacts experienced during the construction period will be managed through the appropriate construction management procedure. It is concluded that this approach will classify this potential effect as a 'minor positive' effect relating to dust and dirt.

12.20 There will be an agreed level of public transport improvements provided by the development to the benefit of the Site and the locality. A Framework Travel Plan identifies a number of measures that could be implemented on a site wide basis to reduce reliance on the car. The Framework Travel Plan sets targets for achieving low levels of private vehicle use to and from the site.

Cumulative Impact

12.21 There are a number of committed developments which together will generate much more additional travel movements than the Application Site. The cumulative effect of these sites has been assessed.

12.22 With a higher level of traffic across the network, severance will slightly increase. This is considered to only result in a minor adverse effect however mitigating measures that will be delivered through each of the wider committed development sites that have been included within this assessment will help to minimise the impact on severance.

12.23 The increase in traffic levels on the local road network surrounding the Application Site is considered to be minor adverse in terms of driver delay. Pedestrian delay will also slightly

increase. The wider committed developments will implement other improvements that will help to enhance overall pedestrian amenity. The effect of an increase in network traffic is considered to result in a minor adverse effect for pedestrians.

12.24 Higher levels of traffic across the highway network as a result of the committed development will result in an increase in fear and intimidation. Due the measures set within the Proposed Development and the supporting mitigating measure, the effect of this increase in traffic is still considered to be minor beneficial. The higher levels of traffic across the highway network are considered to result in minor adverse effect on accidents and road safety.

13. Noise and Vibration

13.1 The effects of noise and vibration arising from the Proposed Development have been assessed using international, national and local guidance. The effects from noise emissions from the demolition, construction and operational phases have been assessed. The Site has also been appraised to determine its suitability for residential development.

13.2 Baseline noise and vibration measurement surveys have been undertaken to establish the current noise and vibration levels. Noise from road, rail and aircraft together with noise from the current light industrial, storage and waste transfer operations make up the noise climate, together with noise from Millwall FC Stadium on match days and evenings. The current site uses, with the exception of Millwall FC Stadium, do not form part of the Proposed Development and would not be represented in the future noise climate.

13.3 The demolition and construction phase (including that of just the construction of Phase 1) would result in effects of medium adverse significance at existing and future sensitive receptors. The phasing of the construction period together with the implementation of best practicable means to control noise and vibration would minimise effects during this phase. Vibration would also be controlled using best practicable means.

13.4 Effects from noise on existing sensitive receptors would arise from fixed plant and additional road traffic movements from the Proposed Development. The plant would be designed to achieve the rating level required by the London Borough of Lewisham (LBL). Increases in traffic noise have been assessed on the road network and increases are not significant.

13.5 Noise from road and rail sources, including the East London Line Extension and Thameslink Works have been calculated at facades within the Proposed Development. The results show that the internal noise levels required by LBL can be achieved for daytime and night-time at the majority of the facades. Residential facades facing Surrey Canal Road would require higher specification glazing to achieve the required internal noise levels. The balconies of some facades and roof gardens within the Proposed Development would require noise

attenuation, such as winter gardens or noise barriers, to achieve satisfactory outdoor living area noise levels.

13.6 Noise from Millwall FC Stadium forms part of the soundscape of the area. The effects during match days for the residential facades of the Proposed Development have been calculated. Although noise levels at noise sensitive receptors would increase during football matches, there is no recognised method for assessing noise from these events.

13.7 Baseline vibration measurements made close to the railway viaducts indicate that there would be a low probability of adverse effects from vibration from trains.

14. Air Quality

14.1 The Application Site falls within an Air Quality Management Area (AQMA) that has been designated by the London Borough of Lewisham due to exceedences of the statutory air quality objectives for nitrogen dioxide and fine particulate matter. Likely significant effects of the Proposed Development upon air quality can be broken down into four main areas as follows:

- Construction Effects;
- Road Traffic Effects;
- Energy Centre Effects;
- Effects from existing industrial activities

14.2 Each of these effects is summarised below.

Construction Effects

14.3 Any construction effects will be temporary and relatively short lived during each phase of the Proposed Development, and will only arise during periods of dry weather. A series of mitigation measures and monitoring consistent with best practice will be incorporated into a Code of Construction Practice and the effects will be minor. The actual phasing of the works will not change the potential environmental effects.

Road Traffic Effects

14.4 The Proposed Development will only increase traffic flows on the local road network by a small amount. Changes to pollutant concentrations at all existing properties along this road network will be negligible and are judged to be insignificant.

14.5 The Proposed Development will also introduce new exposure into the Air Quality Management Area. However, pollutant concentrations are predicted to be well below the

statutory objectives at all relevant locations within the Proposed Development. The effects are therefore insignificant.

14.6 Road traffic effects will be further mitigated by a series of access measures which seek to reduce trips by private car, which will assist to further minimise pollutant emissions.

Energy Centre and SELCHP

14.7 A detailed assessment of whether the new buildings within the Proposed Development could affect the dispersion of the plume from the South East London Combined Heat and Power (SELCHP) facility has been carried out. In addition, the potential effect of all the pollutant emissions specified in the Waste Incineration Directive (WID) arising from the SELCHP facility have been considered at the new buildings within the Proposed Development itself. It is concluded that the new buildings within the Proposed Development would have no significant downwash effect on the SELCHP plume,

14.8 The Proposed Development is expected to receive heat from a district heating network provided by South East London Combined Heat and Power Plant (SELCHP). However, a back up energy centre will be provided.

14.9 Even based on a worst case assumption that the energy centre operates continually at full load, emissions will increase pollutant concentrations at existing properties by an extremely small amount. The effect at some new properties and at the rooftop communal amenity areas of the taller buildings of the Proposed Development will be greater, but all concentrations will remain below the statutory air quality objectives. The effects of the energy centre are negligible and insignificant.

Existing Industrial Activities

14.10 The Application Site lies in close proximity to a number of industrial activities, including several waste transfer stations on Landmann Way. The potential effects of these activities have been considered within this assessment.

14.11 There is a history of odour complaints in the area associated with the Deptford Recycling Centre on Landmann Way. As the winds are predominantly from the south-west, the majority of complaints occur in the residential area to the north-east, between Trundley Road and Greenland Mews. There have been no recorded complaints from properties in the upwind direction, on Bridgehouse Meadows, Myers Lane or Rollins Street. Given the location of the Application Site with respect to the Recycling Centre, the prevailing wind direction and the history of complaints, odour effects within the Proposed Development should be infrequent,

but cannot be discounted. Mitigation measures other than those applied at the waste facility are not practicable, and it is concluded that the effect is moderate adverse.

14.12 There is considerable evidence of dust being tracked out along the local road network, but this is likely to be attributable to a number of sources and not just the waste transfer stations on Landmann Way. The Proposed Development will remove a number of light industrial activities which will assist in reducing track out. Once again, mitigation can only be realistically implemented at source, and the introduction of efficient wheel wash facilities, and careful sheeting of lorries, will minimise the problem. It is concluded that the effect is minor adverse.

15. Groundwater, Soils and Contamination

15.1 The Ground Conditions, Soil and Contamination chapter considers the potential receptors and likely significant effects of the Proposed Development in terms of ground conditions and land contamination, including physical aspects relating to topography, mining, geological conditions and geomorphological features and soil contamination aspects relating to the impacts of pollution on human health, controlled waters, ecology and other receptors.

15.2 The current baseline conditions have been established from a site walkover, review of historical maps, regulatory information on environmental permits and authorisations, published geological maps and borehole logs.

15.3 According to Historical Ordnance Survey maps the Site has historically been occupied by a mixture of residential housing and heavy industry. The Grand Surrey Canal previously passed through the centre of the Site along what is now Surrey Canal Road. The Site was subsequently developed between the 1970s and 1990s with the construction of the Millwall FC Stadium, starter commercial units in the north west and the infilling of the Surrey Canal.

15.4 The geology under the site comprises made ground overlying Kempton Park Gravel over Upper Chalk. The Chalk is classified as a Principal Aquifer which may be used for public water supply. The Kempton Park Gravel is a Secondary A Aquifer.

15.5 A number of potential sources of contamination have been identified on site including made ground and the backfilled canal, a former timber yard, tar paving and leather cleaning works, railway lines, former tanks and electrical substations.

15.6 Construction environmental effects have been identified relating to mobilisation of contamination after buildings are demolished and surface capping removed. Ground instability may result from excavation and dewatering of basements. Piled foundations have

the potential to cause migration of contaminants into the underlying aquifer. Excavated soils from basements will require removal from site to landfill. Further consideration will be given to levels to assess the final volumes for off site disposal during detailed design. The extent to which this material is contaminated or otherwise will be determined following a Stage 2 Site Investigation and appropriate treatment and disposal will be determined in the remediation strategy. The volumes presented are a worst case assessment and would be moved over a 10 to 15 year construction period.

15.9 Following completion of Phase 1a and 1b, the bulk of the remediation of soil and groundwater is expected to have been completed at this stage. The environmental effects identified in the construction phase will be applicable at this stage and are expected due to the continuation of earthworks and construction of basements in future phases across the Site.

15.10 Operational environmental effects relate to continued migration of soil and groundwater contamination into the underlying aquifers and effects on human health of Site users through exposure to contaminated soils, vapours and ground gases.

15.11 A detailed intrusive investigation, risk assessment and remediation strategy will be prepared to mitigate against the long term operational effects including selection of remedial options for soil and groundwater, specification of capping to soft landscaped areas and specification of gas protection measures to buildings.

15.12 Where significant environmental effects have been identified mitigation measures have been proposed to reduce adverse effects or enhance positive effects. The Proposed Development is expected to have a beneficial environmental effect through remediation of soils and groundwater, and subsequent improvement in groundwater quality.

16. Water Resources and Flood Risk

16.1 A Flood Risk Assessment has been prepared for the Proposed Development at Surrey Canal, and this shows that based on flood zone mapping the Proposed Development falls within Flood Zone 3a of the River Thames tidal floodplain. The likely significant effects to the Proposed Development prior to mitigation include rapid inundation, potentially risk to life and increased risk to the wider catchment.

16.2 The likely potential significant effects associated with the construction phase are short term or medium term likely significant effects. In view of the long duration of the construction phase an assessment has been undertaken of an environmental snapshot when the development is partly occupied but construction works are ongoing to identify whether this gives rise to any additional environmental effects. In terms of flood risk and water resources there will be no

additional impacts at this time.

16.3 With regard to flood risk, mitigation includes staff and residents within the Proposed Development registering with the Environment Agency Floodline Warnings Direct scheme to inform of flood warnings in the area. This is a free service which can be set up to produce automated flood warnings direct to telephone, mobile, e-mail or fax.

16.4 Mitigation measures, particularly flood warning, evacuation management plans and provision of safe refuge will be incorporated to address the residual risk of flooding from a failure of flood defences.

16.5 As the Proposed Development may be affected by floodwater if the existing flood defences are breached or overtopped, flood resilient construction will be considered in accordance with the DCLG document *"Improving the Flood Performance of New Buildings: Flood Resilient Construction".*

16.6 With regards to flood risk once the Proposed Development is complete and staff and residents have adhered to the mitigation the likely significant residual effect will be long term and the frequency would be continuous as there will always be a risk of flooding. However, after mitigation the sensitivity of the receiving receptor has been assessed as low which is negligible overall.

16.7 The above measures provide mitigation against the likely significant effect of flooding from the River Thames and whilst there will always be a risk to the Proposed Development these steps reduce the significance of the likely significant effect.

16.8 The existing Site is previously developed land and substantially covered in roof areas and external pavings that are positively drained to the public sewers. The Proposed Development extents do not appear to increase the amount of hardstanding currently on Site and mitigation is proposed to reduce runoff rates generated by the Proposed Development by at least 50% compared to those currently discharging (in accordance with the recommendations of the Lewisham SFRA). Therefore there should be no increase in flood risk off site due to proposed surface water drainage arrangements.

16.9 As the surrounding area is brownfield any future developments will not increase the risk of surface water runoff and as such no further mitigation will be required. The reduction being provided as part of this Proposed Development will afford a significant beneficial likely significant effect to not only the Site but the wider catchment.

17. Ecology and Nature Conservation

17.1 A suite of specific ecological surveys have been undertaken at the Site. The surveys show that the Site is currently of extremely limited ecological value comprising predominantly; hardstanding and buildings, with small areas of amenity grassland, amenity planting and trees. Stands of Japanese Knotweed *Fallopia japonica* are also present in several areas.

17.2 Detailed surveys did not reveal any evidence for the presence of rare or protected habitats or species within the Site itself, although low numbers of bats are known to use adjacent habitats associated with the railway embankments, which may also support common reptile species.

17.3 There are no statutory or non-statutory designated sites of nature conservation importance within the Site. The nearest statutory designated site is Sue Godfrey Nature Park LNR, which is located approximately 1.3km east of the Site. The Nunhead Cemetery LNR is 1.6km to the south and Mudchute Park Farm is 1.9km east of the Site. The closest SSSI is Gilberts Pit located approximately 6.2km from the Site. The closest area of ancient woodland is at Sydenham, located approximately 7km to the south of the Site. The nearest non-statutory designated sites are South Bermondsey Railway Embankments SINC and Senegal Railway Banks SINC which are located adjacent to the western and eastern boundaries of the Site respectively. Both of these are sites of Borough Importance Grade 2. To the immediate south of the Site lies Bridgehouse Meadows SINC, a site of Local Importance.

17.4 With specific regard to ecological considerations during Phase 1 (the identified worst case scenario) of the Proposed Development, no additional or distinct potential significant environmental effects have been identified. This is due to the broadly similar habitat types across the Site and the relative proximity to SINCs within the immediate vicinity of the Site.

17.5 Given the paucity of the habitats present and the fact that the Proposed Development redevelops an existing brown field site, it is considered that any adverse effects will be of no ecological significance. Moreover, through the sensitive design of the Proposed Development and incorporation of both species specific enhancements and general biodiversity improvements, it is considered the Proposed Development of the Site would result in a net gain for biodiversity in the local area.

17.6 The suite of mitigation and enhancement measures proposed will provide positive effects of up to moderate significance at the Site level on habitats, and up to moderate significance at the Site - national level affecting species / groups such as bats, birds and invertebrates.

18. Conclusion

18.1 This Non-Technical Summary sets out a summary of the potentially significant environmental effects arising from the Proposed Development both positively, negatively and cumulatively.

18.2 Through amendments in the design and development of the mitigation for the construction and operation of the Proposed Development, negative effects have been prevented, reduced or offset where possible and opportunities for environmental enhancements and positive effects relating to the Proposed Development have been maximised.

18.3 The main sensitive receptors in the consideration of the Proposed Development, as amended, are the local residents, businesses and those passing through and spending time in the vicinity of the Application Site. They include those attending local schools, those using local transport connections and those visiting local parks, community facilities and enjoying and appreciating local culture and the environment.

18.4 The Proposed Development, as amended, will bring about disruption during construction, although this will be localized. The likely period of construction is 10 – 15 years and effects will range from minor adverse to moderate adverse during that period.

18.5 However, as the Proposed Development, as amended, becomes increasingly operational, the overall significance of the environmental effects will gradually become minor beneficial to moderate beneficial. This is due to the improvements in the physical appearance of the Application Site, the socio-economic opportunities which will ensue, the improvements to the transport network and the landscape and ecological features that are part of the Proposed Development.

18.6 Even where there are some localized operational significant environmental effects for example, from a loss of daylight to a few existing residential units on Rollins Street, it is considered that the overall significance of the environmental effects of the Proposed Development on these residents will be negligible – minor beneficial.

Figure 6: CGI of the Proposed Scheme