# Contents

1. Introduction ......................................................................................................................... 1
2. Planning Context ................................................................................................................... 3
3. Design Statement ................................................................................................................ 9
4. Sustainability ........................................................................................................................ 15
5. Policy and Assessment Issues ............................................................................................ 21
1 Introductory

1.1 The Triangle Site forms part of King’s Cross Central and is the only land within the development which lies to the east of the Channel Tunnel Rail Link (CTRL) realignment of York Way. The site of 1.1 hectares falls within both the London Borough of Camden and the London Borough of Islington and is triangular in shape, bounded by the converging Thameslink and East Coast Main Lines to the north and east and York Way to the west.

1.2 The Triangle Site’s unique size, shape and location have led to the submission of a separate outline planning application. However, the Triangle and Main Sites are closely related, and so the supporting information submitted is, in most cases, for the whole of King’s Cross Central (i.e. the Main Site and the Triangle Site combined).

1.3 This document, however, is submitted in support of the Triangle Site application only. Its purpose is to explain the evolution of the proposals and the characteristics and issues affecting the Triangle Site, and the ways in which the proposals respond positively to those issues. It covers:

- The planning policy context (focussing on the Joint Planning and Development Brief adopted by Camden Council and Islington Council);
- The design evolution of the proposals;
- Sustainability - how the Triangle Site development can contribute to the applicants’ Environmental Sustainability Strategy for King’s Cross Central as a whole;
- Various policy and assessment issues and how these have been approached and addressed - for example transport, retail and environmental impact assessment;
- Implementation, in relation to the Main Site and CTRL delivery.

1.4 It is important to note that this document complements other documents submitted in support of the King’s Cross Central applications. In part, it draws out information relating to the Triangle Site from those documents - for example the Urban Design Statement, Urban Design Guidelines, Environmental Sustainability Strategy and Transport Assessment - amplifying where appropriate, to assist the two local planning authorities.
Illustrative view of the Triangle Site looking north along York Way
2 Planning Context

2.1 This section considers the King’s Cross Opportunity Area Joint Planning and Development Brief, as it relates to the Triangle Site and describes the policy context within which the scheme has evolved. For a full analysis of policy in relation to King’s Cross Central as a whole, please refer to the Planning Statement submitted in support of both applications.

2.2 The Joint Brief states the following in relation to the Triangle:

“The Triangle will have a development potential significantly shaped by the existing and new railway lines, and by its role as an important part of the York Way street scene, complementing the wider development. Initial masterplanning and outline planning applications should thus include proposals for Triangle and the Councils would welcome development in an early phase to help define the regeneration area more definitively. After public consultation on the possible content of a freestanding brief, the two Boroughs have agreed to the following key points:

- Variation in building heights and massing should be used to avoid over-dominating York Way and to respect the local view south from Dartmouth Park Hill at the eastern end of the site. Good designs that avoid microclimatic, overshadowing and other impacts may allow a tall building to be located in the Triangle.

- The mixed use development of the Area should continue into the Triangle, where the Councils favour housing, with retail or other uses to enliven the street frontages. The lack of outlook at lower levels suggests this is an appropriate location for retailing and other public leisure, incorporating a wide range of indoor and outdoor sports activities.

- Subject to satisfactory designs and residential amenity being achieved this close to railway lines, the Triangle could accommodate about 200 one- and two-bed homes in contributing towards the overall housing provision in the Area. The site is considered well suited to key worker homes as part of the range of market and affordable housing.

- Good walking, cycling and public transport connections to the main development are important aspects of successfully integrating the Triangle, with safe crossings on York Way.

- The CTRL services and access area should be integrated into the wider townscape as much as possible, providing a satisfactory street elevation and boundary treatment that helps to lessen the utilitarian character of the pedestrian environment under CTRL bridges. Options exist for shared use of turning space, greened and landscaped hardstandings, and additional natural habitat. Access/gateway widths should be kept to a minimum.”
**Building Heights and Massing**

2.3 Variation in heights and massing across the site is considered important, particularly in relation to the treatment of York Way and the need to address and improve the street scene. It is also important, given the location of the site, to create a ‘gateway to King’s Cross Central’ from the north, without creating a ‘canyon’ effect along York Way.

2.4 The proposals therefore incorporate variations in heights and massing across the site, with taller elements towards the northern part of the site. Daylighting studies have been undertaken to show that the proposals would not significantly overshadow existing development or other areas of the site itself.

**Mix of Uses**

2.5 The brief promotes retail, residential and leisure uses for the site. These uses have the potential to positively enhance levels of activity along this section of York Way. They have been incorporated into the proposals, in line with the brief, as follows:

- Retail and related uses (within A1, A2 and A3 use classes) have been used to enliven and activate the York Way frontage at street level. There would be at least three units, which could be divided into one larger and at least two small units, with access at street level from York Way. The larger unit could be a food store whilst the smaller units would ‘hold the corners’ of the development, providing activity and animation at prominent locations when approaching the site from both north and south;

- Residential uses have been incorporated at the upper levels. Entrances to the residential units would be from both the street and a proposed internal courtyard/garden area, helping to activate these areas outside normal working hours. The brief highlights issues of noise and outlook and these are covered in more detail below; and

**Daylight Study**

1st May 2:00pm

Daylighting studies have been carried out to understand the shadows cast by the development.

By locating the taller elements to the north, away from existing buildings, the effects have been minimised.
2.6 The division of space within the block has not yet been fixed, as it will be dependent on the precise needs and operations of the eventual operator(s). As the proposals become more defined, there will be opportunities to respond to changes in requirements, and to integrate facilities if this is thought to be beneficial.

2.7 The Joint Planning and Development Brief has an aspiration for about 200 one and two bed homes, and considers the site well suited to key worker accommodation as part of the range of market and affordable housing.

2.8 The proposals allow for up to 250 units, based on the following break-down:
   - 123 one bed units;
   - 112 two bed units; and
   - 15 three bed units.

2.9 This total figure is given as a maximum, as the final figure would depend on detailed design and unit sizes. However, the maximum figure of 250 demonstrates that the aspiration of ‘about 200’ dwellings is achievable on the site. Accordingly, whilst the absolute numbers of one, two and three bed dwellings may vary, it is envisaged that the proportions would remain broadly similar.

2.10 Up to 35% of the dwellings would be affordable housing, incorporating key worker housing, in line with London Borough of Islington Supplementary Planning Guidance (April 2003), subject to appropriate levels of grant funding. It is anticipated that affordable housing would be accommodated in the block fronting York Way (Block B), with the block parallel to the Thameslink tracks (Block A) given over to market housing. This offers benefits in terms of discrete housing management, but within an integrated scheme.

- A health and fitness / Medi-centre / community facility has been included within a flexible ‘box’ so that it could accommodate a range of uses including:
  - A leisure facility providing a swimming pool or a full height sports hall, as well as a gym and associated facilities. This could be publicly or privately managed or a combined facility, perhaps allowing public access but managed by a private operator;
  - A Medi-centre, providing space which could accommodate a doctors’ surgery, nurses facilities and possibly a dentist; and
  - A crèche and related community facilities.

The health and fitness / Medi-centre / community facility could accommodate a swimming pool or a full height sports hall.

In addition, there would be the potential to include a general purpose hall that could be used by a variety of people, including community groups, for a range of activities.
Walking, Cycling and Public Transport Connections to the Main Site

2.11 The key connection between the Triangle Site and the Main Site for pedestrians and cyclists would be across York Way. Pedestrian and cycle crossings on York Way would be provided at convenient points taking into account pedestrian desire lines. It is anticipated that these would be positioned near the northern end of the Long Park and adjacent to Randell’s Road to the south.

2.12 The walk from the Triangle Site through the Main Site to the extensive public transport facilities associated at King’s Cross and St Pancras stations would be about 15 minutes through safe and attractive public realm. The site is also 10 - 15 minutes walk from the Piccadilly Line station at Caledonian Road.

2.13 The site is currently served by the number 390 bus, which it is understood the Mayor intends to improve, with the aim of offering ten services per hour in each direction along York Way. This bus route links the site to the public transport node at King’s Cross and St Pancras Stations.
2.14 The Mayor also has plans to develop a Cross River Tram scheme in the area and this could mean trams running along York Way.

2.15 Through the good pedestrian linkages, residents and users of the Triangle Site would also be able to easily access bus services within the Main Site, either to access facilities within the Main Site itself, or to connect with the public transport node at King’s Cross and St Pancras Stations.

2.16 The development also offers the opportunity to integrate the Triangle Site not only with the Main Site but with the surrounding areas to the north, east and south. This is explained in Section 3 below.

CTRL Services and Access Area

2.17 The brief promotes the integration of the CTRL systems and access site (known as the CTRL London West Portal Muster Area) into the wider townscape as far as possible. It states that options exist for shared use of turning space, greened and landscaped hardstandings, and additional natural habitat. Although the design of the West Portal Site is outside the applicants’ control, the Triangle Site responds to these issues as outlined below.

2.18 The applicants have developed a technical solution to highway access that rationalises CTRL arrangements and the need for new access for the Triangle Site into a single junction that meets technical and urban design objectives. This junction would be located over the cut and cover Thameslink tunnel, as a single access off York Way, leading to both the Triangle Site and CTRL site (which lies outside the application area). This minimises the amount of land given over to access and utilises space that could not be otherwise developed due to the limited loading capacity of the Thameslink tunnel. It also forms a crossroads with one of the principle accesses into the Main Site, minimising impacts on the traffic on York Way and promoting better connectivity across it. The illustrative plan opposite indicates the proposed layout.

2.19 The north-east corner of the Triangle Site where the Thameslink and East Coast Main Lines merge would be given over to a habitat area. This is likely to be a ‘rail side’ type habitat, designed to be suitable for Black Redstart and other local wildlife.
Illustrative view with the Triangle Site in the foreground looking south across King’s Cross Central
3 Design Statement

Site Analysis

3.1 The Triangle Site is a vacant area of land that will be tightly defined in 2007 by the re-aligned York Way to the West, the new Thameslink line to the north and the existing East Coast Main Line to the east. The short south edge to the site is bounded by Randell’s Road.

3.2 Due to the re-alignment of York Way the site is partly within Camden and partly within Islington since the Borough boundary follows the existing York Way alignment. The site is not affected by any Strategic View corridors. There is a local view south from Dartmouth Park Hill at the northern tip of the site.

Vehicular Access

3.3 The vehicular access to the site has been fixed in location to:

• provide an access for both the Triangle Site and the CTRL London West Portal Muster Area to the north;
• to ensure no conflict with other accesses off York Way; and
• to provide an acceptable townscape solution.

Access is therefore proposed to be provided over the Thameslink 2000 cut and cover tunnel, as explained above. The vehicular access is therefore a fixed point around which the design solution has evolved.

Levels

3.4 Although the majority of the site is flat there are considerable level changes around the perimeter. All vehicular access would be from the shared access point above the new Thameslink line. The access would serve both the Triangle Site and the CTRL London West Portal Muster Area site that is located directly to the north. The access at this point would be close to the base site level (23.1m ODN). York Way slopes up along the west edge of the site to a level approximately 4.5m above the base site level at the junction with Randell’s Road. Randell’s Road also slopes up along the south edge of the site a further 1.5m giving an overall level difference around the site of approximately 6m. These level changes offer both a challenge in terms of access and an opportunity to create different levels of overlapping street access.

Railways

3.5 The Thameslink line to the north and the existing East Coast Main Line are significant sources of noise and pollution affecting two of the site boundaries. In addition the CTRL is just over 50m from the northern boundary of the Triangle Site and this will create an additional noise source, particularly since the track is elevated - the other adjacent tracks are in cuttings. It is also notable that the Triangle Site will be highly visible to international passengers using the CTRL as they emerge from the enclosed bridge crossing the East Coast Main Line.
The Triangle Site
An artist’s impression by David Morley Architects of how the Triangle Site might be developed.

Garden
A tranquil focal point for the site giving a visual and physical amenity for residents; an enhanced setting for the leisure centre and an outdoor space for the crèche.
Block A
Apartments with all living rooms looking south towards the garden (away from railway) comprising three sub-blocks A1 (11 residential storeys), A2 (14 residential storeys) and A3 (17 residential storeys) - Block A1 creates a gateway to King's Cross - Block A3 creates a local point for long views up York Way and on the CTRL Eurostar trains.

Discrete Service
The levels of the site could be exploited to provide a service undercroft where all deliveries and car parking are provided for at one level without the need for ramps.

Block B
8 storeys of apartments looking towards the street and towards the garden with retail units, which could include a supermarket, at the base. This block would continue the sweeping line of York Way without dominating the scale and provide an animated frontage along the sloping street.

Block C
This block could combine a leisure centre with either a sports hall / swimming pool and a Medi-centre - shared spaces could include community rooms, a reception and a crèche - sited to be easily accessible from east or west.

Public Square
The garden, healthy living centre and south facing retail / café would help to animate a new public space enhancing pedestrian linkages between King's Cross Central and the residential communities to the east.

Environment
The orientation of the apartments and healthy living centre could give opportunities for energy saving measures such as photovoltaics, natural daylight systems and climatic control zones. Space could also be provided for a Combined Heat and Power (CHP) plant and riser shafts to facilitate recycling chutes.
**Pedestrian Links**

3.6 The Triangle Site is in a key location to connect pedestrian routes between other parts of the King’s Cross Central development to the west and the residential communities and Bemerton Estate to the east. The site links directly to the northern end of the Long Park proposed within the Main Site that would form an important part of the principal public realm and pedestrian network in, and through, King’s Cross Central.

**New Views**

3.7 The Triangle Site is a potential focus of long views up and down York Way and would also be visible at the end of the vista down the proposed Long Park within the Main Site. The surrounding topography would also make the site visible from parts of the surrounding residential areas to the north and the east.

**Objectives**

3.8 The Triangle Site offers an opportunity to provide a substantial amount of residential accommodation combined with retail and other publicly accessible facilities that can serve the local community.

3.9 There is also considerable potential for the site development to help link King’s Cross Central to the predominantly residential area to the east. There is an additional opportunity to enhance and extend northwards the street quality of York Way by activating the street frontage. There is also potential to facilitate the possible later formation of a new public space at the junction of Randell’s Road, which is an aspiration of the London Borough of Islington.

3.10 The following key objectives have been set in response to these opportunities:

- develop the York Way frontage to an appropriate scale and ensure that the ground level offers publicly accessible uses that will animate the streetscape;
- develop the other perimeters of the site to create buffers against noise from adjacent railways;
- make the centre of the site an amenity and focal point;
- orientate public entrances to respect and enhance east-west pedestrian movement;
- create a focus for the long view up York Way; and
- define a northern gateway to King’s Cross Central.

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**Possible options for the Triangle Site**

**Private South Facing Garden Frontage**

- Glass - Steel - Terracotta-clad Blocks
  - Bio-climatic wall consisting of two layers of glass set 1.2m apart
  - In winter the double skin reduces heat loss
  - In summer solar gain is reduced by the double skin acting as a thermal chimney
  - In summer further solar gain is reduced by the light shelf
  - Light shelf supports photovoltaic cells
  - Full advantage of views and south facing aspect

**Public North Facing Street Frontage**

- Glass - Steel - Terracotta-clad Blocks
  - Scale and rhythm determined by urban context
  - Composition regulated by vertical cores
  - Window articulation driven by daylight and views from within
  - Gateway façade to King’s Cross Central development
Proposals

3.11 The design response to these objectives takes full advantage of the triangular shaped site and varied surrounding levels. Buildings are proposed around the perimeter of the site to define a triangular Amenity Space at the heart of the scheme. The heights of the buildings would be varied, as suggested in the King's Cross Opportunity Area Joint Brief. The east side facing the Bemerton Estate would be kept low; buildings along York Way would be higher, though low enough to avoid York Way feeling canyon like; and the tallest buildings would be to the north where overshadowing is not a problem. The design strategy exploits the surrounding site levels to allow all available street frontages to be developed for publicly accessible uses with servicing fitting neatly into an undercroft.

3.12 The scheme has 6 key components. These are all interrelated and can be summarised as:

- a Street Block (Block B) along the York Way frontage;
- a taller Stepped Block (Block A) at the northern end of the site;
- a flexible health and fitness and Medi-centre building (Block C) along the eastern edge;
- an open Amenity Space in the middle of the site;
- public realm spaces, for example at the prominent corner of York Way and Randell's Road; and
- a Service Undercroft.

3.13 This would be located at the north of the site giving an opportunity to create south facing apartments where all living rooms can face away from the railway lines. It would comprise three connected blocks that step up in scale from York Way towards the north-east corner. The maximum heights proposed would allow for 11 stories of residential along York Way, rising to 17 stories of residential at the north east corner. These residential floors would be provided above the upper- and lower-ground levels of car parking, plant and associated ancillary uses shown on the Development Specification Parameter Plans that form part of the Triangle Site planning application.

Street Block (Block B)

3.14 This would comprise apartments located above retail units, each of which would be accessible from the sloping street level. The maximum heights proposed would allow for 8-storeys of residential. The alignment of the block follows the sweep of York Way and the scale mediates between the scale of the proposed developments to the west and the smaller scale of buildings to the east. The upper floors would be set back on both sides to enhance light penetration to the street and into the centre of the site. The apartments are proposed to have views either to the street or to the proposed new Amenity Space at the centre of the site. The south end of this block would be a prominent feature that would be visible from long views up York Way and would help to animate the public realm.
The lower block would form part of a visual gateway, announcing the arrival at King’s Cross Central and responding to views from Long Park. The higher block would form a visual focus for both the views up York Way and also for train passengers arriving on the Eurostar. The southerly orientation of the apartments offers potential to take advantage of the sun’s thermal energy.

**Leisure and Medi-centre (Block C)**

This comprises a flexible linear building capable of accommodating a range of facilities related to health and fitness, sports, leisure and community uses. The entrance would be from the south at the uppermost site level. This would allow easy access from the residential area to the east. The south facing entrance would provide a potential location for a café that could spill out onto the adjacent street and public space. The entrance location also offers potential views into activities at the lower levels in the centre, such as a gym. The building configuration would allow the health (Medi-centre) component to be accessed independently or alternatively through a reception that could be shared with the sports facilities. There is also potential to exploit the synergy between the health, fitness and sports uses with shared spaces such as a community room and a crèche. These uses have been designed for. Although this building would be low rise, the site levels mean that it would still provide a substantial visual and acoustic buffer separating the proposed new Amenity Space and surrounding apartments from the adjacent East Coast Main Line.

**Amenity Space**

A triangular garden is proposed at the centre of the site as a focal point for the residential development. The scale of the proposed surrounding buildings would ensure that this space would have good protection from the surrounding railway noise but would also be open enough for sufficient sunlight and daylight to create an attractive amenity that can support tree and plant growth. The majority of this space is approximately one storey above street level and would be primarily for the use of residents. However, controlled access could also be provided from the Leisure and Medi-centre and any crèche could have access to a secure part of the Amenity Space.

**Public Realm Spaces**

The southern edge of the Amenity Space would step down (via ramps and steps) to a smaller public space forming an entrance to the adjacent retail units and the Leisure and Medi-centre. The southerly orientation would allow this area to be used for sitting outside and this could encourage café type uses. This public space, the adjacent Leisure and Medi-centre entrance and the retail units could help form and activate a new urban space immediately to the south of the Triangle Site.

At the north of the site, the building line is well set back from the access road to give a generous allowance for pedestrian space and complimentary landscape.

**Service Undercroft**

The topography of the site allows for convenient use of the entire lower level to be used as a service undercroft without the need for any ramps. Level vehicular access is available from the north via the proposed new shared access road above the new Thameslink line. The service undercroft would provide for cycle and car parking linked directly by lift and stair to the different uses at the upper levels. For servicing the retail units it is proposed that the north east corner of the site be made accessible for large service vehicles with a ramp giving access to a loading dock. This arrangement can also deal with refuse collections and recycling.
4 Sustainability

4.1 The Triangle Site offers the opportunity to take forward aspects of the Environmental Sustainability Strategy for King’s Cross Central in the context of an identifiable development component. In line with the targets set out for the King’s Cross Central site as a whole, the development of the Triangle Site would aim to achieve BREEAM or EcoHomes ‘very good’, with an aspiration for excellent. Due to the highly constrained nature of the site, together with its size, and the level of detail needed to understand the constraints, it has been possible to consider specific measures that could play a part in achieving this target. Based loosely upon the EcoHomes model, these measures are discussed below.

Transport

4.2 The Triangle Site is located less than 1000m from what will be one of the busiest transport hubs in London, providing connections locally, across the UK and to continental Europe. The detailed issues of transport for both the Main Site and the Triangle Site are dealt with comprehensively in the Transport Assessment and the Green Travel Plan.

4.3 The Triangle Site would have excellent pedestrian connections to the facilities on the Main Site and new crossings on York Way would help to facilitate this east-west pedestrian movement. Additionally, the Triangle Site itself could provide a number of amenities, including leisure, a Medi-centre, and a limited quantity of retail. This arrangement of locally available amenities, connected by new, safe routes, would encourage walking as a prime means of transportation.

4.4 As a predominantly residential piece of development, in a central location, cycling would also be a viable and attractive way for many occupiers to reach local amenities. This would be facilitated through the provision of secure cycle storage areas on the site within an accessible communal space. In addition, there may be some opportunities to include cycle storage within individual units, depending on overall space requirements.

4.5 A further specific opportunity on the Triangle Site includes the possible provision of a city car club in the lower ground parking level. This could be linked directly to the residential uses on the Triangle Site or could be a facility accessible to a wider area, complimenting other schemes elsewhere within King’s Cross Central. This would need to be considered in the context of the space requirements for other uses at this level and city car club provision across King’s Cross Central as a whole.

Energy

4.6 The King’s Cross Central Environmental Sustainability Statement (ESS) recognises that:

“... buildings contribute some 50% of the UK’s carbon emissions, and considerably more than this if travel to and from the buildings is included.”

4.7 In response to this a set of targets have been developed for King’s Cross Central, addressing carbon emissions for different building uses, such as offices, residential, retail and leisure. These are based on the premise of reducing carbon emissions by as much as 25% below those specified by Building Regulations. These targets, as set out in the Environmental Sustainability Strategy, would be applied to any development on the Triangle Site.
4.8 The principle of the ‘Energy Hierarchy’ as set out in the London Mayor’s Draft Energy Strategy, provides a strategic tool for prioritising methods of carbon reduction, setting energy efficiency, over use of renewable energy, over efficiency of supply. This hierarchy provides a guide for the development of specific carbon reduction schemes on the Triangle Site.

Energy Efficiency

4.9 The orientation and mix of uses on the Triangle Site offers specific opportunities for energy efficient development on the Triangle Site:

- **Block A** (Stepped Block) - The orientation of Block A, with the majority of the habitable rooms facing southeast, offers the potential for taking advantage of solar energy for heating (yet if coupled with room thermal mass, avoid summer overheating), but also to provide well-lit spaces. As a predominantly residential building, most spaces would be naturally ventilated and so one of the most significant improvements in energy efficiency would be through the thermal performance of the façade. Enhancing the façade, through selection of materials, insulation and glazing systems, to 15% better than Building Regulation requirements would provide a significant reduction in energy requirements of the building. Once the delivery mechanisms for these flats is known, the use of energy efficient white goods could also reduce the overall energy consumption of the block. These could either be supplied with the flats, or information could be provided to assist occupiers with their decision making.

- **Block B** (Street Block) - This is conceived as a street block, with flats facing over both the road and the garden. Lower than Block A, and in keeping with many of the other buildings on York Way, the façade is likely to be relatively ‘solid’ offering the opportunity for significantly enhanced thermal performance, as well as providing protection from the noise of the road and low maintenance costs.

- **Lower Ground Level** - The topology of the site facilitates the creation of a lower parking level that is below external ground level along only a proportion of its perimeter. This means that an active street frontage can be maintained, whilst still allowing free airflow to some areas of the lower level, therefore providing potential reductions in the ventilation of the space.

4.10 Across the development, all external lighting would be low energy lights, and the levels of security lighting would be considered to minimise energy use and light pollution, whilst maintaining a secure and safe environment.

Argent and St George are both at the forefront of brownfield site redevelopment and all of their current development projects are being delivered on brownfield sites. St George has worked in conjunction with the Civic Trust to publish an industry guide for reclamation, offering encouragement and best practice examples.

Some examples of brownfield development undertaken by Argent and St George include:

- **Brindleyplace** - a former brass works and other industrial site
- **Thames Valley Park** - a former coal fired power station and concrete works
- **Imperial Wharf** - former gas works
- **Lockes Wharf** - former lead smelting works
Renewable Energy

4.11 The options outlined in the ESS would all be considered for the Triangle Site, however there is a particular opportunity to use the roof of Block C to capture solar energy with the potential to orientate elements almost due south. The roof could (subject to cost, funding and detailed design) be designed to carry solar electric photovoltaics, or solar hot water collectors could be installed. This might relate well to the leisure uses in Block C, particularly if a swimming pool is included. It should be noted though that this would reduce the viability of any CHP plant, which, if installed, would rely on the leisure centre for part of its base load (see below).

Supply Efficiency

4.12 The possible use of a CHP plant is particularly relevant for the Triangle Site. The combination of uses, including a significant proportion of mixed tenure residential, together with the leisure component, could provide a sufficiently constant demand, particularly if a swimming pool is included. The viability of this would be assessed further once detail of the leisure uses have been fixed and the management structure is more certain. This would also consider the use of CHP in conjunction with other energy efficient schemes such as the use of renewable energy.

4.13 If, following detailed studies, CHP is not a viable option, then gas boilers, rather than electric heating would be considered for the residential accommodation. In comparison to electricity, this offers a reduction in Carbon emissions and also a substantial reduction in the Nitrous Oxide emitted during the generation of grid electricity. It does, however, require the installation of an additional system to distribute the gas to each of the flats.

Waste

4.14 As discussed in the ESS, minimising waste is a key aim of policies at local, national and European level. For the waste that is produced, the reduction of material disposed of by way of landfill sites, through recycling and reuse is the primary objective. The reuse of materials also has a particular benefit of reducing the consumption of virgin raw materials.

4.15 As with the Main Site, the Triangle Site would generate waste both while it is being constructed and once completed. However, the strategies set out in the ESS would be applied to the Triangle Site to minimise the amount of waste produced and to derive value from as much of the waste that is produced as possible.

Exel has worked with many of its partners to bring forward development of a number of their brownfield sites.

In the early 1990s Exel partnered with Safeway and Community Housing Association to regenerate Camden Goods Yard.

Another former Exel site, Paddington Central, is currently delivering high density, mixed-use development on brownfield land adjacent to a transport node. This follows Exel and its partner securing a negotiated planning permission.

Brindleyplace, Birmingham, 2004
4.16 Although household waste is recognised as being a relatively small part of overall waste production, the split of uses on the Triangle Site would mean that it would be a large component of the material being removed from this part of the development. An ancillary area has been set aside which could be used for waste and domestic recycling, and detailed design of the buildings would assist residents to sort and recycle their rubbish. This could either be through the provision of space to store small amounts of segregated rubbish or through chute systems to larger communal storage bins.

**Water Supply and Surface Water Disposal**

4.17 The ESS sets out a number of ways that water consumption could be reduced in the development and discharge into sewers could be minimised and controlled.

4.18 Residential occupiers are substantial consumers of water, and, on the Triangle Site, the leisure component would add to this. The use of very-low flush toilets, ‘Grade A’ appliances and flow regulators could contribute to an overall reduction in mains water consumption.

4.19 There is the potential on the Triangle Site to reduce the roof peak run-off through the use of green and brown roofs. Subject to the management structure for Block B, much of its roof could play a role within a sustainable drainage system for the Triangle Site. Similarly, there is scope on the roof of Block A for green and brown roofs which would help to attenuate storm water run-off, though this would need to be balanced with opportunities to provide private external space for some of the flats. The central Amenity Space, which is conceived as a landscaped area, would offer potential to contribute to the overall reduction in storm water run-off.

4.20 The new drainage infrastructure provided within the Triangle Site would achieve a stormwater discharge to the existing sewers 10% lower than the existing maximum allowable discharge, calculated on the principle of equivalent discharge. The new drainage infrastructure would be designed such that the peak discharge from the Triangle Site to the existing sewers would not exceed 67 l/s. This would be achieved through a combination of the measures discussed above, with further on-site storage if required. Foul water discharge would be to the York Way sewer.

St George has a collaborative trading agreement with British Gypsum including waste minimisation by pre-cutting materials in the factory and special recycling arrangements to handle any wasted product. At Alder Castle, Argent minimised plasterboard wastage through design by using planning grids that reduced non-standard dimensions, avoiding off-cuts.

In general, St George have special skips on site for timber to be recycled into pulped or chipped products. They are also pioneering decontamination and trenching technologies and have established grey water recycling.

Argent uses a high degree of pre-fabrication, which cuts down considerably on primary material and packaging waste. Examples of where pre-fabrication has proven particularly successful are in façades, mechanical and electrical systems, and fully constructed washroom units.
Construction Materials

4.21 The Materials and purchasing strategy for the Triangle Site would follow that set out in the ESS:

- to focus on best practice on site, specifically addressing reducing material usage, use of recycled materials and waste minimisation;
- to develop suitable designs with the intention of promoting sustainable techniques and principles; and
- that material selection should follow a hierarchy based on sustainability criteria.

Ecology

4.22 The Triangle Site is currently part of the construction site for the Channel Tunnel Rail Link and is therefore subject to constant change, offering very little habitat of any kind.

4.23 The development on the Triangle Site offers several opportunities to make a notable improvement to the habitat provision on the site:

- The northern tip of the site, at the convergence of the Thameslink line and the East Coast Main Line would be designated as a habitat area. This would be away from the main activities on the site and so could provide a secluded area. It is likely that the most effective habitat in this location would be to compliment that of the existing railway embankments, with gravel bases, providing support for species such as the endangered Black Redstart.
- The Amenity Space at the centre of the development would be a leisure resource for the residents and possibly for the users of the leisure facility. It would, however, also offer a potential habitat, with the appropriate selection of plant species.
- There is significant potential for the incorporation of green and brown roofs on the Stepped Block (Block A) and the Street Block (Block B), alongside external private space for the flats at the higher levels. This would in addition to the Amenity Space provided above the retail level of built development.

Ecology

The Black Redstart is a rare breeding bird in the United Kingdom and is afforded special protection under the Wildlife and Countryside Act 1981.

It is particularly associated with industrial and wasteland sites in London and at least one breeding pair has been recorded in the area around King’s Cross Central.

This type of habitat is often associated with railways and could be provided in the potential habitat area on the Triangle Site.
Illustrative view of the Triangle Site looking north along York Way by David Morley Architects
5  Policy and Assessment Issues

5.1 As previously explained in the introduction, the Main Site and Triangle Site are closely related, and most of the supporting documentation covers both the Main Site and the Triangle Site (i.e. King’s Cross Central) as a whole. This section highlights and discusses a number of the more pertinent policy and assessment issues.

**Shopping, Food and Drink and Professional Services**

5.2 The ‘shopping, food and drink and professional services’ element of the Triangle Site application (up to 2,500m²) forms part of the maximum floorspace for these uses for the whole of King’s Cross Central (up to 45,925m²), as specified in the Main Site Development Specification paragraphs 3.23 and 3.24 and the Triangle Site Development Specification paragraph 3.9.

5.3 These uses are assessed in the Retail Impact Assessment report, submitted in support of both the Triangle and Main Site applications.

**Transport**

5.4 The Transport Assessment considers the King’s Cross Central site as a whole for all aspects of transport, including public transport provision, pedestrian and cycle facilities, and the impact of the proposals on the network.

**Links Between the Triangle Site and the Main Site**

5.5 The Main Site and Triangle Site are divided by York Way. The key to linking the sites is the provision of successful and useable crossings over York Way and in particular the positioning of crossings and accesses so that routes follow desire lines, thereby encouraging movement.

5.6 The Triangle Site and Main Site proposals seek to achieve this and are explained below.

5.7 The vehicular access to the Triangle Site would be located directly opposite Junction JN1 to the Main Site (junction of route CA1 with York Way), as shown on Main Site Development Specification Parameter Plan KXC007. This would allow for direct flow of vehicles and pedestrians.

5.8 The vehicular access would also be within the sight line of pedestrians using the Long Park and North Square.

5.9 The pedestrian access at Randell’s Road would be located opposite route R1 and Junction JN2 (R1 and York Way), as shown on Main Site Parameter Plan KXC007 thus encouraging movement between the two sites, particularly for those using the Health and Fitness facility on the Triangle Site.

5.10 Pedestrian crossings are proposed on York Way to coincide with desire lines, and to encourage integration. These are located at the end of the Long Park on the Main Site, and adjacent to Randell’s Road.

**Environmental Impact Assessment**

5.11 The Environmental Impact Assessment addresses the impact of the entire King’s Cross Central Development (the Main Site plus the Triangle Site). This reflects the applicants’ intention to develop the Triangle Site as part of a wider, phased mixed use scheme. The environmental impact of the Triangle Site is therefore fully assessed, in conjunction with the impact of the Main Site.
Regeneration

5.12 The development of the Triangle Site offers an exciting opportunity to bring into productive use an unused area that has long been earmarked for development. The Triangle Site development would significantly improve the local environment, and would aid in integrating King’s Cross Central with the surrounding areas. The Triangle Site development could also act as a catalyst for further improvements and new developments along York Way.

Implementation

5.13 It is assumed that the CTRL scheme access to the north of the Thameslink 2000 tunnel would be constructed in advance of the implementation of the Triangle Site proposals. The Triangle Site development would begin with the creation of the new joint access, and the subsequent removal of the CTRL access, to ensure that access to the CTRL site is maintained at all times.

5.14 The Triangle Site development would be implemented as soon as is practicable, but would be dependent on a number of factors that are unknown at this stage, including the timing of enabling infrastructure works and progress within the Main Site development. As indicated in the submitted Implementation Strategy, the earliest the Triangle Site is likely to be implemented would be five years from the commencement of the development as a whole (i.e. the overall start date).
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