King’s Cross Central

SUPPORTING STATEMENT

for a Listed Building Consent Application to dismantle
\textbf{Gas Holder No.8} so as to relocate and re-erect its guide frame

and a Conservation Area Consent Application to demolish the
\textbf{Western Goods Shed}

\textbf{ARUP} on behalf of

\textbf{ARGENT \cdot ST\cdot GEORGE}

\textbf{exel} \hspace{1cm} \textbf{LCR}

APRIL 2004
King’s Cross Central

Supporting Statement
for a
Listed Building Consent Application to dismantle
Gas Holder No.8 so as to relocate and re-erect its guide frame
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April 2004
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Executive Summary

1 This statement provides the justification for two interlinked applications, which seek respectively:

i) Listed Building consent to dismantle Gas Holder No.8 so as to relocate and re-erect its guide frame (paragraph 2.2 and Appendix G give a more detailed scope of works). The guide frame would be renovated so as to be a free-standing structure, within the new public realm, enclosing new play facilities and open space. Details of the new play facilities and open space within the guide frame would be submitted for approval as reserved matters pursuant to any outline planning permission granted for the overall King’s Cross Central scheme.

ii) Conservation Area consent to demolish the Western Goods Shed so as to allow the re-erection of the guide frames of the listed Gas Holder Triplet (currently in storage) as an “outer frame” to new residential buildings. The accompanying outline planning application seeks to establish the principle of this future use, and a subsequent submission would bring forward the necessary works for approval by the local planning authority, when details have been worked out.

2 A joint supporting statement for both these applications is considered helpful because the arguments are interlinked, and because of the strong public interest in securing the future of all four of the listed gas holder guide frames, as a group of iconic structures.

3 The proposed location for the re-erection of the No.8 guide frame north of the Canal is shown on Figure 6, reproduced from Parameter Plan KXC 005. Gas Holder No.8, in its present location, cannot be assimilated into the proposed new development without damaging the concept of an accessible, legible, high density ‘hub’ of activity between the two stations, well connected to the Granary complex to the north of the Canal and the new development areas beyond. There is insufficient land to locate all four gas holder guide frames to the west of the Western Goods Shed.

4 English Heritage has already accepted, through a legal agreement with LCR, the principle of dismantling and re-locating the guide frame of No. 8 to the north of the Canal as part of a scheme for the four listed gas holder guide frames. By re-locating the No.8 guide frame together with the Triplet guide frames, on and near the site of the Western Goods Shed, alongside the Regent’s Canal, it becomes possible to recreate the historic, townscape and other associations of these iconic structures. As a group, in this location, they make the maximum possible contribution to the overall regeneration scheme and they would remain within the context of the Regent’s Canal Conservation Area. Relocation as a group would be consistent with Camden and Islington Councils’ joint Planning and Development Brief for the King’s Cross Opportunity Area which specifically highlights the advantages of the Western Goods Shed site, close to the Regent’s Canal (paragraph 3.3.29). Strong public support for the redirection and re-use of the four gas holder guide frames, in ambitious ways emerged from the applicants’ consultation on a Framework for Regeneration (see extracts at Appendix A).

5 Other hypothetical locations for relocating the group of gas holder guide frames have been considered (see chapter 8) but neither would generate the values necessary to justify relocation, nor maintain the important historic associations with the Canal and the Goods Yard. Using the Triangle Site for some of the guide frames (there is insufficient room for all four) would not give Camden and Islington Councils the range of mixed-use development and dense street frontage along the York Way that they
desire. The Triangle Site also lies beyond the Regent’s Canal Conservation Area. The northern end of the site would not provide a fitting context, allow them to act as a people draw, nor facilitate their early re-erection.

6 The Western Goods Shed is identified as a building that makes a positive contribution to the Conservation Area on a plan in the Regent’s Canal Conservation Area Statement, published by Camden in January 2001. It is mentioned as a building with important group value in the English Heritage Position Statement on King’s Cross Railway Lands published in March 1997.

7 Two hypothetical options for retaining the Western Goods Shed have been identified (see chapter 9). Option 2, which retains most of the original Shed but removes the eastern section so as to open up access to the Western Coal Drops as well as the later northern extension, is then tested against the submitted proposal in chapter 10. Against all the PPG15 criteria, and all but one of the relevant Camden UDP Chapter 13 policies, the proposal to re-erect the Triplet is judged to offer greater advantages than retaining the southern part of the Western Goods Shed. The only UDP policy on which the latter might be preferable is Policy KC3 since retention of the Western Goods Shed could potentially lead to a greater variety of employment uses in this part of the site. There are however significant opportunities for a range of business and employment uses across the site in the applicants’ proposal.

8 The overall framework, in the planning applications submitted by Argent St George, London and Continental Railways (LCR) and Exel, provides for a mixed use development which would contribute to London’s world city role as well as the regeneration of surrounding communities, in accordance with RPG3 and the London Plan. The proposed demolition of the Western Goods Shed is integral to achieving a development, transport and public realm framework which optimises the full potential of the site, provides a suitable setting for the Triplet guide frames (and the guide frame for Gas Holder No.8) alongside the refurbished Goods Yard buildings, maximises public enjoyment of the canal and draws people to this currently inaccessible part of the site.

9 King’s Cross Central is a large and complex area which has been in need of regeneration for many years. The current proposals have evolved from a careful and lengthy process of seeking to blend new buildings and uses with the best of the past. The whole regeneration area needs to be considered as a totality. Any attempt to vary significantly the submitted proposals, for example by seeking to retain one or more parts of the older buildings and structures that it is intended to demolish or move, would damage the overall concept. It would also undermine the applicants’ ability to give the great many retained buildings, including Stanley Building South, the Great Northern Hotel, the German Gymnasium, the Goods Yard complex and the four gas holder guide frames, a viable and secure future.
Gas Holder No.8 and Western Goods Shed

**Floor plan**

**Elevation**

**View from Stanley Building**

**Air photo**

Gas Holder No.8
Graphical Summary
1. **Introduction**

**Overview of King's Cross Central proposals**

1.1 Argent St George, London and Continental Railways (LCR) and Exel (the applicants) have submitted a number applications, an Environmental Statement (ES) and other supporting documents for permission to carry out a mixed use development at King's Cross Central (KXC). The KXC proposals are for high density development, designed to create a vibrant new part of London, well integrated into the surrounding communities to facilitate wider regeneration. The conservation, refurbishment and re-use of many of the existing heritage buildings, plus many major new buildings of quality, would be combined to create and support a range of new central area functions and local opportunities, cultural facilities and services; and a high quality public realm.

1.2 The industrial heritage of King's Cross Central is of great importance and gives the site a distinct sense of place. Yet it is a complex site which has been underused for many decades. There is widespread support for bringing forward a comprehensive regeneration scheme to create a new urban quarter for London. King's Cross Central is the most accessible development site in Central London and the major opportunity area for Camden.

1.3 King's Cross still exhibits reminders of its rich industrial heritage, the most important clusters of which are the Grade I listed King's Cross and St Pancras stations (which lie outside the planning application site), together with the adjacent Great Northern Hotel; and the Goods Yard complex north of the Regent's Canal. Between the two, there are a few remaining historical structures but the recent works in connection with the Channel Tunnel Rail Link (CTRL) have necessarily resulted in the loss of heritage features, fragmentation of the urban grain and radical change to the character and appearance of the area. As a result, the remaining buildings have lost much of their previous historical setting and they lack a meaningful and coherent context (see Figure 1 for a comparison between 1995 and 2003). Very little now remains of what English Heritage, in 1997, mapped and described as part of the 'Victorian city in microcosm' (EH Position Statement, 1997).

1.4 There are, nonetheless, 8 listed buildings and six other buildings considered significant to the character of the Conservation Areas on the Main Site, excluding the two stations (see Figure 2). Two of these listed structures (Eastern Coal Drops and the Granary) are on English Heritage's Buildings at Risk Register, together with the dismantled and stored Gas Holder Triplet. All three are categorised as being in "fair condition". Reusing heritage buildings and bringing disused properties into use is an integral part of the sustainable regeneration of the area (Camden adopted UDP chapter 13, paragraph 13.68).

1.5 "Harnessing the value of heritage" has been one of Argent St George's 10 overarching principles since initiating ideas for the site in 2001 (Principles for a Human City, July 2001). In evolving the comprehensive regeneration proposals that are now put forward for outline planning and other permissions/consents, the master planners have sought to reflect, and benefit from, a proper assessment of the character, value and significance of the historic buildings, structures, surfaces and wider conservation areas. Indeed embedding the best historic buildings is one of the three main influences that underlies the evolution of the application scheme, together with creating a network of safe pedestrian routes and learning from the urban grain of Central London (Framework for Regeneration, page 22 reproduced at Appendix A).
1.6 But taking account of all the other constraints and aspirations influencing the site’s future (as set out in Parameters for Regeneration, December 2001 – see extract at Appendix B), difficult choices have to be made about which buildings would contribute positively to an overall scheme and which would compromise the wider regeneration objectives. Early consultations with key decision-makers and influencers, and consultation with surrounding communities, have explored these issues and led to the current scheme.

1.7 The proposed scheme protects and enhances a complex of heritage structures around the Granary, to become the heart of the new scheme. The proposals would bring this area alive, by connecting it – physically, visually, psychologically, economically and socially – to adjacent residential neighbourhoods and business clusters, both within the new development and outside; by introducing new beneficial uses into the best of the structures; and by embedding them within the fabric of this new urban quarter. Key heritage buildings to the south of the canal would also be retained and linked to the Goods Yard by a legible sequence of new public routes and public spaces.

1.8 The application scheme secures a long-term future for the most important heritage structures. In particular, major efforts have been focused on giving the four listed gas holder guide frames a secure future, on a prominent site within the Goods Yard grouping, alongside and to the north of the canal. This is a costly but appropriate exercise, given the townscape and symbolic significance of the guide frames. There is widespread public support for re-using the guide frames, as demonstrated through the various consultation exercises undertaken by the applicants over the last three years.

1.9 The applicants seek planning permission to undertake various defined works, to the retained historic structures, to facilitate their economic refurbishment and use. Initial conservation plans have also been prepared, to indicate the principles on which future, detailed proposals can be brought forward for approval. These initial conservation plans form part of the supporting material to the current application package.

1.10 There are inevitably some buildings which are felt to compromise the overall objectives for the scheme. These are buildings which, in their current location, would constrain and prevent the structure of new routes and public spaces which are fundamental to the foundations for a new development framework. These routes and spaces provide the connectivity, permeability, legibility and template for the introduction of new buildings and land uses, that both the local planning authorities (Camden and Islington’s Planning & Development Brief, paragraph 3.2.2) and applicants consider important, to deliver sustainable regeneration. The fact that it may not be possible to retain all the remaining heritage buildings in order to achieve wider policy objectives is accepted in Camden and Islington’s Planning & Development Brief. It acknowledges, for example, that certain buildings may stand across the possible alignment of key routes and important views (paragraphs 3.3.10 and 3.2.14) or may be better used for re-siting the gas holders (paragraph 3.3.29). It also states that the approach to redevelopment must be ambitious in order to "achieve the best possible future for King’s Cross" and "to get the best out of the many employment, housing, education and leisure opportunities" (paragraph 1.4.2).

1.11 The independent planning Inspector, who heard evidence on Camden’s new UDP policies for the King’s Cross Opportunity Area, in 2002, endorsed this approach and recognised that a careful balance must be struck. Indeed, he expressed concern that suggested amendments, put forward by objectors, to further emphasise the retention and reuse of buildings and structures, "could undermine the ability of the Opportunity Area to achieve its full potential" (paragraph 23.5 of the Inspector’s report, July 2002). That, he suggested, "is not a risk worth taking" (paragraph 15.1). (see extracts reproduced at Appendix C).
1.12 Where conflicts have occurred between competing objectives, the applicants and their team of advisers have analysed the advantages and disadvantages of retaining the building or structure in situ and/or the possibility of relocating it, compared to the merits of the application scheme. Only when demolition has clear benefits for the total regeneration scheme is a case being made for demolition of all or part of a heritage structure. The results of this analysis are set out in the supporting statements for the relevant Listed Building and Conservation Area applications to demolish or dismantle, relocate and re-erect all or part of these structures (of which this is one).

1.13 By careful planning and design it is possible to retain, within the overall application site, the very extensive number and range of heritage buildings shown below:

- the relocation and re-erection of Gas Holder No.8 guide frame (Grade II) and the re-erection of the Gas Holder Triplet guide frames (Grade II);
- the main part of the Great Northern Hotel (Grade II);
- the German Gymnasium (Grade II);
- Stanley Building South (Grade II);
- Fish and Coal (unlisted);
- the Western Coal Drops (unlisted);
- the Eastern Coal Drops (Grade II); and
- the very extensive group of buildings comprising the Granary complex (Grade II), although it is intended that the Assembly Shed would be removed.

1.14 But overall the current applications for Listed Building and Conservation Area consents do involve some limited losses of heritage structures (see Figure 3):

- the demolition of one Grade II listed building (Stanley Building North);
- the removal of the small extensions of the Grade II listed Great Northern Hotel (together with covering the lightwell and removing the railings along the south-western and northern elevations);
- the removal of one bay at the northern end of both the East and West Handyside Canopies (which are only listed because they are judged to be in the curtilage of the Grade II listed Granary);
- the demolition of three unlisted buildings or structures significant to the Conservation Areas (Culross Buildings, Plimsoll Viaduct and the Western Goods Shed); and
- the removal of several other unlisted buildings and structures, some of which are modern and/or detract from the character of the area.

1.15 Immediately adjoining the southern end of the planning application site there are also the two Grade I listed stations of King’s Cross and St Pancras which provide the context for the proposals.

1.16 The applicants consider that a successful balance has been struck between the protection of heritage buildings and developing a framework which would bring economic and social benefits to a wide area, in accordance with national, strategic and local policy objectives.

Applicant's objectives and consultation

1.17 The applicants are trying to establish a new structural organisation ("a new framework") for King’s Cross Central. This framework:
• creates new routes and spaces that would help join up the city and integrate King's Cross Central with surrounding neighbourhoods and communities;
• provides a better, more legible, high quality public realm – successful new public spaces and streets that are safe, clean and easy to understand;
• 'embeds' retained heritage buildings within the fabric of the 'new city quarter';
• accommodates current and future transport activities in a safe, clear and efficient manner – the underground, cars, buses, taxis, cycles and potentially the Cross River Tram; and
• facilitates the re-development of this highly accessible site in line with the vision set out in RPG3, the London Plan, the Camden UDP and the Camden and Islington Development Brief, with high density commercial and other development that optimises the use of land. (Note: Detailed justification for the development of this Opportunity Area is in the Planning Statement accompanying the Main Site planning application).

1.18 In the southern part of King’s Cross Central, where the Gas Holder No.8 is currently located, the framework seeks to:
• establish a fitting gateway to the wider development and regeneration area;
• provide for a new, strong, legible north-south route, and a subsidiary route through Pancras Square, to:
  ▪ facilitate pedestrian and other movement between the Southern Hub and other parts of the development;
  ▪ help draw people, life and activity up to the Granary and other Goods Yard buildings (some of which are 'at risk') such that there is a secure new economic future for them at the heart of the redevelopment;
  ▪ connect the Goods Yard buildings with the heritage grouping around the Grade I stations – something specifically referred to in the Regent's Canal Conservation Area Statement;
• optimise the use of land close to the public transport interchange for high density development to extend London’s world city role;
• provide the template for the introduction of high quality, modern buildings, to meet the needs of a range of office users, with good 'front doors'; and
• meet the aspirations of Camden's UDP to secure a highly attractive and legible public space as a setting for the Grade I listed stations.

1.19 North of the Regent’s Canal, where the Western Goods Shed is located, the framework seeks to:
• develop a new mixed use district with its own character and sense of place;
• achieve a critical mass of development so as to create a reason for people to be there, to bring large numbers of people into the development and make the place a success;
• create a vibrant heart to the development by bringing new life to the Granary complex and Coal Drops;
• use the four re-erected gas holder guide frames as a group to provide identity and historic association in a prominent part of the site and to provide a focal point, to draw people to and along the Regent’s Canal;
• maximise public access to the canal frontage and along the canal corridor;
• promote pedestrian accessibility more generally, into and across the site, both north-south and east-west linking into the existing urban grain where possible; and
• introduce a range of housing types, and economic, social and cultural activities.

1.20 The Framework for Regeneration document made it clear that the future of Gas Holder No.8 was under review. The main drawings that illustrated the Southern Hub (see Figure 4) showed the possible disposition of major buildings in the area currently occupied by Gas Holder No.8. The text emphasised the need to plan for new buildings and new public spaces that combine high-density development with high quality design to:
• establish a fitting gateway to the wider development and regeneration area;
• generate new, economic, social and cultural activity; and
• draw this life and activity into the heart of the site, around the Granary complex and Coal Drops, to ensure the continued viability and success of these areas and the new developments beyond.

1.21 The Framework for Regeneration also indicated that the main part of the Western Goods Shed was under review but that the rear extension was likely to be demolished. It suggested the possibility of total demolition, giving details of various land use options for the site, including its use for the re-erection of the Triplet. It also indicated an option of partial demolition, with the remaining building used for ground floor retail with employment uses above.

1.22 Consultation findings show strong support for the framework proposals generally and for the concept of bringing new life back into the area. Making King’s Cross safe and clean emerge as the biggest consultation issue followed by community access to new facilities and services. Many people liked the emphasis within the Framework on:
• new housing and job opportunities (and the resultant benefits for local people);
• improving and enhancing the public realm;
• the provision of a cleaner, greener, high quality environment;
• the re-use of historic buildings, including the gas holders;
• the Regent’s Canal; and
• delivering long awaited change.

1.23 Throughout the process the applicants have amended their ideas so as to be sensitive to the range of comments received. King’s Cross Central has passed through many stages as the ideas have been tested and refined, over time, in the context of:
• the progression from ‘principles’, to ‘parameters’, through to ‘framework’ and ‘framework findings’;
• increasing knowledge and awareness about the site, its opportunities, its constraints, particular characteristics and other parameters (including environmental parameters);
• an emerging planning policy consensus, in favour of high density, mixed use development at King’s Cross;
• increasing clarity about Camden, Islington, GLA and other priorities;
ongoing, informal consultations with the local planning authorities, English Heritage, the GLA, CABE and others;

wider consultation response to the ideas in ‘A Framework for Regeneration’, as summarised in ‘Framework Findings’; and

the EIA process, which included the publication of a Draft Scoping Report in April 2003, for consultation with a range of statutory and non-statutory organisations.

1.24 The ‘Framework for Regeneration’ document identified heritage, townscape, transport, socio-economics, health and construction as main or key topics for the EIA process to consider. The heritage, townscape and transport topics, in particular, have been central to the evolution of the spatial layout. In the earlier work Gas Holder No.8, the Gas Holder Triplet and the Western Goods Shed were all stated to be ‘Under Review’. That review has now enabled a firm and appropriate site to be identified for the re-erection of the four gas holder guide frames which can only be achieved by the demolition of the Western Goods Shed.
Figure 1: Aerial photographs, 1995, 2002 & 2003

Key

- Main Site: outline planning application boundary
Figure 3:
Listed Building and Conservation Area
Consents: Application Sites

Key:
- Planning Application Boundary
- King's Cross and Regent's Canal Conservation Areas
- Demolition proposals for which conservation area consent is being sought
- Demolition proposals for which listed building consent is being sought
- Gas holder No. 8, for which listed building consent and planning permission is being sought, to dismantle, relocate and then re-erect the guide frame.
- Telegraph Poles
Figure 4: Illustrative ideas for the Southern Hub from Framework for Regeneration (Sept 2002)
2. **Proposals for Gasholder No.8 and the Western Good Shed**

**Scope of the applications**

2.1 This statement supports two applications.

2.2 The first is an application for Listed Building consent to dismantle Gas Holder No.8 so as to relocate and re-erect its guide frame to the west of the Western Goods Shed and thus nearby the site proposed for the re-erection of the Triplet guide frames. More specifically it is proposed to:

- dismantle the guide frame;
- demolish the telescopic bell;
- infill the tank, with subsequent de-contamination;
- relocate the dismantled guide frame components to Development Zone N or P (see Figure 7), to facilitate their subsequent re-erection as part of the wider “King’s Cross Central” redevelopment;
- clean and restore the guide frame components;
- fabricate replacement components where the original components are missing or degraded beyond repair;
- re-paint the guide frame;
- re-erect the guide frame in Development Zone N to the west of the re-erected Triplet.

2.3 The applicants have prepared a method statement on the techniques to be used in all the processes involved in this ambitious relocation, re-erection and positive conservation project. It is included in this report at Appendix G. In summary, the guide frame would be renovated so as to be a free-standing structure, within the new public realm, enclosing new play facilities and open space. Details of the new play facilities and open space within the guide frame would be submitted for approval as reserved matters pursuant to any outline planning permission granted for the wider King’s Cross Central scheme.

2.4 It is not considered appropriate to consider retaining Gas Holder No.8 in situ, in splendid isolation, but other hypothetical locations for relocating the group of gas holder guide frames are considered.

2.5 The second is an application for Conservation Area consent to demolish:

- the Western Goods Shed so as to allow the re-erection of the guide frames of the Gas Holder Triplet as an “outer frame” to new residential buildings;
- the wall and fences abutting the south-west corner of the Western Goods Shed.

2.6 The Regent’s Canal Conservation Area, published by Camden in January 2001, identifies the Western Goods Shed on a plan as being a building that makes a positive contribution to the Conservation Area. It is mentioned as a building with important group value in the English Heritage Position Statement on King’s Cross Railway Lands published in March 1997.

2.7 A joint supporting statement for both Gas Holder No.8 and the Western Goods Shed is considered helpful in this instance because the arguments are interlinked and because of the strong public interest in securing the future of all four of the listed gas holder guide frames, as a group of iconic structures.
Integration with the applicants' framework

2.8 The principles on which the Development Framework has been based are set out in chapter 1 of this statement and illustrated in Figures 5 and 6. In order to facilitate the overall concept of the Development Specification and Parameter Plans that form part of the Main Site planning application it is essential to secure a high level of economic activity in the area close to and immediately to the north of the stations, around a legible sequence of new routes and spaces, as envisaged in policy guidance at all levels, including the Camden UDP. This then provides the context within which the complex of heritage buildings to the north of the canal can be refurbished and brought back into beneficial uses (and further new uses established beyond, to the north).

2.9 The demolition of the Western Goods Shed would allow for the relocation of the Triplet and No.8 guide frame into that area so as re-create a group of iconic structures, on a prominent site within the Goods Yard, alongside the canal. Importantly, the proposal would keep all four gas holder guide frames within the context of the Regent's Canal Conservation Area.

2.10 At the same time, the proposal would help address the perceived isolation of the Goods Yard from the stations in the south and improve links and access to the canal side, by establishing a new landscaped area (Development Zone N), around the gas holders, making an important contribution to the public realm and enabling direct access to and from the Canal towpath. This is illustrated in Figures 7 and 8.

2.11 The Western Goods Shed is a large building, somewhat detached from the rest of the site. It does not lend itself easily to a new use compatible with wider planning objectives. It occupies an important site close to the Canal and acts as a barrier to east-west movement. The site deserves to be used for a key and vital use in a way which enhances the Canal. Relocating all four of the gas holder structures into this area, but using only the Triplet for residential purposes, would provide the best way of integrating this area and the Goods Yard generally, within King's Cross Central and create a new, striking London landscape.

Site details

2.12 Gas Holder No.8 (Grade II) is currently on a site bounded by Goods Way to the north, Pancras Road and the new Gas Governor station to the west, Battle Bridge Road to south, and a temporary construction road to the east. It was listed in 1986 as was the Gas Holder Triplet that stood further to the west on Goods Way until taken down as part of the CTRL works and now held in storage near No.8.

2.13 The other listed buildings in the vicinity of Gas Holder No.8 are: King’s Cross Station (Grade I) which was listed in 1954; St Pancras Station (Grade I) and the German Gym (Grade II) which were listed in 1967; the Great Northern Hotel (Grade II) which was listed in 1984; and the Stanley Buildings (Grade II) which were listed in 1994. To the south of the Gas Holder No.8 are the Culross Buildings and Hall which are not listed but are judged to make a positive contribution to the Conservation Area.

2.14 The Western Goods Shed lies to the north of the Regent’s Canal, immediately to the west of the Coal Drops and fronting onto Wharf Road.

2.15 The listed buildings in the vicinity of the Western Goods Shed are: The Granary (Grade II) which was listed in 1978 together with the complex of other buildings within its curtilage and the Eastern Coal Drops (Grade II) which were listed in 1983.
2.16 Extracts from the Revised List of Buildings of Special Architectural or Historic Interest are at Appendix D. It includes details of Gas Holder No.8 and, for completeness, the Triplet.

Procedural issues

2.17 The outline planning application for the Main Site development, the accompanying Development Specification and Parameter Plans and the supporting reports demonstrate the merits of the King’s Cross Central project. They show that, of particular relevance to this application, there are good reasons to move the Gas Holder No.8 guide frame to a new location in close proximity to the intended site for the Gas Holder Triplet guide frames to the north of the Regent’s Canal.

2.18 This statement demonstrates that the proposals to demolish the Western Goods Shed to make room to re-erect the Triplet guide frames and dismantle Gas Holder No.8 so as to re-erect its guide frame alongside, within Development Zone N, meet the relevant criteria in PPG15, are compatible with the recently adopted Chapter 13 of the Camden UDP and accord with other guidance for the King’s Cross Opportunity Area.

2.19 In February 1996, during the consideration of the Channel Tunnel Rail Link Bill, English Heritage (EH) and London and Continental Railways (LCR) entered into a legal agreement which committed EH to provide all reasonable practical assistance in obtaining Listed Building consent and any other consents for the relocation of the single gas holder as part of a development scheme (Agreement, clause 2). The Agreement also committed LCR to work with EH and others to determine if a financially viable scheme for the re-use of all four guide frames could be committed.

2.20 Clause 4a of the Agreement authorised LCR to dismantle the guide structures of the Triplet and the single gas holder in a manner so as to enable their re-erection including surveying, recording, coding and sequential storage. The Triplet has been dismantled and is in storage near Gas Holder No.8.

2.21 Clause 5 of the Agreement provided for the re-erection of potentially all four listed structures, to the north of the Regent’s Canal, on a site to be agreed between EH and LCR as reasonably suitable for the purpose.

2.22 EH and LCR agreed that any scheme for the re-erection of the guide structures should not be detrimental to the wider redevelopment objectives of the Railway Lands, and to use their reasonable endeavours to assist in gaining public acceptance of the scheme (Agreement, clause 9).

2.23 The agreement originally expired in September 2000 and was subsequently extended to September 2003. A further extension has now been signed which has the effect of allowing the agreement to continue indefinitely unless terminated by either party giving six months notice. LCR and its development partners have worked within both the letter and spirit of the agreement, as demonstrated in this statement.
Figure 5: Public Realm Areas within the Main Site application boundary

Keys:
- Principal Public Realm Area
- Development Zone Boundary
- Development Zone Boundary (L.O.D. ± 1.0m)
- Development Zone Boundary (L.O.D. ± 0.5m)
- West Handside Canopy
- Indicative Position & Orientation for Gas Holder Guide Frames
- Regents Canal
- Camley Street Natural Park
- Zones for New Bridge Structures
- Route between Lower Level of the Coal Drops and the Canal Towpath

L.O.D. = Limit of (Horizontal) Deviation
Key:
- Development Zones
- Development Zone Boundary
- Development Zone Boundary (L.O.D. ±1.0m)
- Development Zone Boundary (L.O.D. ±5m)
- West Handyside Canopy

In some cases, Development Zones include areas of public realm, as shown in drawing KXC 004. For example, Development Zone M includes the Coal Drops Yard, between the Eastern and Western Coal Drops, which would be refurbished as part of the public realm.

Indicative Position & Orientation for Gas Holder Guide Frames, which would be Re-erected within Development Zone N.
Key

Possible location for storage, cleaning and restoration works prior to re-erection

Figure 7:
Initial location of the guide frame components
scale: 1:4000 @ A4
Key

Contemporary external activity node within the structure of Gas Holder Number 8 (part of Development Zone N).

Carriageway with blacktop surface to be defined by granite kerbs.

Possible outdoor seating area associated with ground floor use.

Open space to the canal incorporating level changes. Predominantly soft landscaping with areas of tree planting to accommodate a series of activities and more sedentary uses.

Pavements with high quality paviours.

Access road with defined carriageway with a stone surface and granite kerbs.

Pedestrian area to be paved in a high quality finish.

Tow-path to be refurbished. Refer to Landscape Proposals Plan LPP106.

Figure 8: Landscape proposals for guide frames relocation area
3. Policy context

Introduction

3.1 This chapter highlights extracts from a range of national and Camden policy statements that are particularly relevant to the consideration of this proposal. It does not seek to comment on the compatibility of the proposal with those policies. That is the function of later chapters in this Statement (chapter 8 onwards).

Planning and the Historic Environment: PPG15

3.2 PPG15 (September 1994) indicates a general presumption in favour of retaining buildings which make a positive contribution to the character or appearance of a conservation area (paragraph 4.27). It expects proposals to demolish such buildings to be assessed against the same broad criteria as proposals to demolish a listed building. In dealing with the non-listed Western Goods Shed, this statement therefore considers the same issues as set out in PPG15 for listed buildings.

3.3 PPG15 (paragraph 3.5) lists four issues that are generally relevant to the consideration of all listed building applications. These are:

- the importance of the building, its intrinsic architectural and historic interest (explained in paragraph 6.11 of PPG15) and rarity, in both national and local terms;
- the particular physical features of the building (which may include its design, plan, materials or location) which justify its inclusion in the list: list descriptions may draw attention to features of particular interest or value, but they are not exhaustive and other features of importance (e.g. interiors) may come to light after the building's inclusion in the list;
- the building's setting and its contribution to the local scene, which may be very important, e.g. where it forms an element in a group, park, garden or other townscape or landscape, or where it shares particular architectural forms or details with other buildings nearby;
- the extent to which the proposed works would bring substantial benefits for the community, in particular by contributing to the economic regeneration of the area or the enhancement of its environment (including other listed buildings).

3.4 However, where total or substantial demolition is proposed, three further but overlapping considerations (PPG15 paragraph 3.19) are set out. These are:

- the condition of the building, the cost of repairing and maintaining it in relation to its importance and to the value derived from its continued use. Any such assessment should be based on consistent and long-term assumptions. Less favourable levels of rents and yields cannot automatically be assumed for historic buildings. Also, they may offer proven technical performance, physical attractiveness and functional spaces that, in an age of rapid change, may outlast the short-lived and inflexible technical specifications that have sometimes shaped new developments. Any assessment should also take account of the possibility of tax allowances and exemptions and of grants from public or charitable sources. In the rare cases where it is clear that a building has been deliberately neglected in the hope of obtaining consent for demolition, less weight should be given to the costs of repair;
- the adequacy of efforts made to retain the building in use. The Secretaries of State would not expect listed building consent to be granted for demolition.
unless the authority (or where appropriate the Secretary of State himself) is satisfied that real efforts have been made without success to continue the present use or to find compatible alternative uses for the building. This should include the offer of the unrestricted freehold of the building on the open market at a realistic price reflecting the building’s condition (the offer of a lease only, or the imposition of restrictive covenants, would normally reduce the chances of finding a new use for the building);

- the merits of alternative proposals for the site. Whilst these are a material consideration, the Secretaries of State take the view that subjective claims for the architectural merits of proposed replacement buildings should not in themselves be held to justify the demolition of any listed building. There may very exceptionally be cases where the proposed works would bring substantial benefits for the community which have to be weighed against the arguments in favour of preservation. Even here, it will often be feasible to incorporate listed buildings within new development, and this option should be carefully considered: the challenge presented by retaining listed buildings can be a stimulus to imaginative new design to accommodate them.

Strategic Guidance for London Planning Authorities: RPG 3

3.5 RPG3 (1996) still provides relevant context for the King’s Cross Central proposals, since it is the London-wide guidance that influenced the current development plan policy. RPG3 (1996) identifies King’s Cross as one of its 5 Key Margin Opportunity Sites (Map 3, Central London). Paragraph 2.3 explains their role as:

“The Central Area margins need to consolidate their existing economic strengths and develop new economic roles. The major development sites in the margins need to be brought forward for development that can rebuild the local urban structure, define a new image for their areas, extend Central Area uses where appropriate and bring benefits to their local communities. Major international termini at King’s Cross/St. Pancras, Paddington and Waterloo are particularly significant.”

3.6 Specifically on King’s Cross, the guidance says that:

“Proposals should be brought forward for a new quarter of London with a distinctive identity, enhancing features of historic and conservation importance. There will be scope for development for business, tourism and leisure, including areas of high density uses. It will be appropriate to provide housing and community facilities and measures to enhance access to employment, which benefit neighbouring local communities.”

3.7 Of particular relevance to the area around the two stations, where the Gas Holder No.8 is currently located, is the explicit expectation that (paragraph 2.36):

“The highest densities and most commercial uses should be closest to the termini. These may include large offices, drawing on the high accessibility to regional and international networks, subject to there being a reasonable prospect of demand”

This guidance applies to King’s Cross, Paddington and Waterloo.

The London Plan

3.8 The London Plan, adopted in February 2004 after an Examination in Public in March/April 2003, replaces RPG3. It seeks to sustain the role of the Central Activities Zone, of which King’s Cross is part, as “the core location for international business and finance and as a national transport node” (paragraph 5.25). King’s Cross is identified as one of 6 Opportunity Areas in Central London. Development within such Opportunity Areas will be expected to maximise
residential and non-residential densities and to contain mixed uses (Policy 5B.4). Paragraph 5.37 comments specifically on the development opportunity here:

“King’s Cross has the best public transport accessibility in London…. Its central location and unique public transport accessibility offer particular scope for high-density business development, as well as housing. … The development framework should draw upon the historic features of the site to create a truly sustainable business and residential community, reliant on minimal use of cars.”

3.9 Policy 4B.12 states that the Mayor will, and boroughs should, support schemes that make use of historic assets and stimulate environmental, economic and community regeneration, including where they bring redundant or under-used buildings and spaces into appropriate use, and secure the repair and re-use of Buildings at Risk.

Camden UDP Policies

3.10 The King’s Cross Opportunity Area (see Figure 9) is the subject of a separate chapter (No.13) in the London Borough of Camden’s Unitary Development Plan, (adopted in March 2000). Chapter 13 was selectively reviewed, following the normal processes and finally adopted by the Borough on 1 May 2003. It also forms Section 9 in the new Deposit Draft of the replacement UDP, approved for consultation in May 2003.

3.11 Paragraph 13.2 of the new Chapter 13 explains the reason for the review as:

“This is a consequence of the Area’s identification in RPG3 and the emerging London Plan, which provides strategic guidance for London authorities, as a major regeneration resource able to complement or enhance Central Area functions and the proposed Channel Tunnel Rail Link (CTRL) terminus at St Pancras.”

3.12 Paragraph 13.3 of the new Chapter 13 says:

“It is widely recognised that the Opportunity Area is one of the few remaining major development opportunities in inner London and is certainly the major one in Camden. The Opportunity Area continues to merit a separate Chapter in Camden’s UDP in recognition of the following factors:

(a) the scale and nature of the outstanding development opportunities presented by the Area’s excellent and improving public transport network;
(b) the opportunities to bring significant regenerative benefits to surrounding communities and thereby contribute to social inclusion by bringing social, economic and environmental benefits to the Area and beyond;
(c) the potential contribution of the Area to London’s ‘World City’ status and its economy and cultural diversity;
(d) the potential for the development of new market and affordable housing to contribute to meeting local and London-wide needs;
(e) the need to address directly the potential impact of comprehensive development on the character, facilities and infrastructure of surrounding areas;
(f) the great potential for low energy buildings with sustainable transport links, located in the heart of central London; and
(g) the great potential for community regeneration through innovative processes of community involvement in the planning, design and management of elements of new developments and services.

With this Chapter, the Council seeks to achieve a successful balance of all these factors.
The key objectives for King’s Cross are set out in King’s Cross: Camden’s Vision (June 2002). These aim to achieve a development that is firmly integrated with the local area in terms of:

- Physical connections;
- Economic connections;
- Social links;
- Managing the impact; and
- Working with the community.”

3.13 Chapter 13 contains 4 Strategic Policies and 12 Local Policies. These are all identified in Appendix F. The proposals in this application are tested against those individual policies in paragraph 8.16 (in respect of Gas Holder No.8) and in paragraph 10.6 (in respect of the Western Goods Shed) of this statement.

3.14 The Inspector’s report on Chapter 13 (see Appendix C) illustrates the need to consider the overall opportunities available within King’s Cross Opportunity Area as opposed to a simple building by building assessment. He said:

“...in considering the future of the Opportunity Area it would be a grave mistake for the Council to ignore national guidance exhorting the maximum use of land occupying central and highly accessible locations. It seems to me that the Opportunity Area represents a rare if not unique opportunity to secure a form of development that can help alleviate a host of social, economic and environmental problems…” (paragraph 1.16)

“...I am concerned that a policy emphasising support for the re-use of other less important buildings and structures could mean that the Opportunity Area might not achieve its full potential. This is not a risk worth taking” (paragraph 15.1)

“The remaining bullet point mentions the refurbishing of existing buildings where practicable. Although I have some sympathy with this suggestion I am concerned that it could undermine the ability of the Opportunity Area to achieve its full potential. I note that the suggested text is qualified by the words “where practicable” but a narrow interpretation could be that all existing buildings should be retained unless they are incapable of some form of re-use. In the light of this concern, I doubt if the proposed bullet point could be justified. Of course, the most important of the buildings and structures that remain on the site enjoy statutory protection in any event.” (paragraph 23.5)

Camden and Islington Planning & Development Brief

3.15 The London Borough of Camden published its draft Brief for the King’s Cross Opportunity Area for consultation in September 2003. The London Borough of Islington also published a separate draft Brief for the Triangle site in September 2003. Camden and Islington Councils then adopted a joint brief for the whole of the Opportunity Area and Triangle in December/January 2003/4. As with other policy documents, the Brief continues to stress the need for major development and regeneration. It also seeks an early start to the process so as to overcome the problems and uncertainties that have blighted the area in the recent past (paragraph 1.1.3).

3.16 There are a range of general statements in the adopted Brief (grouped below into topics) that are particularly relevant and lend support to this application such as:

Sustainability and integration

“...to achieve the best possible future for King’s Cross... we aim to get the best out of the many employment, housing, education and leisure opportunities. The approach must be ambitious. We want to make King’s Cross stronger, healthier, safer, more economically successful and very sustainable, with excellent services. Successful development will be well balanced and completed in good
"The Councils’ main objective will be to create firm links between the development and the local area so that it is a relevant and positive addition to, and well integrated with, this part of London. This integration includes:

- Physical connections – the opportunities for better east-west movement across the site are key, breaking down the boundaries to the site. The development must be - and feel - fully connected with the rest of London, with full public access to attractive spaces and open and safe streets;
- Economic connections – new jobs should be widely available, offering more opportunities for those who find it difficult to work for many reasons;
- Social links – the councils are keen to avoid the development of an exclusive ‘ghetto’. We want to see a balanced and successful development that recognises cultural diversity in all aspects;
- Completing the picture – a large development like King’s Cross Central will take place in stages. Each major phase of the comprehensive development should contain an appropriate mix of different uses, including housing; and
- Working with the community – in King’s Cross, the focus is on community involvement, better access to jobs and training, improving local people’s qualifications through education, safer streets and an attractive environment." (paragraph 1.4.3)

Locational Guidance

"The highest densities are likely to be in the southern part of the site, closest to the transport interchange. Throughout the site, optimising the use of land will require imaginative site planning and design solutions." (paragraph 2.2.3)

"Maintain Pancras Road (and others…) as distributor roads for all classes of traffic and with improved facilities for pedestrians, cyclists and public transport." (paragraph 2.3.41)

The area and the Triangle still retain a strong industrial character derived from its railway heritage. This character is an asset to any new development. The development presents an opportunity to create a new place where attractive spaces are framed by good architecture and high quality design weaving the historic elements into a new and distinctive part of central London." (paragraph 3.1.1)

Masterplanning

"This Brief…seeks a comprehensive approach to the whole site, to ensure development achieves the full regenerative potential of the site. A comprehensive approach is also considered essential to the creation of a quarter with its own distinctive character, and to the introduction and maintenance of high quality standards throughout the development, including attention to the implications of development achieved in a number of phases." (paragraph 3.2.1).

A successful masterplan will:

- Identify the elements of existing character and important buildings, landmarks and infrastructure which the development will protect, enhance and incorporate;
- Establish a structure and layout based on principles of connectivity, permeability and successful urban design and environmental sustainability, and incorporating an open space and public realm strategy for the whole site;
- Set the standards of design and quality for the whole development and its separate phases." (paragraph 3.2.2).
Heritage

"The general presumption in PPG15 is that all listed buildings are to be retained and permission will not be given for their total or substantial demolition. However, Government guidance provides that demolition may be acceptable if it brings forward other benefits, for example, where the proposed works would bring substantial benefits for the community, which have to be weighed against the arguments in favour of preservation (PPG15 section 3.17). Demolition of unlisted buildings in a Conservation Area can similarly be justified if relevant criteria are met. Camden Council has therefore to assess proposals involving the loss or substantial alteration of historic buildings against other wider regeneration aims." (paragraph 3.2.8).

"In addition, new views of local features such as the waterpoint, the relocated triplet and no. 8 gasholders and Camley Street Natural park (CSNP) may be created through new street alignments, ground level variations and the pattern of built development. Views may also be created from bridges over the East Coast Main Line (ECML), over the canal and at Camley Street Natural Park."

(paragraph 3.2.14)

3.17 The Brief then identifies 6 sub areas on which more detailed information is provided.

3.18 Gas Holder No.8 is within sub area 2. Paragraph 3.3.11 says:

"The relocation, restoration and beneficial reuse of the gasholder triplet and Gasholder No.8 should be achieved as part of the development and the Council will seek to achieve this in an early phase. Relocation together with the triplet frames would recover some of the original composition of the structures and to increase prospects of a viable re-use. This is provided for in the legal agreement of 1997 between English Heritage and London & Continental Railways. A range of possible uses should be considered and the gas holders should be integrated with other uses and buildings/spaces in the development. A location close to the canal may be the most appropriate and retain historic connections."

3.19 Paragraph 3.3.11 then refers to an inset box, which is reproduced below.

The triplet Gas Holders (1880) guide structures and Gasholder no. 8 (1883) are listed (grade II) and are monuments of 19th century industrial engineering. They formed the finest group of gasholders in the UK until recently decommissioned and the triplet dismantled to allow the extension to St Pancras Station. Under a mitigation agreement with English Heritage, the triplet is retained in careful on-site storage by the CTRL project. They await re-erection. Together, they are a valuable asset that could be used in an imaginative and contemporary manner to enhance the character of the Area.

The important points are that:

- Re-erection should be in an early phase of the Area’s redevelopment, with agreed method statements and repair schedule;
- The location of the triplet should be near the Canal and the CTRL/MML tracks, being as near as is practical to the original gasworks site. Their presence here would reinstate a strong landscape character adjacent to the Canal, and return to the King’s Cross skyline a distinctive and much cherished heritage feature;
- New uses inside the structures should be sufficiently viable to ensure their long term maintenance, allow public access to view the structures close up, and relate well to the surrounding public realm;
• Interior development should not project above the level of the lower part of the uppermost lattice girder, and should vary in height across the triplet by a minimum of 10 metres, so that some of the ironwork can be silhouetted;

• The design, detailing and materials of development inside should avoid conflict with the external guideframes, for example, by maintaining a clear distance from them and using complementary materials like steel and glass. Solid panels may help retain original character by reducing visual clutter, especially opposite major viewpoints;

• New development should allow long views of the gasholders, particularly from the south and northeast, and closer views that reveal the full height and structure.

3.20 The Western Goods Shed is within sub area 3. Extracts from paragraphs 3.3.26 and 3.3.29 are given below:

“Create appropriate enhancement and canalside development to meet UDP and other guidance within this Brief. For example improved connections with the Canal are important to the viability and sustainability of development in the northern areas, and positive engagement blends waterside access with existing and new development without compromising the Canal’s character or creating a cliff-like frontage.”

“Locating the gas holder frames by the water would be a positive expression of the development, combined with the renovation of the Coal & Fish Offices, new bridges and new direct access to a renovated towpath.”

“The Western Goods Shed is a substantial, later structure, which could be subdivided. Increased access across the site could be achieved by opening up bays across the building. Alternatively, this site may be proved to be suitable for re-siting the triplet and No.8 gas holder.”

3.21 Sub area 4 (to the north of the Granary complex) identifies the need to create new connections. In paragraph 3.3.38 one of those specified is from Copenhagen Street/York Way to the Regent’s Canal bridge in the west. Whilst diagrammatically the route shown skirts the Western Goods Shed (Figure 9 from the Brief reproduced below) an equally legible and more dramatic route, with a more iconic focal point and destination, would be possible if the Western Goods Shed is replaced with the Triplet.
Camden Conservation Area Statement for King’s Cross

3.22 The London Borough of Camden published the draft King’s Cross Conservation Area Statement for consultation in September 2003 which was then modified and adopted in December 2003. It replaces the Statement published in 1998. As far as King’s Cross Central is concerned, the Statement covers the area south of Goods Way. In reviewing the Statement the opportunity has been taken to modify the boundaries with the Regent’s Canal Conservation Area so that the area in which Gas Holder No.8 now stands will be within the King’s Cross rather than Regent’s Canal Conservation Area (see boundaries on Figure 2).

3.23 The Statement acknowledges the Opportunity Area in paragraph 1.1.6 and says:

“……Opportunity Area policies seek to promote its comprehensive redevelopment as a high density, high quality, mixed use urban quarter. Planning policy emphasis therefore varies across the Conservation Area. Regeneration will revitalise the Opportunity Area with a mix of refurbished buildings, new uses and new development.”

3.24 Section 4 of the Statement describes the character and appearance of the Conservation Area. Paragraph 4.1.2 says

“….the character and appearance of the area including and surrounding St Pancras and King’s Cross stations is undergoing substantial change.”

3.25 The Statement then considers the various sub areas that “…have been defined as having distinctive and definable character on the areas.” Sub area 2 comprises King’s Cross and St Pancras stations, the area between them, extending northwards to Goods Way and Camley Street. There are several statements that are very relevant to understanding the changes which have, and will continue, to alter the character and appearance of the area. In particular:

“Some of the buildings and structures and hard landscaping that contributed to the urban grain between the stations have been dismantled or removed and the street layout has been in part altered. This has in turn opened up new views.” (paragraph 4.2.33)

“….Whilst Culross Buildings and Battlebridge Road represent largely intact examples of the Victorian character and appearance of the area, their context to the north and immediately to the south is storage and construction sites” (paragraph 4.2.79)

“The area to the east of the realigned Pancras Road contained by Culross Buildings to the north and the King’s Cross suburban train shed to the south-east is a construction site. This has diluted their original context.” (paragraph 4.2.90)

3.26 Paragraphs 4.2.70 describes the unique interlinked Classical structure of the Triplet and paragraph 4.2.71 describes the stylistically similar No 8. It also says:

“The legal agreement…indicates the possibility of no.8 gasholder being moved so that all four are located together.”

3.27 The Statement concludes the analysis of sub area 2 by saying (paragraph 4.2.94):

“This part of the King’s Cross Conservation Area has experienced significant change. This has resulted in the loss of elements of heritage merit, fragmentation of the urban grain and radical change to the character and appearance of the area. The changes resulting from the CTRL and London Underground works have resulted in the widening of the settings of most of the principal buildings, mostly those to the south of, and including, the German Gymnasium. Change has also resulted in some buildings and structures
standing alone, comparatively isolated from their former context. For example, Stanley Buildings sit somewhat uncomfortably in the context of the new St Pancras Station extension and the remaining gas holder and Culross Buildings are currently somewhat isolated. Nevertheless, these buildings continue to contribute positively to the character and appearance of the Conservation Area, although as a result of the CTRL construction works, they currently do lack a meaningful and coherent visual context.”

3.28 The Statement comments on current issues in the various sub areas and acknowledges the level of change likely in the King’s Cross Opportunity Area. Paragraphs 6.1.1 and 6.1.2 say:

“The King’s Cross Opportunity Area, of which sub-area 2 forms an important part, is the largest remaining strategic brownfield development site in inner London. Whilst the area is subject to a wide range of physical and planning policy constraints, there is an opportunity to regenerate a previously blighted part of London and take advantage of the strategic location. The potential therefore exists for development of a very high standard of urban and architectural design that capitalises upon, and takes into account, the character and appearance of the Conservation Area.

The forthcoming plans for a dense, mixed-use development in the Opportunity Area propose a major development and will result in significant changes to the character and appearance of the central part of the King’s Cross Conservation Area.”

Camden Conservation Area Statement for Regent’s Canal

3.29 Camden published the Regent’s Canal Conservation Area Statement in January 2001. The Conservation Area is sub-divided into three areas – the third area being the Goods Yard to the north of the Canal plus the former Imperial Gas Works to the south. Reference is made to the changes then taking place as a result of CTRL and the further development of the principles to be followed.

3.30 The Statement refers to the 7 gas holders that stood at that time as providing part of “one of the most striking London landscapes” (page 16):

“The three interlocking telescopic gasholders to the north of Goods Way were constructed in the 1880s, over tanks of 1861-4. The guide frames comprise cast iron columns of three vertical sections topped by classical capitals and braced together by three rows of lattice girders. To the north are two further holders dating from 1887…To the south of Goods Way is a further decorated telescopic holder [number 8] dating from 1883 and one storey lower than the others, and to the south of that a further plan lattice gasholder.”

3.31 The Statement also refers to the Western Goods Shed, noting that it was constructed on the site of the original coal and stone handling basin (page 17). It is not however included in the list of buildings which make a positive contribution to the character and appearance of the Conservation Area (page 22), although it is included on the accompanying plan.

3.32 On townscape, the Statement stresses the intactness and group value of the Goods Yard, remarking that:

“it is the totality of this historic grain, comprising both listed and unlisted structures, which contributes in large part to the unique character of the Conservation Area. Any significant erosion of part of this urban landscape would be likely to severely undermine the remainder. The structures and surfaces on site are of interest in themselves but it is the experience of them as a group that is the essence of the character of the Conservation Area” (page 18)
3.33 Under ‘Negative Features’, the Statement says that:

“The absence of a publicly accessible link across the canal into the Goods Yard itself contributes to the isolation of the site from the station to the north” (page 19)

3.34 The importance of new links and access is further reiterated under ‘Current Issues’, which discusses the future use of the canal:

“…The design of new buildings should positively address the canal side, while striking a balance with its established historic character. New uses are likely to be located on the canal to exploit the waterway and reconciling new development with the established character of the old will take skill and imagination.

…Certain sections of the canal have an intimidating character and the council will support proposals for improving links and access to the canal side which complement its built heritage and character and improve the perceived sense of security for those using the canal.” (page 25)

Overview of policy

3.35 The principal policies all have a similar theme – a driving ambition to secure the implementation of a comprehensive regeneration scheme for this part of London that embeds the best Victorian heritage into an exciting new composition of buildings and uses so as to generate a range of significant physical, economic, social and other community benefits.

3.36 At a more detailed level the policies at national and local level, and the guidance in Camden and Islington’s Planning & Development Brief, support the overall concept of the Argent St George, LCR and Exel proposals. Many of the individual quotes set out above support and lend weight to the applicants’ development scheme which itself is dependent on the acceptance, by Camden, of related proposals such as this for the demolition of the Western Goods Shed so as to facilitate the re-erection and use of the four gas holder guide frames.

3.37 The detailed examination of the proposals against the above policies is set out in chapters 8 and 10 of this Statement.
Gas Holder No.8 and Western Goods Shed

Figure 9:
King’s Cross Opportunity Area

Source: Camden UDP, Chapter 13

Source: Planning and Development Brief
4. Planning appraisal

Form and function of Gas Holder No.8

4.1 A gas holder, for the storage of town gas manufactured from coal, was originally constructed on this site in 1853 or 1855 by the Imperial Gas Light and Coke Co. In 1883 it was reconstructed with a new guide frame, a deepened tank and a three-lift telescopic bell by the Gas Light and Coke Company during a period when demand for gas was continually increasing.

4.2 It was designed by John Clark, the works engineer at the St Pancras gas works. It has a highly decorative guide frame, stylistically similar to that of the ‘Siamese Triplet’ frames. 16 hollow cylindrical cast iron columns in two tiers, with cast iron column capitals and two levels of wrought iron riveted lattice girders. It has a deep water-filled brick-lined tank accommodating a three-lift telescopic bell. Gas Holder No.8 is illustrated in Figures 10A, 10B and 11.

4.3 No.8 is the only gas holder still standing today on the gasworks site but at one stage there were then no fewer than nine, seven of which remained until the commencement of the CTRL works in 2001.

4.4 It was decommissioned in 2000, and is now empty of gas.

4.5 Ove Arup & Partners Ltd, in a report dated February 2004, have advised on the methodology for dismantling the Gas Holder and renovating the guide frame (see Appendix G). That has taken account of the existing condition of the structure.

Form and function of the Western Goods Shed

4.6 The Western Goods Shed (1897-99) is a surviving example of a two-level goods station, formerly with railway tracks entering from north at both levels (lower level via cutting, now roofed over). It considerably increased the goods handling capacity of the Goods Yard. It is an early and large example of a partially steel-framed building with compound columns and various types of girders. The multiple ranges of pitched roof trusses are composite, of wrought iron and timber, well detailed, in development of earlier tradition. The original roof timber boarding and slate coverings still mostly in place. The northern extension was built about 1915. The Western Goods Shed is illustrated in Figures 12A, 12B, 12C, 13A and 13B.

4.7 The main part of the building has rugged austere brick elevations, neatly detailed with arched windows and some brick panelling. The unique ‘Hanseatic warehouse’ style of sawtooth-roofed, timber-weather-boarded north extension was erected during World War I.

4.8 The Western Goods Shed has large internal spaces, with generous headroom. The lower level is effectively a basement which was built over the former Coal and Stone Basin of circa 1851. The whole building comprises 15,555 sq.m floorspace distributed as follows:

- Lower ground floor: main shed – 4,685 sq.m; rear later addition – 2,630 sq.m;
- Upper ground floor: main shed – 5,615 sq.m; rear later addition – 1,840 sq.m;
- Mezzanine: 785 sq.m.

4.9 The building, until recently, has been largely used for a variety of small industrial and storage purposes, mostly on short-term tenancies. It is now largely vacant due to the proximity of the CTRL works.
4.10 In November 2003 Ove Arup & Partners Ltd were asked to advise on the condition of the Western Goods Shed. In December 2003 they inspected the lower ground floor, the loading bay area of the upper ground floor and the central storage unit of the loading bay and the northern extension of the Western Goods Shed. It was not possible to inspect the first floor office area. Full access to the external perimeter of the building was limited by the CTRL site compound and the adjacent building. The report states:

“The Goods Shed has two main levels that relate to the two principle ground levels. The floor over the Lower Ground Floor comprises cast-iron columns supporting plated riveted girders. These in turn support secondary girders that carry a mixture of concrete jack arches and timber trusses forming the floor deck to the Upper Ground floor. Masonry walls to the main Goods shed support roof trusses formed from rolled steel sections and timber, supporting timber rafters and boarding. There is a localised first floor office space to the western part of the goods shed, comprising steel girders and in-situ concrete slabs. The northern extension to the Goods Shed comprises a steel frame, supporting a timber north-light roof and a mixture of timber weatherboarding and masonry cladding.

There are some full-height cracks to the western wall of the main goods shed, either side of a main roof support pier. There is some vegetation growing in the western wall of the main goods shed that may have caused localised damage to the masonry. All the steelwork to the existing roof structures appears to be generally in a reasonable state of repair, although there are signs of water leakage to the roof fabric and some deterioration to the timber boarding.

The northern extension roof shows evidence of significant water leakage at the valley locations; the roof and the weatherboard cladding are in a poor state of repair.

To bring the building back into long-term use, the cracking in the masonry walls would need further investigation and possible monitoring to determine the cause, and to determine any repair strategy. The steel roof structure would need checking for any localised corrosion problems, and appraised for its ability to carry the loads from any new roof covering. The varying floor levels and associated structures relating to the buildings previous use may pose significant problems for its re-use.”

Recent planning history

4.11 The Gas Holder Triplet was dismantled under terms of the CTRL legal agreement (and the underground tanks infilled). The guide frames are stored on land around Gas Holder No.8 and English Heritage advise that they remain Listed Buildings (Grade II) in that their temporary storage address is still Goods Way, as on the definitive list.

4.12 There has been a planning policy impetus for large-scale redevelopment on a strategic basis at King’s Cross ‘railway lands’ for over 30 years. Despite this, major redevelopment and regeneration of the main site (King’s Cross Central) has failed to happen in part for economic reasons but also because of uncertainty over the alignment and delivery of transport projects.

4.13 British Rail submitted the first scheme in 1960’s but this was not progressed. In 1987 four developers were invited to submit plans to comply with requirements identified by British Rail. These requirements included provision for a low-level London Terminus for the CTRL at King’s Cross. In 1988, the list of potential developers for the railway lands was reduced to two and final, revised submissions were invited.
4.14 In June 1988, the London Regeneration Consortium (LRC) was selected as the approved developer for the railway lands and Foster Associates was commissioned by LRC to prepare a masterplan.

4.15 In July 1988, British Rail lodged its Parliamentary Bill, to authorise the construction of a Channel Tunnel terminus at King’s Cross. Select Committee hearings continued through 1989 and 1990, against a background of some uncertainty about the funding and viability of British Rail’s plans.

4.16 Meanwhile, LRC had submitted an outline planning application for redevelopment of the railway lands in April 1989. However, this planning application faced substantial opposition and was soon withdrawn. A second application was made in October 1989, providing further/revised proposals.

4.17 Protracted negotiations over the content of the scheme for the railway lands continued. In 1992 Camden Council resolved that it was “minded to grant” planning permission for revised LRC proposals, on certain conditions. The heritage applications were not subject to a formal committee resolution. However, by that time the recession was beginning to bite and later that year Rosehaugh, one of the LRC developers, ceased trading. LRC’s outline planning application for the railway lands was eventually withdrawn, in 1994, in the face of the poor economic conditions and a Government decision to promote an alternative scheme for the CTRL, with the terminus at a high level at St Pancras station. It is this scheme (in essence) that LCR are now constructing.

4.18 On this revised arrangement, with a terminus provided at St Pancras, the Channel Tunnel Rail Link Bill entered Parliament in 1994 and LCR won the right to build and operate the new high-speed line. The Channel Tunnel Rail Link Act was passed in 1996.

4.19 Subsequently the landowners (LCR and Exel) organised a competition to select a development partner and Argent St George was selected in that role in late 2000. For the last three years, they have undertaken extensive research and design work and engaged in widespread consultation with local communities and bodies such as English Heritage and CABE in order to prepare the submitted proposals. They have also worked with the planning authorities to ensure that the policy context is up-to-date, including contributing to the review of the Camden UDP, the Joint Planning and Development Brief and the King’s Cross Conservation Area Statement.
Figure 10a:
Floor plan: Gas Holder No.8
Figure 10b:
Section: Gas Holder No.8
Figure 11: Photographs of Gas Holder No.8
Gas Holder No.8 and Western Goods Shed

Figure 12a: Lower Ground Floor plan: Western Goods Shed

Key

Western Goods Shed
Figure 12b:
Upper Ground Floor plan:
Western Goods Shed
Figure 12c:
Sections and Elevations:
Western Goods Shed
Figure 13a: Photographs of Western Goods Shed (External)
Figure 13b:
Photographs of Western Goods Shed (Internal)
5. **Townscape appraisal**

**An overview**

5.1 This chapter draws from the Cultural Heritage and Townscape Specialist Report prepared by RPS for Argent St George, LCR and Exel as part of the baseline studies for the EIA for the planning application proposals. The material on which the report is based (draft Historic Character Assessment) was the subject of consultation with English Heritage and other interested parties in Spring 2003.

5.2 This work recorded the conditions at 2002/3 and then described the intervention and restoration works likely to take place as part of the ongoing CTRL project by 2006/7, which is the base line year for the assessment. The judgements set out below record the predicted value, in heritage terms, at that date.

5.3 In the Cultural Heritage and Townscape Specialist Report, the buildings within King's Cross Central, both listed and unlisted, are judged in section 9.4 to fall into four groups.

5.4 In describing the building groups in more detail, the Specialist Report includes the Gas Holder Triplet and Gas Holder No.8 within Group 3. It says:

“The Gasholder Triplet – comprises the listed guide frames of three telescopic gasholders dating from 1864-7 (1880 in final form). The guide frames have been dismantled and are stored on site pending re-erection on a suitable site (the bells have been scrapped). A distinctive feature of the holders is the shared use of some columns, creating a linked structure which rises in three tiers.”

“Gasholder No.8 – The listed guide frame, bell and internal features provide a group value related to the Gasholder 'Triplet' guide frames stored nearby. Erected in 1883, it is the last remaining in-situ link with the gas industry that was important in this part of the site. The Gasholder comprises a circular guide frame of 15 equally spaced cast iron columns and two levels of wrought iron riveted lattice girders linking the columns. This frame guided a bell of riveted wrought iron, housing the gas and this is set within a water-filled brick tank excavated deep into the ground.”

“Gasholder No.8 now stands in isolation to the south of the Regent’s Canal following the dismantling of adjacent gasholders, including the Listed Triplet.”

5.5 Under a heading of Open Spaces it draws attention to the fact that CTRL site clearance has created a number of new open spaces including areas around Gas Holder No.8 which later in that section is said to be a notable landmark.

5.6 In assessing “character” the Specialist Report identifies 3 main areas – southern, central and northern, divided into 8 sub areas. Gas Holder No.8 is within Sub Area 3 – Canal South (see Figure 14).

5.7 The Specialist Report covers the built heritage value of buildings in Table 9.6.1. Gas Holder No.8 is judged to have “high” predicted value at 2006/7.

5.8 The Specialist Report then goes on to look at open space value in Table 9.6.2. The former gas works area is judged to be of “moderate” predicted value at 2006/7, as is Battle Bridge Road to the north of Culross Buildings (and south of the Gas Holder).

5.9 The Specialist Report then judges the predicted group value at 2006/7 of the Gas Holder Triplet and Gas Holder No.8 to be “high”. In more detail it covers the
architectural or historic group value and the townscape group value separately. For the former it says (Table 9.6.3):

“Major elements of a once larger gas industry, and related industrial quarter which was instrumental in the 19th century development, prosperity and modernisation of London. Demonstrative of industrial importance of the canal. English Heritage attaches the highest importance to the re-erection of the Listed triplet of gasholder guide-frames presently dismantled and stored on site.”

5.10 For the latter it says (Table 9.6.3):

“Gasholder No.8 has value as a landmark feature close to the canal. However any Group Value is limited by the earlier dismantling of the triplet and other related structures; the opportunity now exists to establish a new grouping of the four listed guide frames.”

5.11 In describing the building groups in more detail, the Specialist Report includes the Western Goods Shed within Group 4, which covers the whole of the Goods Yard complex. It says:

“The Goods Yard Complex forms a major building feature with views to and from it dominating Kings Cross Central. In front of the Granary is a large open area, formerly the Granary Basin. The complex was the largest goods station in Britain when first built, and it is remarkable among such facilities for the extent of survival of the layout and fabric from the first phase of its construction. It is now unique in illustrating a large goods station of the mid 19th century, at the height of the railway boom. It was the point of interchange for coal and general merchandise (including fish and potatoes) in transit both inwards and outwards, between rail, road and canal, upon one of the nation’s principal railway routes. As such, it was a very important element in the transport infrastructure of the capital city for more than 100 years and demonstrates the nature and scale of transport of goods and coal by rail during the 19th century and later. The buildings are aligned slightly fan-wise to accommodate the rail tracks which formerly entered most of the buildings or passed parallel to them and which diverged from the approach from the main line at the north-eastern corner of the site.”

5.12 In assessing “character” the Specialist Report identifies 3 main areas – southern central and northern, divided into 8 sub areas. The Western Goods Shed is within Sub Area 6 – the Goods Yard Complex (see Figure 15).

5.13 The Specialist Report covers the built heritage value of buildings in Table 9.6.1. The Western Goods Shed is judged to have “high” predicted value at 2006/7.

5.14 The Specialist Report then goes on to look at open space value in Table 9.6.2. The south east corner of the site and the area south of the Western Goods Shed is judged to be of “moderate to high” predicted value at 2006/7 with the area immediately to the west of the Western Goods Shed judged to be of “moderate” predicted value at 2006/7.

5.15 The Specialist Report then judges the predicted group value at 2006/7 of the whole of the Goods Yard complex (including the Granary, the Midland Goods Shed, the Coal drops, the Pimmsoll Viaduct, East and West Handyside C, Fish and Coal Offices, Regeneration House and the Regent’s Canal) to be “very high”. In more detail it covers the architectural or historic group value and the townscape group value separately. For the former it says (Table 9.6.3):

“A largely undisturbed cluster of transport related buildings and other features of mid to late 19th century age. With significant amounts of contemporary hard landscape surface features. Has an exceptionally co-ordinated layout which is largely intact.
Comprises buildings of characteristic function which are now uncommon in their typological range, plus significant remains of rail-canal interchange facilities. Group value is enhanced by quality and consistency of architecture and constructional forms. Examples of nineteenth century goods transport into major cities with transfer of traffic between rail, canal and road."

5.16 For the latter it says (Table 9.6.3):

“This area is much less disturbed by the CTRL works than the area to the south of the canal.

The Granary building dominates the group. There are significant amounts of surviving hard contemporary landscaping that continue to forge physical links between the buildings.

Changes in level reflect the historic land uses and serve to give variety and interest to the spaces between the buildings.

The relationship with the Regent’s Canal was diminished by the filling-in of the two old Canal Basins.“

5.17 In summary, Gas Holder No.8 is an important heritage structure but is now isolated and within a changed context. Whilst the Western Goods Shed has some heritage value, the site it occupies is the best and most suitable location in which to re-erect not only the guide frame of Gas Holder No.8 but also the triplet guide frames.
Gas Holder No.8 and Western Goods Shed

Figure 14: Townscape Appraisal
Sub Character Area 3

Source: Cultural Heritage and Townscape Specialist Report by RPS

Key

☐ Sub Character Area containing Gas Holder No.8
Gas Holder No.8 and Western Goods Shed

Figure 15: Townscape Appraisal Sub Character Area 6

Source: Cultural Heritage and Townscape Specialist Report by RPS

Key

- Sub Character Area containing Western Goods Shed
6. **Historical assessment of Gasholder No.8**

**Introduction**

6.1 This chapter draws from a Historic Buildings Baseline Report produced by independent advisers (IHCM) to Argent St George, LCR and Exel. This work has been the subject of informal discussions with English Heritage. A full copy of the report on Gasholder No.8 is included at Appendix E. The summary sections are reproduced below. It should be noted that the baseline evaluation took into account all the heritage buildings as found at the date of survey (2001-2004). It reviewed their historical context, related to the functioning of the buildings and their related surroundings. The evaluation then considered the predictive baseline condition in 2006/7. The assumption was made that CTRL works would be completed as presently known and that there would be no further effects on the heritage buildings.

6.2 Plans, a section and photographs are at Figures 10A, 10B and 11. The historical evolution of the site is shown in Figure 16. The gas holders are first shown on the 1862 map.

**Architecture and fabric**

6.3 Gasholder No. 8, originally erected in 1853 or 1855, was enlarged in 1883. It is the only gasholder still standing, from the nine such structures that existed a century ago on the Pancras Gasworks site.

6.4 Like the ‘Siamese triplet’ group, whose dismantled guide frames are now stored alongside Gasholder No. 8, it illustrates the mature development of the “High-Victorian” manner of gasholder construction. The guide frames employ substantial hollow circular cast iron columns, bolted together in sections. These are coupled with functional but elegant wrought iron lattice girders tying the columns together.

6.5 The exceptionally competent integration of Classical form and details in the “Clark” series of gasholders has created a memorable and decorative piece of architecture which remained functionally effective with minimal alteration for over a century.

6.6 The open yet skeletal, circular structure is an unusual form in an urban setting.

**Setting**

6.7 The clearance of most of the surrounding buildings for the CTRL works has significantly altered the setting and context of this structure, although the Regent’s Canal, and the stations and hotels of King’s Cross and St Pancras, do remain as major townscape features.

6.8 Some nearby features continue to identify its distinctive industrial past.

**Significance related to type**

6.9 Gasholder No. 8 is the last standing gasholder and, with the adjoining section of boundary wall along Goods Way, the only surviving in situ evidence of the St Pancras Gasworks, a major site for the manufacture and storage of gas dating back to 1824.
6.10 No. 8 is one of the few gasholders nationally that retains the traditional style of wrought iron sheeting to the bell. It is also a very early surviving example of a three-lift telescopic bell gasholder.

6.11 The continuing trend for the demolition of gasholders generally (supplanted by the modern practice of high-pressure gas storage), its completeness, and the competence of its design, combine to render it a very unusual survivor.

**Significance related to intangibles**

6.12 Gasholder No. 8 is the remaining part of what was once a group of gasholders, forming an iconic landmark identifying the King’s Cross/St Pancras area, a dramatic skyline feature, and a distinctive silhouette.
7. Historical assessment of the Western Goods Shed

Introduction

7.1 This chapter draws from a Historic Buildings Baseline Report produced by independent advisers (IHCM) to Argent St George, LCR and Exel. Three separate reports cover the lower level, the upper level and the rear northern extension. This work has been the subject of informal discussions with English Heritage. A full copy of the three reports on the Western Goods Shed is included at Appendix F. The summary sections are reproduced below. It should be noted that the baseline evaluation took into account all the heritage buildings as found at the date of survey (2001-2004). It reviewed their historical context, related to the functioning of the buildings and their related surroundings. The evaluation then considered the predictive baseline condition in 2006/7. The assumption was made that CTRL works would be completed as presently known and that there would be no further effects on the heritage buildings.

7.2 Plans, a section, elevations and photographs are at Figures 12A, 12B, 12C and 13. The historical evolution of the site is shown in Figure 16. The Western Goods Shed is first shown on the 1938 map, although having initially been built in 1897.

Architecture and fabric

7.3 The building was designed by Alexander Ross and built to high specifications with the latest quality materials, producing a very early example of a steel framed building that retains its original layout, and evidence of earlier surrounding structures and historic operation.

7.4 The lower level of the Western Goods Shed is an integral part of an early steel-framed building, with its ceiling structure incorporating steel beams.

7.5 The design of the northern extension is strictly functional. It is a relatively uncommon example of a timber-framed and weatherboarded industrial-scale building to be found in inner London. Its utilitarian style and the use of lightweight cladding reflects the probable wartime construction date of the northern six bays, reviving an earlier tradition.

Setting

7.6 The Shed stands on the site of the former Coal and Stone Basin. Historically and physically, it is integrated with the surrounding structures and surfaces. The west and south-west elevations of the Shed provide the main view of the Goods Yard from trains leaving and arriving at St Pancras. These have become more prominent following recent demolitions for construction of the Channel Tunnel Rail Link.

7.7 The Shed is one of the later features of the Goods Yard and is integrated with Wharf Road Viaduct and the Western Coal Drops. It is a major component of the site’s historic layout, following the earlier historic arrangement of buildings fanning out from the railway lines that emerged from the Copenhagen Tunnel.

7.8 The northern extension is part of the Western Goods Shed functional group. The weatherboarding harmonises with that appearing elsewhere in the Western Goods Shed. The northern ends of the Eastern Coal Drops and the Western Coal Drops also originally had timber-covered north gables.
Significance related to type

7.9 The Shed is a large railway station building that fits well into an existing landscape of similar buildings. It represents the continuation of the tradition at King’s Cross of using high-quality construction and materials for the railway goods yard buildings. The Shed is a surviving example of the relatively uncommon form of goods station, served by rail on two levels. The lower level of the Shed offers a large open reversibly divisible space.

7.10 The use northern extension of timber framing and weatherboard cladding is uncommon in a goods station built in the 20th century.

Significance related to intangibles

7.11 The lower level retains evidence of the earlier development of the site, including the adjacent Wharf Road Viaduct, the former Coal and Stone Basin, and features linking it with the adjacent Western Coal Drops.

7.12 The large volume of the Shed, although currently impaired by sub-division and partitioning, reflects the spatial organisation of a large freight depot, which for many years was a busy and noisy hive of activity throughout most of the day and night.

7.13 The use of timber on the northern extension came near the end of a long tradition of its use in railway buildings. These elements were widely used at an earlier period in other industrial and rural contexts, and were again used more widely during the First World War as an economical form of construction which minimised the use of steel.
Figure 16: Historical maps of King's Cross Central

Main Site: Outline Planning Application Boundary
8. **Justification for proposed dismantling, relocation and re-erection of Gas Holder No.8 guide frame**

**Overall case**

8.1 It is not possible to leave Gas Holder No.8 in its existing position with its on-site contamination. In any event it is now inappropriately located in that it is an isolated remnant of the original gas industry in this area. In its present location and form it would restrict the flexibility to create important new development floorspace and hence job creation in that part of the site closest to the public transport interchange. It would also restrict the creation of a network of routes, including a north-south link over a second Canal crossing. If surrounded by high density development Gas Holder No.8 would not fulfill its predicted to contribute to the public realm and would no longer be visible from the Regent’s Canal, Goods Way or the railways.

8.2 Most of the historic fabric that was in the immediate vicinity of No.8 has now been lost to make way for CTRL, or would be lost (e.g. Culross Buildings) if the applicants’ regeneration scheme is permitted. Although the two Grade I Stations, the Great Northern Hotel, the German Gymnasium and Stanley Building South would remain, they would not have a close physical or functional relationship with the lone Gas Holder No.8 if it were to remain. Dismantling the guide frame and re-erecting it to the north of the Canal, close to the Triplet, achieves many important benefits:

- the creation of a legible public realm between the stations with improved visual and pedestrian connection from the stations through both the Boulevard and the new Pancras Square to the Canal, Goods Yard complex and beyond;
- a proper framework for high density development close to the public transport interchange;
- the re-creation a group of iconic structures, on a prominent site within the Goods Yard, alongside the Canal. Importantly, the proposal would keep the gas holder guide frames within the context of the Regent’s Canal Conservation Area; and
- the creation of a new, striking London landscape.

8.3 While it is theoretically possible to postulate an option of No.8 retained in situ, this is not envisaged in the Camden and Islington Brief. Indeed as noted in paragraph 2.18, English Heritage have committed themselves in a legal agreement with LCR to provide all reasonable practical assistance in obtaining the necessary consents to enable the relocation of No.8, alongside the re-erection of the Triplet, as part of a comprehensive development scheme.

8.4 Camden and Islington’s Planning & Development Brief for the area, as noted in paragraph 3.18 above, expects the early relocation of the Gas Holder No.8 to be achieved so that it is located with the Triplet.

8.5 The issue is therefore to determine the best relocation site for the guide frame of No.8. Since there is a general consensus that No.8 should form part of a group of gas holders, the issue becomes to find the best location for re-erecting the No.8 guide frame together with those of the Gas Holder Triplet. As discussed above, LB Camden and Islington’s Planning and development Brief specifically supports the relocation, restoration and beneficial reuse of the Gas Holder Triplet and No.8 guide frame and moots the Western Goods Shed site as a potential location.
8.6 "A Framework for Regeneration" asked specific questions about the gas holders. There was a high level of interest and comment – overwhelmingly wanting to see them retained within the historic part of the site and brought into use.

**Determining the best location for the Gas Holder Group**

8.7 The criteria that have been used to determine the best relocation site for Gas Holder No.8 and the Triplet are that it should:

- maintain as many historical associations as possible;
- be visible from within and outside the site;
- act as a beacon for orienting movement within the new development and drawing people through the site;
- make a positive contribution to the public realm;
- be financially viable; and
- be capable of being implemented early.

8.8 Several sites north of the canal were considered during the early master planning exercise, namely the north end of the site, the Triangle, as well as the area around the Western Goods Shed. Taking each of the above criteria, the site around the Western Goods Shed is clearly the preferred site because:

- it allows the gas holders to be relocated into the heart of the scheme along with heritage buildings from a similar era and for the gas holders to maintain their link with the canal and railways;
- it retains the gas holder guide frames alongside the canal and hence within the context of the Regent’s Canal Conservation Area;
- it allows the gas holders to be visible from the CTRL/MML, from surrounding roads and the canal towpath to maintain the popular imagery of the site and create a new, striking London landscape;
- it would draw people up from the public transport interchange to part of the site which currently has poor accessibility, and will draw people down from York Way providing access on to the canal towpath for westward connections into Camden (see Camden and Islington's Brief aspiration for a diagonal route);
- it would allow the canal corridor to be widened out opposite St Pancras Basin and provide a new setting for the gas holders to be celebrated, within a new high quality component of the enhanced public realm. The amenity and play space created would be of benefit to site occupants and others;
- because it is close to the canal, it allows the Triplet to be converted to a high value residential use which would contribute to the significant costs of their relocation, treatment, re-erection and conversion; and
- the Western Goods Shed and the area to the west will be vacant after CTRL works have finished, hence allowing the dismantling and re-erection of No.8 to occur as part of the first major phase. Following the demolition of the Western Goods Shed and development of the new residential buildings proposed, the Triplet can then be re-erected around those new buildings so that the guide frames can be structurally supported.

8.9 It is not possible to locate all four of the gas holders on land to the west of the Western Goods Shed. There is not enough room, particularly so, given the objectives highlighted above. The placement of the No.8 guide frame alongside the Triplet, within Development Zone N, is an integral part of the public realm and townscape proposals, as well as a creative and imaginative solution to historically important structures.
8.10 In addition, the way the three guide frames of the Triplet are linked is inflexible and largely dictates their orientation. The smallest gas holder lends itself as the gateway to the group, from the main access route into this part of the site and the larger guide frames are best located to ‘front’ directly onto the canal.

8.11 No other site to the north of the canal can offer these advantages. Some but not all of the gas holders could theoretically be re-erected on the Triangle site, but would not give LB Camden and LB Islington the range of mixed use development and dense street frontage along York Way that they desire. Nor would such a location generate the values necessary to justify relocation or maintain the important historic associations around the canal and Goods Yard.

8.12 The northern end of the site would not provide a fitting context for the gas holders, nor allow them to act as a people draw. Their early re-erection in that area would not be possible since the first two major phases are likely to address the historic core of the site, particularly the Granary and the Coal Drops.

The process

8.13 Based on the above explanation it is now possible to test the basic proposal in the application – to dismantle, relocate and re-erect the guide frames of Gas Holder No.8 against its retention in situ.

8.14 The proposal is first tested against PPG15, then against the policies set out in Chapter 13 of the UDP and then against other guidance.

Testing against PPG15

8.15 Paragraph 3.2 above explains the relevance of PPG15. The proposal to relocate and re-erect the Gas Holder No.8 guide frame needs to be considered against PPG15. The general guidance applicable to all listed building applications (PPG paragraph 3.5) is used first:

- The importance of the building, its intrinsic architectural and historic interest and rarity.
  
  Comment. The built heritage value of Gas Holder No.8 has been judged to be high in the Cultural Heritage and Townscape Specialist Report (Table 9.6.1). Its relocation and restoration, as part of a re-created group, would be of significant benefit.

- Particular physical features which justify listing.
  
  Comment. The main and very visible physical features would remain after relocation and re-erection, albeit enhanced by restoration.

- The building’s setting and contribution to street scene.
  
  Comment. The gas holder is currently isolated. The group value of Gas Holder No.8, when considered with the Triplet, has been judged to be high in the Cultural Heritage and Townscape Specialist Report (Table 9.6.3). The proposal would retain the gas holder guide frame within the context of the Regent’s Canal Conservation Area and create a striking, new London skyline.

- The extent to which the proposed works would bring substantial benefits for the community, in particular by contributing to the economic regeneration of the area or the enhancement of its environment.
  
  Comment. The relocation of the Gas Holder No.8 guide frame within Development Zone N would allow it to make a significant contribution to the overall regeneration scheme. There are substantial benefits to the community; to the economic regeneration of the area, particularly the
southern hub, south of the Canal; to the overall regeneration scheme and its integration; and to the enhancement of the public realm. The proposal would re-establish physical relationships between the group of gas holders and the Canal and retain the guide frame within the context of the Regent’s Canal Conservation Area. It would also enable the relocated gas holders to be seen and appreciated, as a group, from a range of vantage points, within and outside the site.

8.16 The general guidance on demolition given in PPG15 paragraphs 3.16 and 3.17 establishes the basis for three further but overlapping considerations that paragraph 3.19 suggests should be addressed. These are:

- **The condition of the building, the cost of repairing and maintaining it in the relation to its importance and to the value derived from its continued use.**

  **Comment.** Gas Holder No.8 has a substantial below ground tank which is a potential source of contamination. The Holder is currently unused and relatively inaccessible. The cost of renovating it in its present location is estimated to be £1.9m exclusive of professional fees and VAT. In the proposed scheme it would regain its iconic grandeur and group value and contribute to a striking new London skyline.

- **The adequacy of efforts made to retain the building in its current or a compatible alternative use.**

  **Comment.** As described earlier in the statement, retention in situ is not a realistic or appropriate option. Gas Holder No.8 is currently in that part of the King’s Cross Opportunity Area where the policies dictate the concept of a high density ‘hub’ of activity. The Gas Holder is currently unused and can never be brought back into use for its original purpose.

- **The merits of alternative proposals for the site, in which case there may very exceptionally be cases where the proposed works would bring substantial benefits for the community which have to be weighed against the arguments in favour of preservation.**

  **Comment.** As stated above, the relocation of the Gas Holder No.8 guide frame within Development Zone N would allow it to make a significant contribution to the overall regeneration scheme. There are substantial benefits to the community; to the economic regeneration of the area, particularly the southern hub, south of the Canal and the Goods Yard complex to the north; to the overall regeneration scheme and its integration; and to the enhancement of the public realm. The proposal would re-establish physical relationships between the gas holders and the Canal and retain the guide frame within the context of the Regent’s Canal Conservation Area. It would also enable the relocated gas holders to be seen and appreciated from a range of vantage points, within and outside the site.

8.17 The case for dismantling Gas Holder No.8 and re-erecting its guide frame to the west of the Western Goods Shed rests on the substantial community benefits of the overall regeneration scheme outweighing the loss of this building on its existing site. PPG15 does not specify the nature of those community benefits, leaving it instead to local definition. The following paragraphs look to Camden UDP Chapter 13 for an elaboration of those community benefits.

**Testing against Camden’s UDP policies**

8.18 The proposal for Listed Building consent to dismantle Gas Holder No.8, relocate and re-erect its guide frame in this application performs well against Camden’s adopted Chapter 13 policies. In terms of each policy (set out in full in Appendix H) the following conclusions have been drawn:
### Strategic Policies*

<table>
<thead>
<tr>
<th>Policy SKC1</th>
<th>Sustainable Development</th>
<th>Relocation and re-erection of No.8 helps achieve the full potential of the King’s Cross Opportunity Area.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy SKC2</td>
<td>Mixed-use Development</td>
<td>Relocation and re-erection of No.8 helps achieve a genuinely mixed use development, with appropriate densities to the south of the Canal, housing along the Canal and with the development as a whole well integrated with surrounding areas.</td>
</tr>
<tr>
<td>Policy SKC3</td>
<td>Comprehensive, Integrated and Phased Development</td>
<td>The proposals provide for a comprehensive, integrated and phased development.</td>
</tr>
<tr>
<td>Policy SKC4</td>
<td>Design</td>
<td>The high standards required are best achieved by re-locating and re-erecting the Gas Holder No.8 guide frame to the proposed location, within Development Zone N. This is the public realm area designed to celebrate the gas holders by re-establishing the group of four listed and iconic structures, bringing new uses onto the canal, encouraging pedestrian movement and providing amenity and play space for site occupants and others.</td>
</tr>
</tbody>
</table>

### Local Policies

<table>
<thead>
<tr>
<th>Policy KC1</th>
<th>Mixed use development</th>
<th>A better mixed use scheme, with a critical mass of business and employment activities, is possible with the Gas Holder No.8 guide frame relocated from the southern part of the site and re-erected to the north of the Regent’s Canal.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy KC2</td>
<td>Prioritisation</td>
<td>Relocating and re-erecting the Gas Holder guide frame affords appropriate priority to the provision of employment floorspace to the south of Regent’s Canal.</td>
</tr>
<tr>
<td>Policy KC3</td>
<td>Economic Activities</td>
<td>Relocating and re-erecting the Gas Holder guide frame to the north of the canal allows more flexibility in the overall provision of business uses to the south. See also KC2 above.</td>
</tr>
<tr>
<td>Policy KC4</td>
<td>Housing</td>
<td>The relocation and re-erection of the four listed Gas Holder guide frames, together, would enable the Triplet to make an important contribution to housing provision.</td>
</tr>
<tr>
<td>Policy KC5</td>
<td>Transport</td>
<td>No particular issues.</td>
</tr>
<tr>
<td>Policy KC6</td>
<td>Transport</td>
<td>Relocation and re-erection of No.8 guide frame within Development Zone N would help achieve a safe, legible and accessible environment.</td>
</tr>
<tr>
<td>Policy KC7</td>
<td>Transport</td>
<td>No particular issues.</td>
</tr>
<tr>
<td>Policy KC8</td>
<td>Design</td>
<td>The relocation and re-erection proposals would help achieve the very high standard of design sought under this policy. See also SKC4 above.</td>
</tr>
<tr>
<td>Policy KC9</td>
<td>Design</td>
<td>The public realm areas around the four relocated gas holder guide frames, with improved access to the Canal, would enable a unified approach to this area.</td>
</tr>
<tr>
<td>Policy KC10</td>
<td>Open Space</td>
<td>The proposed relocation and re-erection of the Gas Holder guide frame within Development Zone N would make a major and positive contribution to an enhanced public realm. See also SKC4 above.</td>
</tr>
</tbody>
</table>
Policy KC11
Heritage

The proposal would re-create a group of listed, iconic structures, on a prominent site within the Goods Yard, alongside the Canal. Importantly, the proposal would keep the No.8 and Triplet guide frames within the context of the Regent’s Canal Conservation Area. The proposal is compatible with Policy KC11 and paragraphs 13.68 and 13.69 of the UDP. It is judged to be important to locate all four gas holder guide frames together and the best site from all aspects entails the loss of the Western Goods Shed so as to create an appropriate setting.

Policy KC12
Integration, Regeneration and Community Development

The proposal takes due account of community aspirations for the gas holder guide structures to be re-used and incorporated as an important element of the scheme and the area’s regeneration.

* The strategic policies are not named in the Camden UDP – suitable titles have been inferred for ease of reference.

Testing against other guidance

8.19 The overall framework provided by the applicants’ planning applications provide for a mixed use development which would contribute to London’s world city role as well as the regeneration of surrounding communities, in accordance with RPG3 and the London Plan. The proposed relocation and re-erection of the Gas Holder No.8 guide frame is integral to achieving a development, transport and public realm framework which maximises opportunities at the points of highest public transport accessibility.

8.20 Paragraph 3.12 above sets out the five main objectives of Camden, as specified in the UDP policies and in the joint Planning & Development Brief for this Opportunity Area. The proposal to dismantle and relocate Gas Holder No.8 guide frame can to be considered against those aims.

- **Physical connections.** The relocation and re-erection of the guide frame for Gas Holder No. 8 would make an important contribution to the public realm and the legibility of both the southern hub, to the south of the Canal, and the development areas to the north.

- **Economic connections.** Substantial new jobs that make full use of the site are only going to be created in the whole area if the various components are all achieved and are all in balance. The aim is to secure major new commercial and other floorspace to the south of the Canal and to ensure that the restored heritage buildings to the north of the Canal (and new development areas beyond them) can be readily accessed. The layout and the flexibility to create attractive new floorspace to the south of the Canal would be heavily constrained if Gas Holder No.8 were not moved and the links and legibility that underpin the proposals as a whole would be impaired.

- **Social links.** The creation of a successful and balanced development – and not an “exclusive ghetto” – would be achieved if all elements of the proposed development, as set out in the Main Site planning application, the Development Specification and Parameter Plans are consented.

- **Managing the Impact.** The proposals are accompanied by an Implementation Strategy. That is clear about which elements it is hoped to complete in the various stages. The demolition of the Western Goods Shed and the relocation of the guide frame of Gas Holder No.8 to the north of the Canal for cleaning, refurbishment and re-erection are both planned for the first major phase and must take place before much of the other development can start. They are a key to unlocking the potential of the whole regeneration area.
• Working with the community. The community interested in and involved with King’s Cross have been given extensive opportunity to comment on the concepts as they have evolved and the findings have been taken into account. There has been extensive acceptance, particularly of the idea to relocate all four gas holder guide frames as proposed. The regeneration of the area would bring with it extensive job opportunities, training, safer streets and an attractive environment.

8.21 Overall, the proposal produces benefits for the public realm and makes more efficient use of land in that part of the site closest to the public transport interchange, as advocated by the Camden UDP and the Camden and Islington Planning and Development Brief (paragraphs 2.2.3 and 2.3.46). The relocation and re-erection of the Gas Holder No.8 guide frame, coupled with the Triplet guide frames, is justified within the overall masterplan approach. It thereby meets the objectives of the Planning and Development Brief, particularly in relation to the creation of new views (paragraphs 3.2.14) and promoting movement across the site (Figure 3 on page 50 of the Brief). It also accords with the desire expressed in the Brief for the four gas holders to be re-grouped and put to a beneficial use (paragraph 3.3.11).

8.22 Relocation and re-erection of Gas Holder No.8 guide frame is not anticipated directly in Camden’s Conservation Area Statement for King’s Cross (paragraph 4.2.71), but its “landmark and skeletal form” is judged to be a visual benefit from Goods Way. The proposed relocation and re-erection would enable a different, but equally important view to the four gas holders to be recreated.
9. Hypothetical options for the retention of the Western Goods Shed

Basic description of hypothetical options

9.1 Whilst the Parameter Plans that form part of the Main Application Site Development Specification show the demolition of the Western Goods Shed so that the area can be used for the re-location of all four gas holders, the applicants consider it important to test hypothetical options that retain the Goods Shed. Potential uses are constrained by the building form and the difficulty of getting light into the centre of the building. Two hypothetical options have been examined and tested. Both of them, together with the proposal, are illustrated in Figures 17, 18 and 19.

- Option 1 – retain the Goods Shed and use the whole area for a space consuming use.
- Option 2 – retain most of the original Goods Shed but remove the eastern section so as to open us access to the Western Coal Drops and remove the later northern extension.

9.2 There are a number of other possible options for keeping the Western Goods Shed but they are inferior in design and practicality.

9.3 The two main hypothetical options are each described in more detail below and then their relative advantages and disadvantages listed so as to enable a judgement to be made on which one is preferable. In chapter 10, the best of the retention options is then compared with the submitted proposal (see Figure 19), against the range of criteria in PPG15, UDP Chapter 13 and other policy statements.

Hypothetical Option 1

9.4 This hypothetical option (see Figure 17) is, in many ways, the “do-nothing” version. The Goods Shed would need to be re-furbished and a use found for it. Keeping the Goods Shed would also result in the need to find a less suitable site for the re-erection of the Gas Holder Triplet, or possibly abandoning any hope of its re-use.

9.5 If the Goods Shed were to be kept as a large building then the developers would need to attract a large space user. The floorspace of some 15,555 sq.m. (gross external area over all floors) could be used for retail warehousing but this use would be a missed opportunity at this key location within the regeneration area. It would be too large for specialist retail purposes, bearing in mind the need to attract retail uses into many of the other historic buildings. The building form and orientation is not ideal for conversion into an ecclesiastical use or public events space. The building itself inhibits east-west movement within the eastern end of the King’s Cross Central site and, therefore, inhibits the economic potential of the Coal Drops.

Hypothetical Option 2

9.6 The Goods Shed is constructed in such a way that it would be feasible to remove that section that adjoins the Western Coal Drops so as to allow access between the two buildings and also to remove the later northern extension (see Figure 18). Although it would be possible to provide roof lighting to the upper floor, hence making residential or small office uses a possibility, it would not be possible to get a reasonable level of daylighting into the majority of the ground floor and basement without losing floorspace and flexibility by creating some form of atrium.
Evaluation of retention options

9.7 The table below highlights the key differences between the two hypothetical retention options so as help inform a judgement as to their relative merits.

<table>
<thead>
<tr>
<th>Option 1 – Advantages</th>
<th>Option 2 – Advantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retains the whole of the Western Goods Shed.</td>
<td>Retains most of the Western Goods Shed.</td>
</tr>
<tr>
<td>Slightly improves connectivity across the site.</td>
<td>Allows for two-sided access to the Western Coal Crops.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Option 1 – Disadvantages</th>
<th>Option 2 – Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficult to improve canalside access.</td>
<td>Difficult to improve canalside access.</td>
</tr>
<tr>
<td>Maintains low density and potentially low people generating uses at a key part of the site.</td>
<td>Maintains low density and potentially low people generating uses at a key part of the site.</td>
</tr>
<tr>
<td>Prevents two sided access into the Western Coal Drops hence reducing scope for their viable re-use.</td>
<td></td>
</tr>
<tr>
<td>Restricts permeability of this part of King’s Cross Central.</td>
<td></td>
</tr>
</tbody>
</table>

Best retention option

9.8 The analysis above indicates that Hypothetical Option 2 has advantages which outweigh the loss of heritage through demolishing the northern and eastern parts of the Western Goods Shed. Of the two hypothetical “retention” options, Hypothetical option 2 has more merit overall.
Note: The precise location of all four guide frames will be determined later.
10. Justification for proposed demolition of the Western Goods Shed

The process

10.1 Based on the above analysis it is now possible to test the basic proposal in the application – to demolish the whole of the Western Goods Shed to provide a relocation site for the Gas Holder Triplet guide frames – against the best of the retention options (Hypothetical option 2) in 9.8 above.

10.2 These alternatives are first tested against PPG15, then against the policies set out Chapter 13 of the UDP and then against other guidance.

Testing against PPG15

10.3 Paragraph 3.2 above explains the relevance of PPG15. The proposal to demolish the Western Goods Shed needs to be considered against PPG15. Even though this structure is a significant building in a Conservation Area (see paragraph 2.6) rather than a listed building, the general guidance applicable to listed building applications (PPG15, paragraph 3.5) is used first:

- The importance of the building, its intrinsic architectural and historic interest and rarity.
  Comment. The built heritage value of the Western Goods Shed has been judged to be high in the Cultural Heritage and Townscape Specialist Report (Table 9.6.1). Equally, the Triplet that is intended to replace it has similar if not greater merit and would also facilitate opening-up this part of the regeneration scheme so that it becomes an important place.

- Particular physical features which justify listing.
  Comment. The Western Goods Shed is an early example of a steel-framed building but is not unique. Again the Triplet is an important, perhaps more important, link with the past. The Western Goods Shed location has been shown, and generally accepted, as being the best new location for the gas holder guide frames.

- The building’s setting and contribution to street scene.
  Comment. The group value of the Western Goods Shed, when considered with the rest of the Goods Yard complex, has been judged to be very high in the Cultural Heritage and Townscape Specialist Report (Table 9.6.3). Nevertheless, the proposed replacement of the Goods Shed with the iconic structures of the gas holder guide frames could be judged to improve the street scene. It would certainly make the area more accessible and therefore visible to a wider audience.

- The extent to which the proposed works would bring substantial benefits for the community, in particular by contributing to the economic regeneration of the area or the enhancement of its environment.
  Comment. The loss of the Western Goods Shed allows for a much better regeneration scheme than if it were to be retained. There are substantial benefits to the community; to the economic regeneration of the area and its integration; and to the enhancement of the public realm. The proposal would re-establish physical relationships between the group of gas holders and the Canal and retain all four of the guide frames within the context of the Regent’s Canal Conservation Area. It would also enable the relocated guide
frames to be seen and appreciated, as a group, from a range of vantage points, within and outside the site.

10.4 The general guidance on demolition given in PPG15 paragraphs 3.16 and 3.17 establishes the basis for three further and overlapping considerations that paragraph 3.19 suggests should be addressed. These are:

- The condition of the building, the cost of repairing and maintaining it in the relation to its importance and to the value derived from its continued use.

  Comment. The condition of the Western Goods Shed is set out at paragraph 4.10. The cost of restoring and maintaining it has not been estimated and would depend on its future use if it is not demolished. Such costs would need to be born as part of any conversion to a new use. For the reasons set out throughout this statement the proposal to demolish it, so as to use the site for the re-erection of the Triplet guide frames, is judged to be far preferable to its restoration. Thus the likely cost of restoration is not an aspect on which this statement relies as justification for demolition.

- The adequacy of efforts made to retain the building in its current or a compatible alternative use.

  Comment. The options for retention have been set out in the preceding chapters of this report. None of them are considered to be suitable and thus have not been marketed. The concept of retaining the building would result in the four gas holder guide frames either not being re-used or being placed in an altogether more unsuitable location. There is such overwhelming merit in replacing the Western Goods Shed with the Triplet guide frames that it has not been judged sensible to seek a user for a retained Western Goods Shed. The balance of advantage lies in using the site for the Triplet guide frames, with the guide frame from No.8 adjacent.

- The merits of alternative proposals for the site, in which case there may very exceptionally be cases where the proposed works would bring substantial benefits for the community which have to be weighed against the arguments in favour of preservation.

  Comment. As explained at 10.3 above, the loss of the Western Goods Shed allows for a much better regeneration scheme than if it were to be retained.

10.5 The case for demolition of the Western Goods Shed rests on the substantial community benefits of the overall regeneration scheme outweighing the loss of this building. PPG15 does not specify the nature of those community benefits, leaving it instead to local definition. The following paragraphs look to Camden UDP Chapter 13 for an elaboration of those community benefits.

**Testing against Camden's UDP Policies**

10.6 The policy analysis below shows conclusively that the proposal in this Conservation Area consent application to demolish the Western Goods Shed is the best overall solution. In terms of each policy (set out in full in Appendix F) the following conclusions have been drawn:

<table>
<thead>
<tr>
<th>Strategic Policies*</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy SKC1 Sustainable Development</td>
<td>The applicants’ proposed scheme contributes better to achieving the full potential of the Opportunity Area, particularly in terms of business and employment space, housing provision and integration. <strong>The proposal is best.</strong></td>
</tr>
</tbody>
</table>
Policy SKC2  
**Mixed-use Development**  
The proposal would achieve a genuinely mixed use development, with appropriate densities to the south of the Canal, with the development as a whole well integrated with surrounding areas and new activity along the Canal. **The proposal is best.**

Policy SKC3  
**Comprehensive, Integrated and Phased Development**  
Both schemes are capable of being phased into a comprehensive masterplan, though retention of the Western Goods Shed would run counter to integration objectives. **The proposal is best.**

Policy SKC4  
**Design**  
The high standards required are best achieved by co-locating all four of the guide frames within Development Zone N, to enclose new public space, play facilities and new housing provision. **The proposal is best.**

**Local Policies**

Policy KC1  
**Mixed use development**  
A better mixed use scheme is possible if the Western Goods Shed were demolished, thus not only allowing for the re-erection of the gas holder guide frames but also improving pedestrian circulation around the Coal Drops. **The proposal is best.**

Policy KC2  
**Prioritisation**  
Greater chance of a range of employment floorspace in this part of the site with retention. However, the proposed scheme affords more priority to housing. **Neutral**

Policy KC3  
**Economic Activities**  
Retention of the Western Goods Shed could lead to greater variety of employment uses and workshops in this part of the site, though there are significant opportunities for a range of business and employment uses across the site in any event. **Option 2 is best.**

Policy KC4  
**Housing**  
The applicants' proposed scheme would better contribute to housing objectives. **The proposal is best.**

Policy KC5  
**Transport**  
No particular issues.

Policy KC6  
**Transport**  
The applicant's scheme, with the gas holders fronting directly onto the Canal, within a landscaped area of new public space, would enhance safety and accessibility. **The proposal is best.**

Policy KC7  
**Transport**  
No particular issues.

Policy KC8  
**Design**  
The submitted scheme would help achieve the very high standard of design sought under this policy. **The proposal is best.**

Policy KC9  
**Design**  
No particular issues.

Policy KC10  
**Open Space**  
The applicants' proposed scheme would make an important contribution to the public realm and enabling direct access to and from the Canal towpath. **The proposal is best.**

Policy KC11  
**Heritage**  
The proposed scheme involves the loss of an unlisted but significant building in the Conservation Area. At the same time, it accommodates the four listed gas holder guide frames as a group of iconic structures on a prominent site within the Goods Yard, alongside the Regent's Canal. Importantly, the proposal would keep the guide frames within the Regent's Canal Conservation Area. **The proposal is best.**
Testing against other guidance

10.7 The overall framework provided by the applicants’ planning applications provide for a mixed use development which would contribute to London’s world city role as well as the regeneration of surrounding communities, in accordance with RPG3 and the London Plan. The proposed demolition of the Western Goods Shed is integral to achieving a development, transport and public realm framework which optimises the full potential of the site, provides a suitable setting for the gas holder triplet alongside the refurbished Goods Yard buildings, maximises public enjoyment of the canal and draws people to this currently inaccessible part of the site.

10.8 Paragraph 3.12 above sets out the five main objectives of Camden, as specified in the Camden UDP and the Development Brief for this Opportunity Area. The proposal to demolish the Western Goods Shed can be considered against those aims.

- **Physical connections.** The proposal would help address the perceived isolation of the Goods Yard from the stations in the south and improve links and access to the canal side, by establishing a new landscaped area (Development Zone N), around the four gas holder guide frames, making an important contribution to the public realm and enabling direct access to and from the Canal towpath, providing a focal point and assisting the linkage, along the Canal, with Camden Town.

- **Economic connections.** Substantial new jobs that make full use of the site are only going to be created in the whole area if the various components are all achieved and are all in balance. The aim is to secure major new commercial and other floorspace to the south of the Canal and to ensure that the restored heritage buildings to the north of the Canal (and new development areas beyond them) can be readily accessed. The range of new, public uses proposed within the Goods Yard would depend upon good connections and a high footfall to and through this part of the site. In this way their long-term economic future should be secured. Replacing the Western Goods Shed to establish the public realm proposals within Development Zone N and re-erect the Triplet is integral to the whole scheme.

- **Social links.** The creation of a successful and balanced development – and not an “exclusive ghetto” – would be achieved if all elements of the proposed development, as set out in the Main Site planning application, the Development Specification and Parameter Plans are consented.

- **Managing the impact.** The overall proposals are accompanied by an Implementation Strategy. That is clear about which elements it is hoped to be completed in the various stages. The demolition of the Western Goods Shed and the relocation of the guide frame of Gas Holder No.8 to the north of the Canal for cleaning, refurbishment and re-erection are both planned for the first major phase and must take place before much of the other development can start. They are a key to unlocking the potential of the whole regeneration area.

- **Working with the community.** The community interested in and involved with King’s Cross has been given extensive opportunity to comment on the concepts as they have evolved and the findings have been taken into...
account. There has been extensive acceptance, particularly of the idea to relocate the gas holder guide frames within the historic Goods Yard, alongside the canal. The regeneration of the area would bring with it extensive job opportunities, training, safer streets and an attractive environment.

10.9 The demolition of the Western Goods Shed is justified within the overall approach contained in the Development Specification and Parameter Plans and thereby meets the objectives of the UDP and the Camden and Islington Planning & Development Brief, particularly in relation to connectivity and regeneration (paragraph 3.3.29).

10.10 The Western Goods Shed is a later addition to the Goods Yard complex and less visible than the central buildings around the Granary and the two sets of Coal Drops. Nevertheless the southern and western facades are significant structures when viewed from the canal. Overall however, because this is the best location for the re-erection of the group of gas holders, its demolition is justified to produce greater public gains and a more integrated scheme.
Overall community benefits

Conclusions

11.1 King’s Cross Central is a large and complex area which has been in need of regeneration for many years. The current proposals have evolved from a careful and lengthy process of seeking to blend new buildings and uses with the best of the past. The whole regeneration area needs to be considered as a totality. Any attempt to vary significantly the submitted proposals, for example by seeking to retain one or more parts of the older buildings that it is intended to demolish or move, would damage the overall concept. It would also undermine the applicants’ ability to give the great many retained buildings, including Stanley Building South, the Great Northern Hotel, the German Gymnasium, the Goods Yard complex and the four gas holder guide frames, a viable and secure future.

11.2 Gas Holder No.8, in its present location, cannot be assimilated into the proposed new development without damaging the concept of an accessible, legible, high density ‘hub’ of activity between the two stations, well connected to the Granary complex to the north of the Canal and the new development areas beyond.

11.3 Indeed, English Heritage has already accepted, through the legal agreement with LCR, the principle of dismantling and re-locating the guide frame Gas Holder No.8 to the north of the Canal as part of a comprehensive scheme for all four listed gas holder guide frames.

11.4 By re-locating the No.8 guide frame together with the Triplet guide frames, on and near the site of the Western Goods Shed, it becomes possible to re-create the historic, townscape and other associations of these iconic structures. As a group, in this location, they make the maximum possible contribution to the overall regeneration scheme. There is therefore an exceptional case for demolishing the Western Goods Shed and dismantling Gas Holder No.8 so as to relocate and re-erect its guide frame as proposed.
12. **Principles for quality rehabilitation and adaptation**

**Methodology for the dismantling, storage, relocation and re-erection of Gas Holder No.8 guide frame**

12.1 The remedial work on the guide frame is unlikely to be large scale. There is an obvious need to ensure that the materials and techniques are appropriate to the historic significance.

12.2 Ove Arup and Partners Ltd have prepared an initial method statement and schedule of works for the dismantling, refurbishment and re-erection of the Gas Holder No.8 guide frame. This is set out in Appendix H.

**Proposed conditions to apply to the re-erection of Gas Holder No.8 guide frame**

12.3 No demolition to take place until a contract has been let to relocate and refurbish the guide frame prior to its re-erection.

12.4 All materials and techniques for the dismantling and re-erection to be approved before use.

12.5 A detailed historic record of the Western Goods Shed to be produced.

**Proposed conditions to apply to demolishing the Western Goods Shed**

12.6 No demolition to take place until a contract has been let to either:

(a) initial works to refurbish the Western coal Drops, or

(b) infrastructure works to provide the site levels within which the Gas Holder Triplet guide frames will be re-erected in Development Zone N on Parameter Plan KXC 012.

12.7 A detailed historic record of the Western Goods Shed to be produced.
13. **Subsequent Listed Building consent applications**

*Gas Holder Triplet guide frames*

13.1 All aspects of the re-erection and future development to be covered in future submissions when a specific scheme has been identified.
APPENDIX A

Extracts from other publications referred to in the text:

A Framework for Regeneration
We believe that three principles should underpin our framework for King’s Cross Central:

- Create a pedestrian network of safe and other routes and spaces, to join up different surface levels provide many and varied public places and functions of the Goods Yard.
- Embed the best historic buildings and features along the site’s history of transport and industrial market place, a place of business, offices akin to a city square…
- Learn from the urban grain of Central London. It is the success of both development, to connect all streets, squares and other routes and spaces, that are easy to see and understand, with few opportunities to develop things that will allow the view to be more commercially and socially successful.

A framework for regeneration cont.

We believe that three principles should underpin our framework for King’s Cross Central:

- Create a pedestrian network of safe and other routes and spaces, to join up different surface levels provide many and varied public places and functions of the Goods Yard.
- Embed the best historic buildings and features along the site’s history of transport and industrial market place, a place of business, offices akin to a city square…
- Learn from the urban grain of Central London. It is the success of both development, to connect all streets, squares and other routes and spaces, that are easy to see and understand, with few opportunities to develop things that will allow the view to be more commercially and socially successful.

A framework for regeneration cont.

To the east, the Goods Yard is now complete, with cleaning access to the canal towpath, new pedestrian connections, in Camden and Islington.

The resultant site layout has created a dynamic quality to the urban space and an opportunity to capture a sense of the historic fabric of historic and industrial buildings, in particular the Grade I listed Fish and Coal Granary enclosed by the Eastern Conservation Area Statement for the Regent’s Canal.

Heritage buildings and structures

Government planning policy on the historic environment states that ‘In general, it is better that old buildings are not swept away, as they are so generally adapted to the needs of present-day usage and are an essential part of our historic environment.’

In this context, the central approach to King’s Cross, in particular the conversion of the South Yard as an artsquad, is the most successful part of our framework. It was the direct result of a long process of debate and discussion with the various stakeholders involved, including Camden Council, English Heritage and London Underground, to ensure that the heritage buildings and structures were preserved and redeveloped in a way that would enhance the public realm of the city.

The physical form of its buildings, structures and structures is shown in the map (Figure 9) and the accompanying text. The map, which is a key part of our framework, helps to visualise the potential re-use of buildings and structures at King’s Cross Central. Various ideas for the redevelopment and regeneration of buildings and structures are presented within this document. We are working closely with both Camden Council and English Heritage to achieve our vision for King’s Cross.

The map shows clearly that the physical form of the buildings, structures and structures at King’s Cross Central is shown in the map (Figure 9). The map also shows how the buildings, structures and structures have now been categorised into four different categories, which are:

- Buildings under review
- Buildings with potential demolition
- Buildings with potential retention
- Buildings with potential refurbishment

This categorisation helps to ensure that the buildings, structures and structures are preserved and redeveloped in a way that will enhance the public realm of the city.

The Assembly Shed (No. 14) and the Western Goods Shed (No. 15) are considered to be key parts of the King’s Cross Central development. The Assembly Shed is a large timber-framed building that is located to the north of the Goods Yard. The Western Goods Shed is a large, timber-clad building that is located to the west of the Goods Yard. Both of these buildings are significant examples of Victorian industrial architecture and are located on the edge of Victorian London.

The physical form of the buildings, structures and structures is shown in the map (Figure 9). The map also shows how the buildings, structures and structures have now been categorised into four different categories, which are:

- Buildings under review
- Buildings with potential demolition
- Buildings with potential retention
- Buildings with potential refurbishment

This categorisation helps to ensure that the buildings, structures and structures are preserved and redeveloped in a way that will enhance the public realm of the city.
APPENDIX B

Extracts from other publications referred to in the text:

Parameters for Regeneration
APPENDIX C

Extracts from other publications referred to in the text:

UDP Chapter 13
Inspector’s Report
Extracts from the relevant pages of the UDP Chapter 13 Inspectors Report are included in the following pages, highlighting the full paragraphs quoted in earlier in this statement.
The London Borough of Camden
Unitary Development Plan

Planning Inspector’s Report
& Addendum Report

Chapter 13 King’s Cross
Opportunity Area:
Public Local Inquiry

July 2002
General Comments (from page 10)

Inspector’s Reasoning and Conclusions

1.14 Similarly there is widespread agreement with the thrust of objection (xi), namely that the development proposals should build on the appeal of Regent’s Canal and the Camley Street Natural Park. Proposed amendments 94 and 101 helpfully remove any uncertainty regarding their importance.

1.15 Objection (xii) is one of a number of linked objections that in concert argue that the Council’s vision for the Opportunity Area is ill-conceived and contrary to the needs and aspirations of local communities. In part at least these objections are rooted in an understandable grievance regarding the local disruption caused by Channel Tunnel Rail Link (CTRL) related activities in recent years. Before addressing the objections in turn, it might be helpful to make a few general observations.

1.16 Firstly, I accept that the development proposals cannot ignore the needs and aspirations of local communities. Indeed in that regard a number of amendments are promoted by the Council to ensure meaningful community involvement in the evolution of the development proposals. Having said that it seems to me that in considering the future of the Opportunity Area it would be a grave mistake for the Council to ignore national guidance exhorting the maximum use of land occupying central and highly accessible locations. It seems to me that the Opportunity Area represents a rare if not unique opportunity to secure a form of development that can help alleviate a host of social, economic and environmental problems. In my view the claim that Chapter 13 favours global corporate business at the expense of the local community is quite simply wrong. I am in no doubt that the long awaited re-development of the Opportunity Area can bring significant benefits for those living nearby as well as those living further afield.

1.17 Objection (xii) claims that local residents do not want or need housing or offices. Whether or no that is correct, I am in no doubt that the provision of a significant number of new dwellings, many to be occupied by less affluent members of society, together with a range of new employment opportunities, represent very significant regenerative benefits. Of course housing and employment are not the only components of the proposed mixed use development. A successful mix will also include a range of new retail, cultural and leisure facilities as indicated in policy KC1. To my mind a vibrant new urban quarter is in prospect. Its benefits will extend beyond the boundaries of the Opportunity Area and boost the range of facilities available to the occupants of neighbouring areas.
Inspector’s Reasoning and Conclusions

15.1 At first sight this appears a sustainable and appropriate suggestion. In the event, however, I am not convinced that it should be supported. Firstly, it seems to me that the understandable desire to conserve the industrial heritage of the site is effectively addressed by policy KC11. Secondly, I am concerned that a policy emphasising support for the re-use of other less important buildings and structures could mean that the Opportunity Area might not achieve its full potential. This is not a risk worth taking.
Inspector’s Reasoning and Conclusions

23.1 Responding to objection (i), the Council puts forward amendment 87. This adopts some of the additional text suggested by the objector (bullet point 2) in its entirety. I see no reason to resist it. The first bullet point mentions that development should capitalise on the existing high quality architecture and engineering works. As I understand it, the Council does not disagree but is satisfied that Chapter 13 already recognises the point, in particular in paragraph 13.28. Notwithstanding this reference, on balance I consider that a reference in policy KC8 to the existing high quality architecture and engineering works would be helpful. Some of the existing buildings are, after all, identified as List 1 quality. However, rather than introduce a new bullet point, I suggest that the reference be part of the opening preamble.

23.2 In respect of (ii), on reflection the Council accepts that Chapter 13 should be modified to clarify the sustainable design principles. Rather than include this material in policy KC8, in its view it would be more appropriate for it to be included in paragraph 13.60. I agree. For the avoidance of doubt I would add that I also accept that amendment 89 is preferable to the text set out in the deposit draft. The new text also seems to me to meet the concerns raised in objections (iii) and (iv).

23.3 Turning to objection (v), again it is said that policy KC8 should clarify its sustainable design principles. While I see no difficulty with a reference to biodiversity and so on, the list of matters identified by the objector is not exhaustive. On balance I consider that the material is more properly located in paragraph 13.60 as proposed in amendment 89. In addition, amendment 45 also introduces text that should help to alleviate the objector’s concerns.

23.4 In respect of objection (vi), there is no dispute that the UDP needs to take on board the PPG25 guidance on flood risk. Chapter 13 includes some passing references to it but the Council aims to provide a more comprehensive response in its forthcoming review of the parent UDP. On balance I support this approach though a new bullet point referring to flood risk could be added to those listed in paragraph 13.60. In addition I favour a new bullet point to refer to Sustainable Urban Drainage Systems.

23.5 Objection (vii) argues that policy KC8 should contain 3 new bullet points. Reasoning in support of the first of these is set out in paragraph 23.1 above. Amendment 87, which I support, carries forward the third. The remaining bullet point mentions the refurbishing of existing buildings where practicable. Although I have some sympathy with this suggestion I am concerned that it could undermine the ability of the Opportunity Area to achieve its full
potential. I note that the suggested text is qualified by the words “where practicable” but a narrow interpretation could be that all existing buildings should be retained unless they are incapable of some form of re-use. In the light of this concern, I doubt if the proposed bullet point could be justified. Of course the most important of the buildings and structures that remain on the site enjoy statutory protection in any event.

23.6 It seems to me that to a degree at least proposed amendment 89 overcomes objection (viii). The amendment does not include a specific reference to “green roofs” and, on balance, I doubt if it should. That said I note that they are addressed in supplementary planning guidance recently adopted by the Council.

23.7 Finally Doc.ID12 argues for an amendment to the last bullet point to introduce a specific reference to limiting greenhouse gas emissions. The existing reference to improving energy efficiency presumably covers this point but given its importance it seems to me that an explicit reference could be helpful.
APPENDIX D

Extract from Revised List of Buildings of Special Architectural or Historic Interest
Location: Gas Holder No.8, Goods Way (East side)

Grade: II

Description: Single gas holder. Erected 1883 for the Imperial Gas Light and Coke Company. Designed by Company Engineer, Mr Kirkham, and built by CF Clegg. Cast-iron, painted red and black (original colours). Circular plan with framework comprising 2 superimposed orders of columns, being Doric with triglyphs and a simplified waterleaf Ionic, linked by horizontal lattice trusses. HISTORICAL NOTE: the holder was originally part of the largest gas works in London and is still in use. With the gas holders on the west side of Goods Way (qv), the holder forms a group of unusually elaborate design and a landmark of historic importance.

Reference number: I798-1-586 85 1
Date of listing: 01/10/1986

Source of text and photograph: LB Camden web site
Location: Three Linked Gas Holders, Goods Way (West side)

Grade: II

Description: 3 linked gas holders. Southern gas holder erected 1864, telescoped 1880; eastern gas holder erected 1867, telescoped 1880, northern gas holder erected 1866, telescoped 1880. Cast-iron, painted black and red (original colours). Each of circular plan with framework comprising 3 superimposed orders of columns, being Tuscan, Doric with triglyphs and a simplified waterleaf Ionic, linked by horizontal lattice trusses, the southern one only retaining white painted lead rosettes on the lattice work. Each holder with a cast-iron date plaque. HISTORICAL NOTE: these surviving holders of the Imperial Gas Light and Coke Company's works were designed by the Company Engineer, Mr Kirkham and built by CF Clegg. In 1869 this was the largest gas works in London. Some of the holders are still in use. With the gas holder on the east side of Goods Way (qv), the holders form a group of unusually elaborate design and a landmark of historic importance.

Reference number: I798-1-588 84 1
Date of listing: 01/10/1986

Source of text and photograph: LB Camden web site
BUILDING NAME
GASHOLDER NO. 8

LOCATION
Between Battle Bridge Road to the south and Goods Way to the north

CLIENT REF.  EH INVENTORY REF.  IHCM REF.  LINKED EH REFS.
16                  N2                  N2                  M

NATIONAL GRID REF.  REPORT BY  DATE
TQ 3010 8332  MTT, MNB  April 2004

Listed Grade II
Formerly in Regent’s Canal Conservation Area, now within King’s Cross Conservation Area

1 DESCRIPTIVE SUMMARY

1.1 Built as a gasholder at Pancras Gasworks for the storage of town gas manufactured here from coal. Originally constructed in 1853 or 1855 by the Imperial Gas Light and Coke Company, but reconstructed and enlarged in 1883 by the Gas Light and Coke Company during a period when demand for gas was continually increasing.

1.2 Highly decorative guide frame, stylistically similar to that of the ‘Siamese triplet’ guide frames. 16 hollow cylindrical cast iron columns in two tiers, with cast iron column capitals and two levels of wrought iron riveted lattice girders. Deep water-filled brick-lined tank accommodating three-lift telescopic bell. Adjacent pump survives.

1.3 Decommissioned in 2000, and now empty of gas. The only gasholder still standing on the site of the former gasworks, although the dismantled guide frames of the ‘Siamese triplet’ group from the cleared site north of Goods Way are currently in store immediately north of this gasholder. Around these are proceeding the works for the construction of the Channel Tunnel Rail Link (CTRL).

2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 Pancras Gasworks was built as the principal works of the Imperial Gas Light and Coke Company. When opened in 1824 this was the finest and largest gasworks in the world. The works was sited alongside the Regent’s Canal (opened 1820). It used coal delivered to the works by the canal, producing gas in large retort houses. This was
then stored in the gasholders on the site, which acted as reservoirs so that an adequate supply of gas was always available when required. The Gas Light and Coke Company acquired the Imperial company in 1876.

2.2 The consumption of gas was steadily climbing throughout the second half of the 19th century, in response to London’s rising population and prosperity and falling costs in the making of gas. Proportionate increases in gas storage capacity were needed to meet peak demands at all the company’s works. With connection by trunk mains to the company’s huge Beckton gas works supplementing local production, several of the Pancras gasholders came to be enlarged in the 1880s.

2.3 The enlargement of No. 8 gasholder was designed by John Clark, the engineer of the Pancras works, and its ironwork was built by Westwood and Wrights in 1883. Both they and Clark had been responsible for the ‘telescoping’ of the three ‘Siamese triplet’ gasholders Nos. 10, 11, and 12, completed in 1880. The brick tank of No. 8, set in the ground, had been constructed c.1853 for a previous gasholder, and was now deepened by 2 feet to 28 feet (8.5 m), still considerably less than the exceptional 55 feet (16.8 m) depth of the tanks of the triplet group. So the new bell of No. 8 was given three telescopic ‘lifts’, within a guide frame some 83 feet (25.3 m) tall, compared with the two lifts, within guide frames 108 feet (32.9 m) tall, of the reconstructed triplet group. With different proportions, the guide frame of No. 8 has only two tiers of columns and girders compared with the three tiers of the triplet group.

2.4 All of these guide frames were based stylistically on those of John Clark’s father, Joseph, some of whose work may be seen at the Bethnal Green and Bromley-by-Bow gasholder stations.

2.5 Although No. 8 is the only gasholder still standing today on the gasworks site, it may be noted here that in 1886-7 two other gasholders were enlarged and two more were added, with a new style of guide frame in lattice girder construction (with resemblance to the wind girders of St Pancras Station trainshed). There were then no fewer than nine substantial gasholders on the site, seven of which remained until the commencement of the CTRL works in 2001. Developed piecemeal on a constricted site, the holders were smaller and more attuned to the urban setting than some other London gasholders of the period. They presented a remarkable townscape.

2.6 By 1900 the works occupied 11 acres (4.6 hectares), of which more than half was devoted to gas storage. Pancras Gasworks ceased to make gas in 1904, with many of its buildings being demolished shortly afterwards, but the gasholders continued in use, storing town gas piped from other gasworks. In the 1970s town gas was replaced by natural gas brought ashore from the North Sea, although again the gasholders continued in use.

2.7 The high-pressure national gas grid established first in the 1960s for the distribution of natural gas has an inherent storage capacity and flexibility, allowing a considerable and ongoing reduction in the national stock of gasholders. But high-pressure mains cannot be used in built-up areas, and meeting the peaks of demand in large cities remains a problem. The removal of several of the St Pancras gasholders, necessitated by the alignment of the CTRL and sanctioned by the CTRL Act of 1996, required an augmentation of the regional gas supply network through the construction of a gas governor immediately to the south-west of the gasholder. With that achieved, all of the St Pancras gasholders were decommissioned and purged of gas in 2000.

2.8 All the gasholders, except for No. 8, were taken down in 2001. The guide frames of the listed triplet group were carefully dismantled and put into in store next to No. 8.
This gasholder, being a listed structure but not on the line of the CTRL works, remains standing but disused.

3 DESCRIPTION

3.1 The constructional details of No. 8 gasholder are generally similar to those in the triplet group (qv), unsurprisingly as both its design and construction were undertaken by those responsible for the triplet group a few years earlier.

3.2 The gasholder comprises a circular guide frame of 16 equally spaced hollow cylindrical cast iron columns and two tiers of wrought iron riveted lattice girders linking the columns. The frame guides a bell of riveted wrought iron sheet housing the gas. This bell sits in a tank of water (to seal in the gas), enclosed by circular brick walls set in the ground.

3.3 The ring of columns closely surrounds the inner face of the tank, which is recorded as 138 feet 8 inches (42.3 m) in diameter. The height of the guide frame is recorded at approximately 83 feet (25.3 m). The bell had a nominal capacity of 1.1 million ft³ (31000 m³) of gas.

3.4 The bell is made up of three sections or 'lifts' which are telescoped so that when the holder was empty the three lifts rested, one within the next, in the water. As the bell filled, the lifts rose out of the water under the pressure of the gas (only slightly above atmospheric pressure). Guide wheels mounted on 'carriages' attached to the sides of the bell ran up and down on vertical guide rails secured to the inside of the frame columns to ensure that the bell travelled smoothly.

3.5 The guide frame columns are of hollow cast iron. They are arranged in two superimposed classical "orders", one to each tier of girders. The capitals and other details are based on the Doric and Corinthian orders. The acanthus leaves which would originally have characterised the Corinthian capitals have been removed. As in the case of the triplet group, each shaft consists of two or three castings bolted together via internal flanges.

3.6 The capitals support entablature blocks of hollow cast iron with heavily-modelled cornices around their tops. These entablatures are separate castings, and they serve as junction boxes between the columns and the girders.

3.7 The side faces of the entablatures are facetted to receive riveted wrought iron lattice girders, which are bolted both to and through the hollow cast iron blocks.

3.8 The lattice webs of the girders are of diagonal flat bars, closely-spaced in a triple-Warren type configuration, which is special to this gasholder and the triplet group. (So also are the additional bolts tying the girders together through the column heads - a robust connection.) The girder flanges are of built-up iron plate, riveted together and connected to the lattice web by riveted angles.

3.9 The column bases are secured into the brick tank walls by substantial wrought iron holding-down bolts, to provide fixity against overturning or sliding of the columns, particularly when subject to wind loads. The tops of these bolts are exposed at the corners of the column base flanges. Each column base is in the form of a hollow pedestal, to raise the column higher for better visual proportions. It is chamfered to an octagonal plan form to allow space for the holding-down bolts, in contrast to the earlier rectangular pedestals, with bolts concealed inside, as at Bromley-by-Bow. The triplet group at St Pancras did not have pedestals, as the proportions of the frames are
different.

3.10 A rectangular cast iron cover plate on each pedestal made the interior accessible for small apprentice boys to fasten the internal bolts connecting column sections. One or more of these plates carries the date 1883.

3.11 A steel ladder gives access to the top of the frame.

3.12 The carriages are latticed wrought iron cantilever brackets in groups of three, one being attached to the top of each lift of the bell. Each has a captive, double-flanged wheel that rolls up and down the guide rail - a T section secured to its adjacent column by cast iron brackets.

3.13 The telescopic bell which contained the gas remains in its original form. Extending to approximately 80 feet in height, it is divided into three lifts which nest one within the other, to fit the comparatively shallow depth of the tank. Each lift is a vertical cylinder made of wrought iron sheets which are close-riveted at the joints to seal in the gas. These sheets are laid out in a characteristic 19th century manner - each relatively small, for ease of man-handling on site, and arranged in a neat “stack-bonded” pattern. (Soon after this holder was built, sheets became much larger, often arranged in “stretcher-bond”.) There are shallow stiffening posts concealed on the inner face. When extended, each lift picked up the one beneath it by means of a circumferential “cup and grip” water seal detail, a standard feature of water sealed gas holders. Around the top of each lift is a simple handrail.

3.14 The roof of the bell, based on the evidence of the triplet group, is likely to be supported on light wrought iron trusses that resist the tendency of the roof plates to crumple downwards when the bell is out of service and the roof is consequently not supported by the pressure of gas. A central pillar in the tank provides support to the trusses when the tank is empty.

3.15 The depth of the brick tank, recorded at 28 feet (8.5 m), is one-third of the full height of the bell, which is some 25 m. To reduce the amount of excavation, it was normal to leave the soil in the central portion of the tank in place, in the form of an inverted cone or “dumpling” to ensure stability of the soil. The bottom of the tank and the sloped sides of this ‘dumpling’ would be sealed with a layer of puddled clay or concrete if necessary, to prevent leakage of water out of the tank. But on this site the tank will assuredly cut into the underlying impermeable London Clay, and so these surfaces are likely to have received only a thin ‘blinding’ of concrete.

3.16 The wall of the tank will increase in thickness with depth, stepping out several times on the outer face to provide adequate resistance as a compressive ring against earth pressure, which would otherwise tend to force the walls inwards. Vertical piers to support the guide columns will project behind the wall, probably capped with a massive padstone. The inner face of the wall will be a uniform cylinder with vertical iron guides attached to the face.

3.17 The frame columns have been painted black, with the neck rings and the Doric triglyphs picked out in red, while the lattice girders are also painted red, as are the lattice carriages and the handrails. A similar colour scheme was employed on the triplet group. This colour scheme was introduced at the last repainting in the 1980s. (A note on recent architectural research on the paintwork of the surviving gas holders is included in the historic building baseline report on the triplet gas holder guide frames.)

3.18 From inspection of the dismantled guide frames of the triplet group, it may be expected that some corrosion of the wrought ironwork will have occurred in Gasholder
No. 8. The cast ironwork is more durable, with little sign of corrosion externally. Long-term effects of condensation or rain within the hollow columns is likely to have led to modest surface rusting of the column interiors, as has been noted in the stored columns of the triplet group.

3.19 Immediately adjoining the tank on its south-west side, there is a circular brick well for the pipes that descend beneath the bottom of the tank wall to convey gas into and out of the gasholder bell. A hand-pump for draining the well of accumulated water stands next to it. The pump, with a six-spoked cast iron flywheel, is probably of early 20th century date.

3.20 The gasholder and pump are currently enclosed by a temporary fence separating them from the CTRL work site.

3.21 To the north of the gasholder, there remains a section of the boundary wall of the gasworks, probably of mid 19th century date. It is built of multicoloured stock brick, without embellishment except for an early 20th century coping in blue engineering brick. It stands about 4 m high above the former street level of Goods Way (earlier Wharf Road), providing security for the gasworks site. It carries a set of four cast iron tie-plates of considerable height (3 m), with three tie-bolts to a structure that stood on its south side but has long gone. These iron elements are elegant and increasingly scarce examples of 19th century constructional ironwork. Further west, the wall also has several blocked windows with round-arched heads from a former building that stood behind it.

4 ARCHITECTURAL ANALYSIS

4.1 Gasholder No. 8 follows the same architectural principles as are described for the ‘Siamese triplet’ group (qv, N1). No. 8 of 1883 was the last of the “Clark” series of holders (the last of nine such holders at Bromley-by-Bow had been completed in 1882), and John Clark took early retirement the following year. The guide frame maintains the very high quality of detailing seen in the other holders.

4.2 To fit the dimensions of the gasholder bell, predetermined by the earlier tank, the proportions of the guide frame of No. 8 are somewhat different from those of the triplet group. It is shallow in proportion, but that is made up for by division into only two tiers, so that the individual panels are taller (their average height being about 1.4 times their width between column centres). The pedestals, although large at close quarters, are only a small part of the whole. The proportions work well, making the appearance both light and elegant.

5 PHASING ANALYSIS

5.1 The gasholder was originally constructed c.1853-5.

5.2 The continuing growth in demand for gas led to the reconstruction of the gasholder in 1883 with a new guide frame, a deepened tank, and a larger, three-lift telescopic bell. It has remained virtually unaltered since then.
6 FUNCTIONAL AND RELATIONAL ANALYSIS

6.1 The role of a gasholder in a town gasworks such as this was to accumulate and store gas as it was produced throughout the working day, so that an adequate supply was always available in response to demand, which would fluctuate daily, weekly, and seasonally. Gas was used particularly for lighting in the 19th century before electric light, and subsequently for cooking and heating. Demand for gas rose at an accelerated pace through the later 19th century, and this created problems for the Pancras Gasworks on its constricted site with no room for enlargement. The solution adopted was to increase the capacity of the existing gasholders by increasing their height. In the case of Gasholder No. 8, this involved deepening the existing tank and erecting new guide frames with an enlarged three-lift telescopic bell.

6.2 The gasholder was built when bells of three lifts - rather than two - were just beginning to be adopted widely, so as to increase the capacity obtainable with a given depth of tank. To run reliably, such bells required a good standard of design and construction that could not previously be depended upon. While three-lift bells were commonplace by the 1890s, this is a very early surviving example. It testifies to the growing confidence among gasholder designers in the early 1880s.

6.3 Structurally No. 8, like the ‘Siamese triplet’ group, illustrates the mature development of the form of gasholder construction that developed empirically through the middle years of Victoria’s reign, prior to a more sophisticated understanding of three-dimensional frameworks. The guide frames employ substantial hollow circular cast iron columns, bolted together in sections, and bolted down to the substantial brick tank. These are coupled rigidly with functional but elegant wrought iron lattice girders tying the columns together, and providing a degree of overall tubular framing action to what would otherwise be pure cantilever columns.

7 LISTING CITATION

7.1 “Single gas holder. Erected 1883 for the Imperial Gas Light and Coke Company. Designed by Company Engineer, Mr Kirkham, and built by C F Clegg. Cast-iron, painted red and black (original colours). Circular plan with framework comprising 2 superimposed orders of columns, being Doric with triglyphs and a simplified waterleaf Ionic, linked by horizontal lattice trusses.

7.2 “HISTORICAL NOTE: the holder was originally part of the largest gas works in London and is still in use. With the gas holders on the west side of Goods Way (qv), the holder forms a group of unusually elaborate design and a landmark of historic importance.”

[Note for information: this citation and historical note were written when the gasholder was listed, in 1986, when other gasholders were still standing. Some statements are debatable; in particular, recent architectural paint research (described in the report on the triplet guide frames) indicates that the current red and black colour scheme is not original.]
REFERENCES


(Fitzgerald, R. S.) Report on Nos. 10, 11 and 12 Gasholders at the Agar Town holder station of the Pancras gasworks. Structural Perspectives, n.d. but c.1996. (Unpublished report prepared for Union Railways Limited.)


Tucker, M. T. Unpublished notes from company minute books and other documents.
### SUMMARY: THE HERITAGE IMPORTANCE OF GASHOLDER NO. 8

**ARCHITECTURE AND FABRIC**

Gasholder No. 8, originally erected in 1853 or 1855, was enlarged in 1883. It is the only gasholder still standing, from the nine such structures that existed a century ago on the Pancras Gasworks site.

Like the ‘Siamese triplet’ group, whose dismantled guide frames are now stored alongside Gasholder No. 8, it illustrates the mature development of the “High-Victorian” manner of gasholder construction. The guide frames employ substantial hollow circular cast iron columns, bolted together in sections. These are coupled with functional but elegant wrought iron lattice girders tying the columns together.

The exceptionally competent integration of Classical form and details in the “Clark” series of gasholders has created a memorable and decorative piece of architecture which remained functionally effective with minimal alteration for over a century.

The open yet skeletal, circular structure is an unusual form in an urban setting.

**SETTING**

The clearance of most of the surrounding buildings for the CTRL works has significantly altered the setting and context of this structure, although the Regent’s Canal, and the stations and hotels of King’s Cross and St Pancras, do remain as major townscape features.

Some nearby features continue to identify its distinctive industrial past.

**SIGNIFICANCE RELATED TO TYPE**

Gasholder No. 8 is the last standing gasholder and, with the adjoining section of boundary wall along Goods Way, the only surviving in situ evidence of the St Pancras Gasworks, a major site for the manufacture and storage of gas dating back to 1824.

No. 8 is one of the few gasholders nationally that retains the traditional style of wrought iron sheeting to the bell. It is also a very early surviving example of a three-lift telescopic bell gasholder.

The continuing trend for the demolition of gasholders generally (supplanted by the modern practice of high-pressure gas storage), its completeness, and the competence of its design, combine to render it a very unusual survivor.
SIGNIFICANCE RELATED TO INTANGIBLES

Gasholder No. 8 is the remaining part of what was once a group of gasholders, forming an iconic landmark identifying the King’s Cross/St Pancras area, a dramatic skyline feature, and a distinctive silhouette.
APPENDIX F

Historic Buildings Baseline Reports on the Western Goods Shed: Upper level, Lower level and Northern extension (IHCM)
BUILDING NAME
WESTERN GOODS SHED, UPPER LEVEL

LOCATION
North-east of the Wharf Road Viaduct and immediately west of the Western Coal Drops

CLIENT REF. | EH INVENTORY REF. | IHCM REF. | LINKED EH REFS.
-------------|------------------|-----------|------------------
24B          | E                | E         | F2, F3

NATIONAL GRID REF.
TQ 3000 8363

REPORT BY
KS, MTT

DATE
April 2004

Not listed
Within Regent’s Canal Conservation Area

1 DESCRIPTIVE SUMMARY

1.1 Upper level of Western Goods Shed built 1898-9, length a maximum of some 115 m north-south by 53 m wide. Extended northwards in early 20th century (described in separate report, qv). As with slightly shorter lower level (also qv), original part of upper level is largely rectangular, with oblique south-west wall. Upper level is seven bays long, four bays wide. West and south-west walls are Gault brick, their fenestration reflecting internal functions within building. Much of southern part of east wall is originally west wall of Western Coal Drops, raised and with brick piers. Above Coal Drops’ wall, bays between piers are weatherboarded with windows. To north of Coal Drops, west wall is overclad with corrugated steel sheeting, as is south wall of Shed. North end integrated with northern extension, except in west bay, where it consists of low brick wall with lightweight blocking above. Two main vehicle entrances located at south end of west wall and on short southern end. (See Figure BD9 in Part 2.)

1.2 Internally, steel columns are on grid that does not align exactly with that in lower level of Shed beneath. Steel columns support transverse steel lattice girders that carry composite wrought iron, cast iron and timber structure of symmetrically pitched roof. Roof covering is slate, with glass skylights. Also areas of corrugated asbestos in location of possible earlier skylights.

1.3 Western bay has high-level offices over, in third to fifth bay from north, under north-south gabled roof with weatherboarded north gable. Offices supported on steel plate girders; this level accessed from western door and lift in western bay, from timber
staircase rising from platforms in main area of Shed, and from staircase set along the north-western end of the angled south-west wall. Remainder of Shed’s upper level has hipped east-west orientated north-lit roofs with gablets. Angled south-west wall built up into gables to meet roof in southern two bays.

1.4 Internal roadway runs along western bay, beneath high-level offices. Roadway then turns south-east, running inside angled south-west wall. This part of roadway is currently separated from north-south element by lightweight partition. Timber platforms that originally extended north from angled south-west roadway, and as far west as east edge of western bay, replaced in late 20th century by roadway-level concrete surface in southern two bays. Between platforms, three pairs of railway sidings between platforms, now covered over at platform height. Overhead beams and monorail track of travelling crane remain over and within platforms between two easternmost areas of track.

2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The main part of the Western Goods Shed was built in 1898-9 to the design of Alexander Ross, the Chief Engineer of the Great Northern Railway, as the outward-bound goods station. The Western Coal Drops were converted at the same time to serve the same function, while the Granary group - which had previously dealt with both incoming and outgoing freight traffic - was adapted to serve as the inward-bound station.

2.2 The Shed represented an early use of structural steel framing, although the building represents a hybrid in that it had a steel frame that was partly supported on loadbearing walls. The fact that Dorman Long published the first section book for steel construction in 1887, and the earliest British fully steel-framed building was built c.1896, indicates how slowly the new technology caught on (Clarke).

2.3 Cart access to the upper level from the south was across the end of the Western Coal Drops Viaduct, itself accessed from the Wharf Road Viaduct, while an opening in the south end of the west wall provided direct road access from Wharf Road further to the west. Both levels of the Shed were built against the Western Coal Drops (qv) in such a way as to integrate the two buildings. At upper level this allowed from the Shed to the track in the former Western Coal Drops, via the platforms of the Western Goods Shed and the archways in the west wall of the Coal Drops (now a party wall). This gave greater flexibility of operation. The Western Coal Drops had their own loading bank on the east side of their siding at upper level, with greater space for short-term storage.

2.4 A similar level of integration was achieved in the lower levels of both buildings. Here, there was an internal road for carts that ran from the south door alongside the south-west angled wall and turned north along the western bay. There was a long loading bank on the diagonal across the building, alongside the internal roadway, where carts would unload; this no longer survives. From this bank, finger platforms extended northwards between the pairs of railway tracks.

2.5 Three pairs of railway tracks entered the building from its north end. The westernmost pair curved slightly towards the north-east before it left the northern extension. These and the other tracks curved, once they left the Shed, towards the tracks that led to the Copenhagen Tunnel through which the trains arrived in the Goods Yard. The tracks ran parallel outside the Western Goods Shed for about 200 m, before they converged via points, in order to give space for the marshalling of wagons into longer trains. The sign on the outside face of the north wall of the extension, stating that “ENGINES
2.6 When the Western Goods Shed was opened in July 1899, the high-level offices were not yet complete. These offices dealt with the paperwork and administration of the loading of freight.

2.7 A pair of overhead crane beams between the eastern and middle pairs of tracks shows the position of two travelling monorail cranes, which would have facilitated the loading of goods onto trains on two platforms. The monorails survive within the structure of the platform and are supported on timber trusses visible from below in the lower-level floor of the Shed. They appear to be integral with the platform. The monorail cranes were added after c.1900, and were shown in 1942 to be electrically-powered (Clarke). The 1930s plan (also in Clarke) shows a series of stationary cranes that could have been in operation at the same time as the travelling cranes, as long as the swivel cranes’ jibs passed below the overhead crane beams. It is possible that the monorails were installed for the conversion of the Shed to an inward-bound goods station in 1938.

2.8 Shortly before 1913, a northern extension (qv) had been added to the Shed, attached to its eastern three bays only. As just noted, the Western Goods Shed was converted in 1938 into the inward-bound goods station, while the Granary complex became the outward-bound goods station.

2.9 After the building ceased to operate as a goods station, it was converted to warehouse and workshop use. The platforms were severed and replaced with lower concrete flooring in the southern two structural bays. The tracks were covered over to create a continuous floor at platform level over the remainder of the eastern three bays, and the fourth to seventh bays from the south were partitioned off to produce four transverse rental units occupying the eastern three bays. Road access to these units was along the road in the western bay, which was now partitioned off from the continuation of this road along the angled south-west wall. The southern three bays were partitioned off to the east of the western bay to create a larger rental unit.

3 DESCRIPTION

3.1 This report describes the original upper level of the Western Goods Shed, comprising the southernmost seven bays of the Shed at this level, including the high-level offices above the westernmost bay. Separate reports (qv) describe the later northern extension of the Shed at upper level, and the lower level.

3.2 The building is aligned north-north-east to south-south-west along its long axis. For the purposes of this report its alignment is assumed to be north-south. It is basically rectangular on plan, but with only a short eastern portion of the south elevation being at right-angles to the east wall; west of this, the elevation is aligned obliquely at 45° to give a south-west frontage onto Wharf Road. Maximum plan dimensions are approximately 115 m long north-south, and 53 m wide.

3.3 The main upper level floor has a common platform level with the upper level of the Western Coal Drops immediately to the east. These were converted into a goods shed in 1898, at the same time as the Western Goods Shed was built. The Western Goods Shed abuts the Coal Drops building, whose originally external west wall became the
party wall between the two buildings when the Shed was erected. The Western Coal Drops Viaduct (qv) giving access from wharf Roads to the upper level of the Coal Drops on their east side also forms the access into the upper level of the Western Goods Shed from the south. There is also direct road access to the upper level from Wharf Road further west, at the south end of the west wall.

3.4 Three pairs of railway tracks formerly entered the north end of the building at this level. Each pair stopped between one and two structural bays (approximately 35 m) short of the oblique south-west wall, so that the buffer stops of each pair were staggered. Roadways for carts ran internally on the south and south-west sides of the building. Platforms flanked all of the paired railway tracks, extending as fingers between them and joined across their southern ends, abutting the internal roadways and extending as far west as the eastern edge of the western bay. The platforms were connected at the south-eastern corner of the Shed to the platform in the Western Coal Drops. Furthermore, the platform along the eastern edge of the Shed had its eastern edge on the inner face of the arch piers of what was now the Shed-Drops party wall, so that it could serve vehicles on the track within the Coal Drops. This easternmost platform was fairly narrow and, although providing access to the track of the Western Coal Drops, is therefore unlikely to have been used for handling large volumes of goods. This arrangement can be seen on a plan based on a 1930s map (Clarke). When or after the railway connections were severed, the tracks were covered over at the same height as the platforms. In the southern two bays the platforms were removed and replaced with a concrete floor, laid to extend the roadway into a lorry loading area.

3.5 The supporting structure of the floor of this upper level of the Shed has been described in the report on the lower level of the Shed (qv). The upper level space is articulated by a grid of steel columns supporting the roof, in seven north-south bays typically 16.5 m in length, except that the northern bay is only 14.9 m. There are four east-west bays of width varying between 11.5 m and 15.7 m (see 3.6 below). Loadbearing outer walls on the south-west and west sides are of fletton brick, faced externally with Gault brick. The columns and walls in the third to sixth bays from the north in the western bay support the high-level offices as a mezzanine; the remainder of the upper level of the Shed is open to the roof. The column grid generally supports east-west double-Warren-trussed steel girders, which have integral vertical struts under the roof trusses. The north-south spanning queen-rod roof trusses are of composite wrought iron, cast iron and timber construction. The symmetrically-pitched roof has timber purlins and close-boarding, and has a slate covering with glazed strips, supplemented by areas of relatively recent corrugated asbestos. The seven main east-west roofs are hipped with gablets, except where they meet the oblique south-west wall (where they are gabled) and where the third roof from the south terminates with a gabled end against the high level offices.

3.6 There are fewer columns and at wider spacing at this upper level than in the lower level. This reflects the much lighter loading to be carried from the roof, as compared with the heavy floor construction, its vehicles, and the freight traffic that had to be supported by the lower-level columns. Wider column spacing also facilitated the handling of freight at the upper level. The columns on the upper level are located above the alternate transverse (east-west) girder lines of the lower-level structure, except that the south-westernmost column (supporting the east side of the high-level offices) 'breaks step' by half a bay northwards, to avoid the perimeter roadway. Transversely, the columns are naturally located to clear roadways and the railway tracks, with the western line located along the edge of the loading bank facing the western roadway, and the middle and eastern lines generally central to the former finger platforms. As a result, several of the columns do not align directly over the
columns at lower level, but are displaced westwards, having to be supported on the transverse plate girders below. This applies to most of the columns in the first row from the east. The two columns on the north side of the second bay from the south are displaced westwards, off grid, to suit the layout of the south-west road and loading bank. The roof girders spanning the south-west roadway are of increased length and depth, necessitated by the skewed orientation of the roadway. Additional steel columns extend to the north-east corner of the Shed, providing necessary support to the roof here, beyond the northern end of the party wall with the Western Coal Drops.

3.7 The steel compound columns are of two patterns. Most are fabricated from rolled I sections that are riveted to flange plates. Those columns supporting the high-level offices are cruciform on plan, and consist of a large rolled I section with two smaller I section rolled joists riveted to either side of the larger section’s web. These latter columns are strengthened by horizontal straps, seven eighths of an inch (22 mm) thick, riveted to the outer facing flanges. The steel girders and columns bear the inscription “Dorman Long and Co., Middlesborough”. Triangular brackets riveted to the columns support the roof girders.

3.8 In the main part of the Shed, the columns support double-Warren lattice girders (see above). Beneath the high-level offices, the columns and outer walls support steel plate girders. There are three transverse girders to each of the upper level’s structural bays. Short shelf angles, riveted horizontally between the web stiffeners on the transverse girders, support rolled steel joists that carry the floor structure of the offices. The floor structure of the offices consists of timber planking over the northern two and two-thirds bays. However, the office floor structure above the southernmost office bay, and above the southern third of the bay to its north, is of poured concrete supported on relatively closely-set steel joists. More than one timber-encased drainpipe descends through the timber planking of the high level and runs into external rainwater pipes.

3.9 In the main part of the Shed, the roof trusses are of composite construction, with timber principal rafters and collar beams, and wrought iron tie-rods and bracing members. Cast iron shoes join the principal rafters (each of which consists of two sections of timber) with the collars. Wrought iron rods span between the end principal trusses and the hips to support the roof in these areas. The roof truss configuration has typological links to that used in the Western Coal Drops of c.1860, which in turn is a development of that used in the Eastern Coal Drops of a decade earlier. The roof surfaces originally consisted of slate laid over timber planking, with glazed skylights. Some former skylights appear to have been replaced with corrugated asbestos sheeting. These are located on the hips and on either side of the valleys between the roofs. The roof trusses are generally in good condition, although there has been some water ingress. The slate is generally covered in a fabric that has been impregnated with a waterproof substance.

3.10 The south wall of the upper level is formed by the steel doors that give access from Wharf Road, via the southern part of the Western Coal Drops Viaduct (qv), into the south-east corner of the Shed. The doors are flanked by corrugated steel panels. The structural support to this elevation consists of two I section steel columns carrying a steel plate girder.

3.11 The exterior brickwork is generally in reasonably good condition, although vegetation has colonised parts of the west elevation (in particular) especially around rainwater downpipes. This clearly indicates water leakage which, together with the root growth of the vegetation within mortar joints, will have caused some damage to masonry. The dampness will also have caused some rot damage to timber, and local corrosion of ironwork and steelwork can be seen around the Shed.
3.12 The oblique south-west wall, set at 45° to the main axis of the Shed, forms two oblique gables with parapets that conceal the minor intricacies of the roofs behind. The southern of the two gables terminates the east-west southern bay's roof. The northern of the two gables terminates half of the next east-west bay's roof and continues, slightly higher, to terminate the north-south roof of the high-level offices. The external treatment of the south-west angled wall reflects the internal arrangement.

3.13 The southern part of this double-gabled wall is divided into five recessed panels, topped by a triangular pediment, centrally recessed. It shows evidence of three blocked arched windows in its central three panels, which would have lit the loading area at the south end of the platforms.

3.14 The northern of the two gables has two similar recessed panels with blocked arched windows at its southern end, where the southern half of the second bay from the south terminates. This southern end is topped by a stepped parapet.

3.15 A totally different window configuration exists at the northern end of this northern gable, where extant fenestration lights the high-level offices and the staircase against the wall leading to the second floor. Also, the parapet of the gable slopes, rather than being stepped. The southern end of the high-level offices is lit by a large segmental-arch-headed window, flanked by two smaller windows also with segmental-arched heads. Three narrower arch-headed windows, arranged diagonally in a stepped configuration, light the staircase along the north-west end of the angled wall. Beneath the uppermost of these windows, a single boarded-up window lights the space beneath the stairs. There is another window to its south-east, set at the same height as the middle window on the stairs. This window is set over a relatively low-level window that was blocked using Gault brickwork. This window is shown on a photograph of 1912 to have already been blocked at that date (Hunter and Thorne, page 55). There is a similarly blocked window at the same low-level height beneath and slightly to the south-east of the middle window over the stairs. There are internal brick pilasters supporting the plate girders where they meet the angled south-west wall.

3.16 On the west wall, the two northernmost, lower, bays (beyond the high-level offices) are each externally divided by pilasters into three recessed panels. In both, the central panel has a segmental-headed window. Above the pilasters, the brickwork thickens and the wall is topped by a simple brick cornice. The roof surface extends over the top of the cornice to a gutter.

3.17 To the south of the northern two bays, the west wall is higher. This, and its fenestration, reflects the fact that the high-level offices, housing the clerical and administrative functions of the Western Goods Shed, were located there. Lighting this upper level of the Shed, the wall has 14 arched windows that are recessed in pairs, recesses being separated by stepped pilasters. These windows align vertically with the rectangular sash windows, with steel-faced timber lintels, of the offices above. One of the office windows has been replaced with a door that leads onto the fire escape (see below).

3.18 The main road vehicle access into the building on this western elevation is at the southern end of the wall, to the south of the arched windows. The wall above the opening is carried on a steel plate girder, which sits on stone pads supported on brick piers. These are integral to the pilasters that frame the opening and rise to roof level. The girder carries the west end of one of the transverse plate girders beneath the high-level offices. An entrance set below the south-westernmost of the arched windows provides access to a lobby with electric lift access to the second floor. The
three southern high-level office windows at the south end of the west wall are set more widely apart over the main vehicular doorway, suggesting that the opening may have been original. Both the south-west wall and the west wall have low-level windows, providing a modicum of natural light into the lower level of the Shed.

3.19 To the south of the vehicular doorway in the west wall, there is a south-east to north-west orientated low fletton brick wall that obliges road vehicles to approach the opening from the north-west. The fact that its foundations are built with multicoloured brick of fabric 3032 suggest that this wall is probably a rebuild of an earlier wall in the same location. (It has sustained some damage.) The wall may have been built originally to keep cold draughts out of the Shed (it faces the prevailing wind).

3.20 On the western elevation is an external fire escape staircase of concrete and steel, originally supported on angled steel brackets and currently supported on scaffolding. The gate to the main south door on the west elevation has a steel gate-post, and is steel-framed with a wire mesh covering. Two external enamelled steel signs reading “Drive Slowly” in white on a blue background appear at both ends of the angled south-west wall. These, dating from some time in the mid 20th century, are rare survivals in railway premises, most having been either removed completely or replaced with more modern signage.

3.21 The north wall in the western bay is brick-built and is probably not original. Both externally and internally it appears as a low one-brick thick fletton brick wall with galvanised profiled steel sheeting set onto a timber frame, bolted onto the double-Warren lattice roof girder above. The low brick wall has significantly cracked, apparently owing to a lack of foundations on the made-up ground. In the bays to the east, the northern end of the Shed is open into the northern extension (qv).

3.22 The east wall in the northern bays, beyond the north end of the Western Coal Drops, is clad with corrugated steel sheeting supported on a steel frame and the columns of the building’s main steel frame. A double-Warren lattice girder supported by the columns at this end of the wall serves to carry the east end of the northern bays’ roofs here. To the south of this, the east wall incorporates the west wall of the Western Coal Drops. The floor level in the eastern three bays of the Shed’s upper level is at the same height as the upper level of the Western Coal Drops. The mostly-blocked arches of the original Coal Drops wall are visible on the internal face of the east Shed wall, and in a few cases were open at the time of writing. Where this east wall extends above the top of the Coal Drops wall, it consists of a series of brick piers, each set above one of the piers of the Coal Drops wall, which support the timber wallplate upon which the Goods Shed’s roof is set. The gaps between the piers have weatherboarded external faces, and there is a single window in each panel. Where the transverse girders that support the roof meet this wall between the brick piers, they are carried on steel beams spanning the gaps between the piers.

3.23 The timber boarded platforms within the upper level of the Shed are covered in asphalt with some localised patches of concrete. Their timber joists are supported on substantial timber trusses, each consisting of a top and base plate between which are set timber struts. The trusses are in turn supported on timbers that rest directly onto the girders in the ceiling of the lower level of the Shed. The platform edge facing the western roadway mostly has a brick face. The railway tracks between the platforms are supported on concrete jack-arching that can be seen from below in the lower level of the Shed (qv). There were openings between each pair of tracks which lit the lower-level space. The tracks are now covered over with a timber deck to the same height as the surrounding platforms. The timber covering at the south end of the middle pair of tracks extends further south on one side, possibly indicating that the two adjacent
tracks had staggered ends. This contradicts the evidence on the 1930s plan (in Clarke) that shows the two tracks extending the same distance to the south, and may represent a later reconfiguration.

3.24 The 1930s plan shows swivelling platform cranes that have since been removed. On either side of the eastern column line, through the northern five bays, there was a pair of monorail travelling cranes of an unusual configuration, added in 1938. The single flat-bottomed rails, upon which the cranes ran, survive in the platform surface. Currently covered over by steel plates, they were supported on timber trusses that form part of the substructure of the platform. Overhead, there is a pair of steel plate girders spanning between the roof girders in each bay, below which rolled steel beams are bolted transversely to carry rolled channels centred above each of the monorail tracks. These channels gave lateral guidance and restraint to the top of the crane-post. At the southern end of the Shed, the monorail tracks converged so that the crane could transfer from one platform face to the other. The columns along the platform’s centre-line would have obstructed the use of a more stable portal-type crane, while the transverse rolled steel beams would have prevented a suspended bogie from running along the upper rails. The apparatus as found could only have handled light loads. At the northern end of the overhead crane beams is a suspended sign reading “CRANE LIMIT”.

3.25 In the western bay, the smaller western upper level doorway leads to a lobby where there is a lift to the high-level offices set within a rectangular concrete blockwork structure that was built in the 20th century. The surviving original access to the high-level offices is by a concrete staircase with a steel handrail, built against the internal face of the oblique south-west wall. The staircase is built on a concrete platform with cast iron protective kerbing, bearing the ironfounder’s name “W RICHARDS & SON LEICESTER”. A light flat-roofed room, walled in concrete blockwork, is set beneath these stairs.

3.26 High-level offices

3.27 The purpose-built high-level offices have a timber-framed and weatherboarded north gable end, which has suffered some damage. Their east wall is weatherboarded with sash windows. The interior is divided into 21 bays by 20 composite roof trusses of a similar configuration to those in the main upper level space, with timber rafters and collars, wrought iron tie-rods, and cast iron shoes. The northern bays have a central corridor with offices on both sides. The lift from the ground floor entrance provides access to a lobby on the west side of this corridor. The southern bays have an eastern corridor which leads to the southern stairs, the door to which is in the south corner of the floor. On the east side of this corridor is a weatherboarded projection that extends into the roof space of the third most southerly bay of the upper level of the Shed. This projection is supported on brackets and forms the landing at the top of the exceptionally long timber staircase that extends from its north-east side. Its top flight of stairs runs down to the north corner of the third most southerly bay of the main Shed, and then extends along the north side of that bay down to the upper level. The staircase has well-constructed handrails with cross bracing. A further projection, supported on brackets, extends from the upper level offices where they meet the angled south-west wall. The room in this projection is accessed from the staircase that rises along the south-west wall. The offices have a relatively-recent light steel-framed suspended ceiling with lightweight panels. The symmetrically-pitched roof is slated. The roofs of the second and third bays from the south in the upper level of the Shed butt onto, and overlap, the roof of the high-level offices. There is a water tank in the roof over the offices.
4 PHASING ANALYSIS

4.1 The construction of the Western Goods Shed appears to have been a change of plan from an intention to build a two-level Coal Yard. The conversion of the adjoining Western Coal Drops into a goods shed, contained in this previous scheme, probably proceeded concurrently with the construction of the Western Goods Shed during 1898. The whole integrated complex was opened in July 1899, although the high-level offices were not yet complete.

4.2 The 1930s plan (reproduced in Clarke) shows the layout of the upper level of the Shed roughly as it was when built. The two phases of the northern extension (qv) were added just before 1913 and shortly thereafter. No evidence was found within the Shed of the extension of the platforms when the Shed was extended northwards; such evidence may however be preserved within the platform's structure.

4.3 The location of areas of corrugated asbestos roof covering show the maximum possible extent of the original roof toplighting.

4.4 The monorail cranes were not added early in the Shed's operation. They are absent from a photograph of c.1900 (Clarke, Figure 5) and are not mentioned on the 1921 Goad plan. The 1942 Goad plan shows that the cranes were electrically powered (Clarke). They could have operated concurrently with the swivel cranes shown on the 1930s plan. This plan suggests that the electric lift to the high-level offices in the western bay was not original, not being in place at that date. This is confirmed by the fact that the lift shaft and entrance lobby are enclosed within concrete blockwork walling, a more modern material.

4.5 The main access to the offices would have been via the two extant staircases, one against the angled south-west wall, and the other from the main platform area, to the south of the western pair of tracks.

4.6 The angled wall against the western road entrance is unlikely to have been original.

4.7 The 1930s plan also shows that the eastern wall of the upper level to the north of the Western Coal Drops was solidly built, rather than being open on its lower portion. It is even possible that there was a brick wall in this location. (The wall is currently clad in corrugated steel sheeting.)

4.8 In the post-railway period, the building has gradually become separated from the Western Coal Drops, and the historic circulation routes within the building have been restricted. Thus, almost all of the arches in the west wall of the Coal Drops have been blocked. The three pairs of railway sidings between the platforms have been covered over with planking, which in some areas have been further covered in asphalt. The southern end of the platforms has been severed in the southern two bays, and replaced with a concrete surface at the level of the perimeter roadway. The south-east to north-west orientated part of the internal road has been partitioned off from its continuation as the north-south roadway in the western bay. Lastly, the eastern three bays of the building have been partitioned into discrete units.

4.9 The blocking of the windows at the southern end of the building and the decrease in the areas covered by the skylights would have necessitated increased electric lighting.
5 FUNCTIONAL AND RELATIONAL ANALYSIS

5.1 The main part of the Western Goods Shed was built during a major expansion of the Goods Yard in 1898-9 to serve, with the adjacent Western Coal Drops, as the outward-bound goods station.

5.2 Three pairs of railway tracks entered the upper level of the Shed through its northern end, the westernmost pair curving slightly towards the north-east before leaving the Shed. This and the other tracks all curved once they left the confines of the original Shed, leading towards the Copenhagen Tunnel through which goods trains arrived in and left the Goods Yard. The tracks continued to run parallel outside the Western Goods Shed for about 200 m before they converged, via points, in order to give space for the marshalling of wagons into longer trains.

5.3 The sign on the north exterior wall of E3, stating that “ENGINES MUST NOT PASS THIS POINT” reflected the severe fire risk and nuisance of steam locomotives within buildings. The wagons were brought in for loading with the aid of capstans, driven by hydraulic power and later by electricity. The old-fashioned system of shunting with horses was thereby abolished. It would also have been possible for trains of wagons and vans to be shunted into the Shed from the rear by locomotives.

5.4 The loading of goods in the Shed was administered from the high-level offices, which had direct access to the loading platforms via the surviving timber staircase located in the third structural bay from the south. A window in the projection to the high-level offices that forms the landing at the top of the stairs would have allowed the loading operations to be overseen.

5.5 Cart access to the upper level from the south was from the Western Coal Drops Viaduct, accessed from Wharf Road, and by an opening further west in the south end of the west wall which provided direct road access from Wharf Road. Both levels of the Shed were built onto the Western Coal Drops in such a way as to integrate the two buildings, allowing access to and from the track on the upper level of the former Western Coal Drops, via the platforms of the Western Goods Shed and the arched openings in the west wall of the Western Coal Drop arches. This gave greater flexibility of operation. The Western Coal Drops had its own loading bank to the east of its upper-level track, with greater space for short-term storage.

5.6 A similar level of integration was achieved in the lower levels of both buildings.

5.7 There was an internal road for carts in the upper level of the Shed that ran from the south door alongside the south-west angled wall and turned north along the western bay. Goods were loaded onto the platforms, and from there into the trains in the sidings between the platforms.

5.8 The working space within the upper level would have had more natural light than at present. There were windows above the Western Coal Drops wall that still survive. The extent of the skylights would have been considerably greater than at present. The large arched windows on the oblique south-west wall (now blocked) would have lit both the south-west roadway and the unloading of goods at the southern end of the platforms. The large windows and large entrance on the western wall would have lit the western road as well as the platform areas that are now obscured by the north-south partition that separates the western bay from the other bays. The c.1900 photograph (in Clarke) shows that additional lighting was provided by gas lamps. The current lighting is by electric fluorescent strip lighting.
5.9 Two overhead crane beams between the eastern and middle pair of tracks show the position of two travelling monorail cranes, which would have facilitated the loading of goods onto trains on two platforms. The monorails survive within the structure of the platform and are supported on timber trusses visible from below in the lower level of the Shed, which appear to be integral to the platform. This craneage feature might have been added after the 1930s, although it could have been built early in the building’s development. The 1930s plan shows a series of stationary cranes that could have been in operation at the same time as the travelling cranes, as long as the swivel crane’s reach extended below the overhead crane beams. However, they could not have operated simultaneously.

5.10 The pre-1913 and c.1915 northern extension increased the capacity of the Shed, which may have had to deal with increased traffic occasioned by the First World War. It is not certain whether the platforms were also lengthened at this time, or whether they originally extended beyond the confines of the Shed.

5.11 In 1938, the Western Goods Shed was converted into the inward-bound goods station while the Granary complex became the outward-bound goods station. This was without apparent need for alteration of the Shed layout, except for the probable addition of the monorail cranes.

5.12 The building was converted to warehouse and workshop use after it ceased to operate as a goods station. The platforms were severed and replaced with lower concrete flooring in the southern two structural bays. The tracks were covered over to create a continuous floor at platform level over the eastern three bays, and the fourth to seventh bays from the south were partitioned off to produce four transverse rental units occupying the eastern three bays. The southern three bays were partitioned off to the east of the western bay to create a larger rental unit. These were used as warehousing and workshops. Road access to these units was along the road in the western bay, which was partitioned off from its former continuation along the angled south-west wall.

6 LISTING CITATION

6.1 Not listed.

REFERENCES


Goad Insurance Sheet 12/400. Kings Cross Goods Yard, updated to January 1921, also 1942 revision and reissue. (In London Borough of Camden Local Studies and Archives Centre.)

Great Northern Railway. Specification, Bills of Quantities of, and Tender for the several Works required in the construction of an extension to the Coal Yard and Goods Depot of the London Coal and Goods Station, Great Northern Railway Kings Cross. GNR, October 1897. (Contract signed 9 December 1897. Original in Public Record Office, RAIL 236/532.)


Ordnance Survey, 25 inch series, 3rd edition, 1913

Ordnance Survey, 5 feet to 1 mile series:

- First edition surveyed 1871, published 1874
- Second edition revised 1894, published 1895
- LCC revised edition, 1938 (without amendment)

SUMMARY: THE HERITAGE IMPORTANCE OF THE WESTERN GOODS SHED, UPPER LEVEL

ARCHITECTURE AND FABRIC
The Western Goods Shed was designed by Alexander Ross, the Great Northern Railway’s Chief Engineer, and built to a high-quality specification with the latest materials, producing a very early example of a steel-framed building.

SETTING
The Shed stands on the site of the former Coal and Stone Basin. Historically and physically, it is integrated with the surrounding structures and surfaces.

The west and south-west elevations of the Shed provide the main view of the Goods Yard from trains leaving and arriving at St Pancras. These have become more prominent following recent demolitions for construction of the Channel Tunnel Rail Link.

The Shed is one of the later features of the Goods Yard. It is a major component of the site’s historic layout, following the earlier historic arrangement of buildings fanning out from the railway lines that emerged from the Copenhagen Tunnel.

SIGNIFICANCE RELATED TO TYPE
The Shed is a large railway station building that fits well into an existing landscape of similar buildings.

It represents the continuation of the tradition at King’s Cross of using high-quality construction and materials for the railway goods yard buildings.

The Shed is a surviving example of the relatively uncommon form of goods station, served by rail on two levels.

SIGNIFICANCE RELATED TO INTANGIBLES
The large volume of the Shed, although currently impaired by sub-division and partitioning, reflects the spatial organisation of a large freight depot, which for many years was a busy and noisy hive of activity throughout most of the day and night.
BUILDING NAME
WESTERN GOODS SHED, LOWER LEVEL

LOCATION
North-east of the Wharf Road Viaduct and immediately west of the Western Coal Drops

CLIENT REF. | EH INVENTORY REF. | IHCM REF. | LINKED EH REFS.
--- | --- | --- | ---
24A | E | E | F2, F3

NATIONAL GRID REF.
TQ 3000 8363

REPORT BY
KS, MTT

DATE
April 2004

Not listed
Within Regent’s Canal Conservation Area

1  DESCRIPTIVE SUMMARY

1.1 Lower part of former two-level goods station, built 1897-9. At approximately original ground level of site, hemmed in on three sides by retaining walls and on fourth, eastern, side by lower level of Western Coal Drops. (See Figure BD9 in Part 2.)

1.2 Main southern space approximately 100m north-south by 53 m wide internally; roughly rectangular with oblique south-west wall. South-west wall partly formed by Wharf Road Viaduct, and east wall by lower level of Western Coal Drops. North wall of main southern space partly formed by wall of earlier Coal and Stone Basin that previously occupied the site. Incline at north end, between two retaining walls with arched recesses which carried rail access.

1.3 Main space divided internally by grid of cast iron columns of two types into 12 north-south bays and seven east-west bays. Columns support grid of steel plate girders. Ceiling built with concrete jack-arching between transverse girders under track and road surfaces of upper level, while timber framing under platforms of upper level is visible elsewhere, except where areas of more recent corrugated steel obscure spaces beneath platforms.

1.4 Floor mostly of asphalt covered with areas of concrete, with some track surviving. Later central platform occupies middle of space; another, probably 1897-9, platform against east wall.
2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 Period of first use of this site by Great Northern Railway, c.1851-1897: The space was occupied by the Coal and Stone Basin. This basin was surrounded on three sides by railway tracks and staithes at high level, and on its fourth (south-western) side by Wharf Road on a brick retained embankment. Some of the staithes may have been at intermediate level, but not as low as the present Shed’s floor. It is possible that parts of the lower level north wall may incorporate elements of the earlier basin wall. The Western Coal Drops, the former associated viaduct of which extended at high level over the eastern part of the Shed site, forms its eastern wall. The filling-in of the Coal and Stone Basin had already commenced, on its western side, by 1894.

2.2 1897: The initial construction work on the Western Goods Shed was tendered by Charles Wall of Chelsea on 9 December 1897, to a Specification and Bills of Quantities dated October 1897. This covered the conversion of the Western Coal Drops to a two-level Goods Shed, the infilling of the Coal and Stone Basin, and the construction on its site of a two-level Coal Yard, with inclined rail access to the lower level from the north, and an open yard at upper level. The work was to be undertaken under the direction of the GNR’s engineer, Alexander Ross.

2.3 1898-1938: Early in the building process there was a change of intentions, presumably with a new contract (particulars not found). In place of the Coal Yard, a two-level goods station was completed as the new outward-bound goods shed in July 1899. The lower level of this station (the subject of this report) had rail access from the north by a steep (approximately 1:48) incline between heavily-buttressed retaining walls. A single approach track from the higher-level goods yard divided into three within the cutting. Within the lower level of the station, a system of turntables allowed wagons to be manoeuvred to four loading banks (only one of which remains along the east side, which was probably original). A 1930s plan (Clarke, 1998) shows that cranes would have facilitated the loading of goods, and that at least six of the Western Coal Drops’ arches opened onto the eastern loading bank. The main working space was partly lit by high-level western windows, and by skylights beneath the upper level’s railway tracks and possibly through the sides of the platforms of the upper level. There was direct road access from the southern end.

2.4 Heavy girders spanned the cutting to support the approach tracks to the upper level. When the upper level of the Goods Shed was extended northwards in 1913-5, the adjoining space was covered by the extended platform, making the southern part of the cutting into a tunnel. The covering of the tunnel displays more than one phase of construction, reflecting the fact that the Goods Shed’s extension was built in two phases.

2.5 1938-1960s: The Shed became the incoming goods station in 1938, with the Granary group buildings handling outgoing goods. There is no evidence of significant alteration of the Western Goods Shed at this time,

2.6 1960s-present: The incoming goods station was closed, and the lower level of the Shed was converted into a bottled beer warehouse. The northern three loading banks were removed and replaced by a large central platform, and the floor was resurfaced in asphalt and concrete, which covered at least some of the railway tracks. Some track remains visible. The lower level of the Shed has recently been used for road vehicle parking and maintenance.
3 DESCRIPTION

3.1 The Western Goods Shed, on two levels, was completed in 1899. Although at approximately the original ground level of the site, it is hemmed in on three sides by retaining walls and on the fourth, eastern side by the lower storey of the Western Coal Drops. The main southern area here has brick outer walls forming a large rectangular space oriented approximately north-south, with an oblique south-west wall. It is slightly shorter north-south than the main space of the upper level. The space is gridded by cast iron columns, with nine to 13 bays north-south and seven bays east-west. There is a tunnel to the north which formerly brought railway tracks down from the higher, present, ground level of the Goods Yard.

3.2 The columns in the western two bays are spaced at 6.6 m from east to west, while the column centres in the five bays to the east are spaced at approximately 7.9 m (25 feet 9 inches), except for the easternmost bay against the Western Coal Drops which varies from 8.2-8.4 m clear. The spacing of column centres from north to south is more regular, at some 8.4 m (27 feet 6 inches).

3.3 The walls are of brick; their internal faces are painted white. The ends of the girders supporting the ceiling, and the floor structure, above rest on stone pads forming the tops of brick pilasters on the external walls.

3.4 The west wall’s external face is a combination of blue brick and white Gault brick, and forms the plinth under beneath the west walling of the upper floor of the Shed. High-level windows set into the plinth provide light to the lower level. There is a blocked opening near the north end of the external elevation. The external door to the fire exit in the north-west corner here appears at the north end of the second northernmost bay of the upper level’s west wall. This shows that the upper level extends further north than the lower level. To the south of the fire exit, there are three high-level windows set into the plinth under the second northernmost bay of the upper level’s west wall. South of this, the lower-level windows are spaced so that there is a basement window under every pair of upper-level windows.

3.5 The south-west oblique wall’s base at this level is formed by the north-west wall of the Wharf Road Viaduct. Features visible in the viaduct wall include a series of cast iron plates, with wrought iron tie-rods that extend through the viaduct to similar plates on the canal wall. A string course on the internal wall face marks the height of the Wharf Road Viaduct’s roadway. The inclined sills of eight high-level windows of 1897-9 cut into this string course.

3.6 Towards the south-east end of the oblique wall, the base of the wall is formed by the abutments and roadway of the Wharf Road Viaduct bridge that spanned the canal channel into the Coal and Stone Basin that occupied the space before the erection of the Western Goods Shed. The rusticated stonework on the earlier c.1851 abutment quoins is only partly covered by fletton brick plasters added in 1897-9 to carry the supporting beams of the upper level’s floor. An iron or steel door leads from here into the area under the bridge that is now a room beneath the viaduct (described in the Wharf Road Viaduct report). Between the door and the north-western abutment, the wall is of brick with an opening that is blocked with horizontal planking. The cast iron beams of the bridge survive in the ceiling of this room and on the internal wall face of the viaduct. To the south-east of the bridge there is a door leading into another room within the viaduct which has a vaulted ceiling. The brickwork above the earlier viaduct was added with the building’s plinths, which externally consist of blue engineering
3.7 Across the south perimeter of the shed are the hinged steel vehicular doors that currently form the only point of access into the lower level, except for the fire escape. The doors span the gap between the Wharf Road Viaduct and the Western Coal Drops.

3.8 The east wall is also the lower-level wall of the Western Coal Drops. There are two windows at its southern end that were the original windows of the offices at the southern end of the Coal Drops. To the north of this, the wall consists of a series of blocked arches that originally would have been open onto the Coal and Stone Basin. Much of this wall is hidden from view. The north end of the Western Coal Drops' west wall returns to the east short of the north wall of the Shed here, although upstairs the walls of the upper level of the Western Coal Drops extend as far as this north wall.

3.9 The north wall here is the retaining wall bounding the Shed to the west of the original Coal and Stone Basin. The return at the north end of the Coal Drops forms a recess in the north-east corner of the Shed. The north wall here retains elements of the Coal and Stone Basin’s north wall. It was built with a slight batter. The eastern end of the wall is set forward from its western part, and extends into the recess in the north-eastern corner of the Shed here. This recess lies under the west end of the northern bay of the upper level of the Western Coal Drops. The east end of the north wall predated the construction of the Western Coal Drops, and forms the lower part of its north wall. To the west of this, the wall curves north-west. The main part of the wall is punctuated by three pilasters supporting the girders at the ends of the first, fourth, and fifth colonnades from the west. Larger piers located either side of the third and fourth colonnades from the west define the corners of the retaining walls of the railway track incline.

3.10 The internal space is divided by six lines of cast iron columns into 13 bays on its east side, and only nine bays on its west side, because of the change in north-south length of the Shed resulting from the splay of its south-west wall. The columns support the steel plate girders of the upper level. They are circular, and each has a slightly convex taper (entasis) and a square abacus head above a neck ring. At the base of each column there are stiffening ‘feathers’ to a base flange which is concealed in the floor. The column bases in the roadways are mostly protected and concealed by cast iron circular kerbs some 1.22 m or 1.37 m (4 feet or 4 feet 6 inches) in diameter, filled with concrete. The columns mostly bear the name of a well known specialist in structural ironwork of the period - “RICHARDS & SON / MAKERS / LEICESTER” - within an oval border. The joint between the two halves of the mould in which the columns were cast has left prominent longitudinal marks either side of the column shafts.

3.11 Most of the columns stand 4.2 m (14 feet) above the floor, with a nominal diameter of 0.46 m (18 inches) at mid-height. In the western two lines, which are closer together (and so carrying nominally less load) the columns are narrower, of 16 or 17 inches nominal diameter. They were cast 0.9 m (3 feet) shorter than the columns to the east. Their height has been made up with extra head-pieces, each consisting of two cast iron half-boxes bolted together through a vertical flanged joint and bearing the Richards name without the oval setting. This difference in height between the columns might relate to the change of plan, although the 1897 specification does not describe such shorter columns. Along the splayed south-west wall, the main girders of the upper level span onto brick piers except at the former entrance to the canal basin, where there is a plate girder supporting the wall above, parallel to the road bridge (described in the Wharf Road Viaduct report). This girder is supported on an additional cast iron column at its mid-length. The seventh column from the north in the second
colonnade from the west has two steel stanchions inserted either side of it. These
stanchions are not original, and would have been inserted when increased loading
necessitated it, perhaps when the concrete floor was inserted above.

3.12 The columns support north-south longitudinal riveted steel plate girders that in turn
support less substantial transverse steel plate girders. The transverse girders carry
concrete jack-arches under and slightly beyond the former railway tracks and the
roadways on the upper level. (The roadways ran alongside the angled south-west wall
and alongside the Goods Shed’s west wall). There are skylights in the jack-arches that
allowed light to enter the lower level through the track above. Voids were left in the
jack-arching under the former platforms of the upper level, probably to allow additional
light to enter through the platform sides, and the timber structure of the platforms was
therefore left exposed on its soffit. In many areas, corrugated steel sheeting has been
fixed across these voids, although offering very limited fire protection.

3.13 The flooring is variously of concrete and asphalt, with areas of cobbles surviving in
the south and along the east side of the main southern space. An area of railway track
is visible towards the north end of the second bay from the east; it is possible that
more track survives elsewhere beneath the later concrete and asphalt

3.14 There is a modern ‘L’ shaped wall of concrete blockwork around the fire exit stairs in
the north-west corner of the lower level.

3.15 A platform survives along the eastern edge of the lower-level space that facilitated the
loading and unloading of goods into the lower level of the one-time Western Coal
Drops. The fletton brickwork of this platform indicates that it probably dates to the
1897-9 construction of the Shed. The platform edges retain possibly re-used millstone
grit facings. The north end of this platform is curved to accommodate a turntable that
formerly provided railway access to the east platform.

3.16 A large platform, which appears to date from the second half of the 20th century,
extends longitudinally from the south side of the northernmost bay as far south as the
eighth bay from the north. Its east-west extent is from the second to the fifth
colonnade from the west. Its supporting structure consists of low brick walls into which
are set transverse steel beams that have raking braces at both ends where the beams
extend beyond the low walls. The northernmost beam is clamped to the end column of
the third colonnade from the west by an arrangement of rolled [ section lengths of
steel bolted together. Longitudinal timber joists of the platform’s frame are set on top
of the beams. The platform is edged with steel sheeting. Some of the low walls may
incorporate fabric surviving from the original platform walls, although this is definitely
not the case in the platform’s east and west walls, which do not align with the earlier
loading bank edges.

3.17 The south bay of the platform is occupied by single-storey late 20th century cabins
that serve as offices. Two late 20th century lightweight walls of timber boarding extend
from the south-western and south-eastern corners of the platform as far south as the
southern column of the third column line from the west. These walls form a triangle at
the rear of the offices. A plastic ventilation duct extends from the offices to an outlet in
the southern window of the west wall.

3.18 A turntable and associated track are probably buried beneath the concrete floor just to
the south of the northern incline. One of the recent lessees witnessed the laying of the
concrete and the burial of a turntable in this position (pers. comm.).

3.19 The whole space is now lit by fluorescent lighting.
3.20 There is some water ingress in the south-west corner of the lower level.

3.21 **The northern approach tunnel**

3.22 The northern approach tunnel leading into the lower level has a clear width of 11.3 m (37 feet) at its southern end, reducing to 4.6 m (15 feet 3 inches) where it emerges beyond the north end of the extended high-level shed. It formerly had three tracks, converging northwards into a single line. The tunnel curves round to the north-east, rising on a gradient of approximately 1 in 48. The west wall of the tunnel is aligned with the second column line from the west, and the east wall is just to the west of the fourth column line from the west. The brick retaining side walls contain 14 segmental-headed arches that divide each wall into recessed bays. The piers between the arches are set at roughly 4.7 m centres. The recesses are arched in plan, and are approximately 2.5 m deep on the west wall and 5 m deep on the east wall. This is a very substantial version of a type of buttressing that was first introduced around 1860. The north wall of the tunnel, built after the railway access was severed, can be seen externally beneath the north exterior wall of the Shed’s northern extension (qv), built soon after 1913. A Gault brick wall blocks the cutting, dating from after the railway access to the lower level was severed. It has a fire escape door. There is a high-level louvred opening with an extractor fan behind to ventilate the tunnel.

3.23 The floor of the tunnel is of concrete. The main roof structure consists of transverse concrete-encased girders (some of which can be seen to be box girders), which support the brick walls (many of which are rendered in cement) that carry the concrete filler-joist deck of the platforms above. Between the box girders is localised steel trough decking with riveted plates, as a structural support for the tracks of the upper level. The western edge of the western platform and track of the upper level of the shed is visible in the south-east part of the tunnel’s ceiling. Along part of the tunnel, the girders support timber trusses under the timber platform of the upper level. These differences in construction indicate the phases of extension of the Goods Shed.

4 ARCHITECTURAL ANALYSIS

4.1 Alexander Ross’s design of the lower level of the shed was largely dictated by the siting of the existing Wharf Road Viaduct and Western Coal Drops to east and west, and the presence of the earlier Coal and Stone Basin and its surrounding walls. The almost ad hoc use of two patterns of column may have arisen due to changes in design during construction.

4.2 The original design facilitated the integration of the lower level of the Shed with the lower level of the Western Coal Drops to provide it with direct railway access. The upper level of the shed was more completely integrated with the Western Coal Drops’ upper level.

5 PHASING ANALYSIS

5.1 The Coal and Stone Basin was infilled in 1897-8 to allow the construction of the Western Goods Shed to accommodate the increasing freight trade in the Goods Yard. The Shed was built in 1897-9 to the design of Alexander Ross to handle outward-bound goods traffic. Some of the areas of granite setts outside the shed to its south-east may date to before the construction of the Western Goods Shed.

5.2 The covering-over of the rail access tunnel leading into the lower level of the Shed
was completed when platforms in the upper level were extended northwards in the early 20th century.

5.3 In the late 20th century, the platforms in the lower level were mostly removed (except the eastern platform), and the tracks were covered over and/or removed. The large central platform was built. Later still, offices were built at the southern end of the central platform. A fire escape was inserted, and the tunnel was blocked by construction of a new external wall at its northern end.

6 FUNCTIONAL AND RELATIONAL ANALYSIS

6.1 The Western Goods Shed was built to alleviate congestion that slowed the operation of the inward- and outward-bound traffic then being handled in the Granary and adjoining sheds, and to increase capacity in the Goods Yard. It initially handled outward-bound goods while the Granary complex handled the inward-bound traffic. The physical separation of these two operations would have created a smoother flow of goods traffic on both road and rail within the Goods Yard.

6.2 In 1938 the operations of the Granary complex and the Western Goods Shed were reversed, with the latter now handling the inward-bound goods.

6.3 A 1930s plan (reproduced in Clarke) demonstrates how the lower level of the shed functioned. A system of turntables took the individual wagons from the three tracks that entered the shed through the tunnel to one of four loading banks. The eastern loading bank penetrated through the arches of the lower level of the former Western Coal Drops (qv) and had a platform edge for road vehicles on the eastern side of that building. Part of the railway track that ran alongside the second easternmost loading bank is still visible in the floor, in the second bay from the east. Road access to the loading banks was from the south, with the roadway running alongside the Wharf Road Viaduct and along the eastern bay of the building. The roadways were wide enough to handle two-way traffic.

7 LISTING CITATION

7.1 Not listed.

REFERENCES


Great Northern Railway. Specification, Bills of Quantities of, and Tender for the several Works required in the construction of an extension to the Coal Yard and Goods Depôt of the London Coal and Goods Station, Great Northern Railway Kings Cross. GNR, October 1897. (Contract signed 9 December 1897. Original in Public Record Office, RAIL 236/532.)

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Hunter, M. and Thorne, R. Change at King’s Cross: from 1800 to the present. Historical


Ordnance Survey five foot to 1 mile series:

- First edition surveyed 1871, published 1874
- Second edition revised 1894, published 1895
### SUMMARY: THE HERITAGE IMPORTANCE OF THE WESTERN GOODS SHED, LOWER LEVEL

#### ARCHITECTURE AND FABRIC
The lower level of the Western Goods Shed is an integral part of an early steel-framed building, with its ceiling structure incorporating steel beams.

It retains its original layout, and evidence of earlier surrounding structures and historic operation.

#### SETTING
The Shed is integrated with Wharf Road Viaduct and the Western Coal Drops.

#### SIGNIFICANCE RELATED TO TYPE
The lower level of the Shed offers a large open reversibly divisible space.

The Shed is a surviving example of the relatively uncommon form of goods station, served by rail on two levels.

#### SIGNIFICANCE RELATED TO INTANGIBLES
The lower level retains evidence of the earlier development of the site, including the adjacent Wharf Road Viaduct, the former Coal and Stone Basin, and features linking it with the adjacent Western Coal Drops.
BUILDING NAME

WESTERN GOODS SHED, NORTHERN EXTENSION

LOCATION

North of the original Western Goods Shed and immediately west of the Western Coal Drops

CLIENT REF. | EH INVENTORY REF. | IHCM REF. | LINKED EH REFS.
---|---|---|---
24C | E | E | F2

NATIONAL GRID REF.
TQ 3003 8369

REPORT BY | DATE
KS, MTT | April 2004

Not listed
Within Regent's Canal Conservation Area

1 DESCRIPTIVE SUMMARY

1.1 Built 1913-15 as northern extension to Western Goods Shed. Approximately 50 m from north to south, approximately 40 m wide at its south end, narrowing northwards. Curves slightly towards the east to accord with orientation of the six railway tracks that ran through building. Steel frame of rolled I section columns supporting east-west beams, dividing space into 10 bays (north-south) by four (east-west). Ten transverse bays with north-lit roofs, of simple timber construction, northern pitch steeper than southern pitch. (See Figure BD9 in Part 2.)

1.2 West external wall brick-built, incorporates gables of transverse bay roofs. East wall of similar construction in southern four bays, but steel-framed to north where upper part clad with weatherboarding supported on timber frame, and lower part clad with later corrugated steel. North wall timber-framed, weatherboarded on its upper part; originally open below to accommodate railway tracks, except at west end where timber walling extends down to platform level across the end of platform 7.

2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The northern extension to the Western Goods Shed was built in two phases, to increase the capacity of the outward-bound goods station by extending the length of the platforms. The 1913 revision of the Ordnance Survey shows a short extension to the original building, corresponding to the four southern bays that have brick east and
The northern six bays were added later. The RCHME report (Clarke) dates this extension to c.1915, although the 1921 Goad Plan shows the Western Goods Shed still with only a four-bay extension. The six-bay extension was built using the same materials, except that the north and east walls between the steel stanchions were timber-framed, and weatherboarded at high level. Below the timber framing, the east wall and most of the north wall was originally open. This lightweight construction may reflect the fact that this work took place during the First World War.

In 1938 the Western Goods Shed was altered to handle inward-bound traffic.

After rail connections were severed, probably in the 1960s, this section of the Shed was adapted for workshop and storage use. This continued until 2002. Road access was created in the north-east corner of the shed. The gaps between platforms were covered over in the southern six bays, and the opening at track level along the east wall was blocked with corrugated steel. The internal space was sub-divided by a longitudinal and transverse timber-framed partitions. The opening in the north end of the shed, which originally extended along most of this end, was largely blocked using corrugated steel cladding in an ad hoc fashion.

The northern extension is currently vacant.

The northern extension abuts the eastern three bays of the upper level of the Western Goods Shed.

Its plan form follows that of the three pairs of railway tracks that emerged from the north end of the original Shed, which gently converged to the north while curving slightly to the east.

The extension is divided into four unequal and tapering bays from east to west by simple 10 inch by 6 inch I section rolled steel columns located at the centres of the platforms, between the tracks. There are 10 bays from north to south, of approximately 5 m width (16 feet 6 inches). Each of the 10 transverse bays has a north-light roof with a steeper, glazed slope to the north. This saw-tooth roof is supported along the valleys on I section rolled steel beams, between which are steel tie-rods at the column lines. The roof itself has timber common rafters with a timber ridge plate. Every second pair of rafters has a timber tie-beam raised above the rafter feet and simply nailed to the sides of the rafters. The roof has a slate covering on its southern slopes. Water ingress in the valleys, and where the rooflights are damaged, has affected some of the timbers.

The west wall curves towards the east, and is entirely built with fletton bricks, as is the eastern wall in the southern four bays. The north end of this eastern four-bay brick wall has blue brick dressings. These walls have internal brickwork pilasters supporting the east-west girders. The brickwork is in good condition except around some of the rainwater pipes. The northern six bays of the east wall are of lightweight construction. Their upper parts incorporate the saw-tooth gables, consisting of timber studwork with cross bracing, clad with lapped weatherboarding supported on the shed’s steel frame. The upwards strapping of the mid-rail to the studs, in conjunction with the truss-like bracing, suggests that the lower part of the east wall was originally open, although it is now clad with relatively recent corrugated steel sheeting set onto steel sheeting rails. The north wall is similarly constructed. The former opening across the tracks at the west external walls.
north end of the platforms is now partly blocked with corrugated steel sheeting. Where there was no opening, at the western end of the north elevation, the soleplate of the timber-framed wall is supported on a concrete plinth at platform level.

3.5 The original platforms are visible in the northern four bays. A later flooring of timber planking has covered the tracks, except where there is road access in the northern four bays at the original track level. The platforms have original fletton brick sleeper walls and timber top edges. The floor surfaces of the shed at platform level are now asphalt-covered, with some areas obscured by steel plates. A section of surviving track (number 3, see below) is visible in the north-west corner of the shed. The original track may survive beneath the floor surfaces.

3.6 Two external timber signs over the original opening at the north end of the shed read ‘ENGINES MUST NOT PASS THIS BOARD’. This reflects the severe fire risk and nuisance of steam locomotives within buildings. The wagons were brought in for loading with the aid of capstans, driven by hydraulic power and later by electricity, or were shunted into the shed from the rear. Two generations of external electric lamp brackets appear on the north-east corner of the shed.

3.7 There are a series of numbers painted in black directly onto the weatherboarding at the north end of the shed above the original open track access. They are numbered ‘2’ to ‘7’ from south-east to north-west, and appear in pairs corresponding to the three pairs of tracks that ran through the Western Goods Shed at this level. The numbering system makes allowance for an additional track (track 1) running externally along the east side of the Shed that led into the goods shed that was converted from the Western Coal Drops (qv). The easternmost pair of tracks (2 and 3) has a relatively narrow northern opening; a 1.5 m length of steel railway track survives in the floor, lying centrally within the opening for these two tracks. A 1930s plan of the shed shows that there was a single track in this location that split soon after entering the shed.

3.8 To the west of track 7, between two retaining walls, is the partially-backfilled incline that carried the track providing access to the lower level of the goods shed (qv).

3.9 The modern road surface is slightly higher than track level. The presence of the partly-obscured 1.5 m length of track described above suggests that track survives elsewhere at this level, beneath later floor surfaces.

4 PHASING ANALYSIS

4.1 The differences in construction between the main upper level of the Western Goods shed and this northern extension clearly indicate that the latter is indeed a later extension.

4.2 Documentary evidence for two phases of development can be seen in the 1913 revision of the Ordnance Survey, which shows only the four southern bays of the extension as having been built at this time, and the fact that timber framing was used to the north of this. The similarity of the details of the internal column grid and roof structure throughout the extension suggests that the second northward phase of the extension was built soon after this first phase. The RCHME report (Clarke) dates this second extension to c.1915, from a plan of the extension of that date, although the revision of the Goad Fire Insurance Plan to 1921 does not show the second phase yet in place. However, a 1930s plan (also in Clarke) confirms that the second extension was definitely built by then.
4.3 The platforms are original to the extension.

4.4 The two partitions subdividing the interior, the cladding across the ground-level openings, and the covering between the tracks in the southern six bays are all of post-railway date.

5 FUNCTIONAL AND RELATIONAL ANALYSIS

5.1 The 1913 revision of the Ordnance Survey shows that the southern four bays of the extension were built by that date. The extension was enlarged further soon after then (possibly c.1915), to increase the loading capacity of the platforms of the Western Goods Shed’s upper level. Until 1938, the 1897-9 Western Goods Shed handled outward-bound goods traffic (the sheds around the Granary handling only inbound goods traffic from 1899). Departing goods were carted into the upper level of the Western Goods Shed and its extension via roadway on the south and west side of the Shed.

5.2 The angle of the platforms, and the building’s curve on plan to the north-east, reflect the angle of approach of the tracks that fanned out across the site from the Goods Yard entrance, south of the Copenhagen Tunnels. The original platforms of 1899 are unlikely to have projected beyond the shelter of the original Shed; they would have been extended to their present length in two stages, corresponding to the two-phase building of the extension. There was a remodelling of the tracks, subsequent to the 1913 Ordnance Survey revision, to accommodate the second-phase extension of the platforms. The location of this extension over the cutting that provided access to the lower level of the Western Goods Shed necessitated additional decking to cover the cutting.

5.3 Structural evidence suggests that the north end of the east wall was open at ground level. This probably ensured greater visibility and safety for staff involved in shunting wagons where tracks 2 and 3 converged. Because of the curve of the railway lines, track 2 stopped level with the end of the brick wall, six bays south of the north end. The west wall’s curve reflects that of the track.

5.4 The design of the extension is strictly functional. The saw-tooth roof and the steel columns are typical of many industrial sheds of the early 20th century. The weatherboarding, and the timber framing onto which it was applied in the six northern bays, would have represented a cheap and practical method of cladding appropriate to the dating of these bays, which appears to be entirely or largely during the First World War. They continue a long tradition of less-permanent railway construction that does not often survive.

5.5 In 1938, the Western Goods Shed was altered to handle inbound railborne traffic, while the Granary sheds were adapted for outward-bound traffic.

5.6 Following the end of railway use of the Shed, probably in the 1960s, the extension was subdivided and converted to warehousing and workshops, with road access being provided from the north.

5.7 The extension is currently vacant, following a period of use as workshops and warehousing by Steel Deck until 2002.
6 LISTING CITATION

6.1 Not listed.

REFERENCES


Goad Insurance Sheet 12/400. Kings Cross Goods Yard, updated to January 1921, also 1942 revision and reissue. (In London Borough of Camden Local Studies and Archives Centre.)


Ordnance Survey, 5 feet to 1 mile series:

First edition surveyed 1871, published 1874
Second edition revised 1894, published 1895
LCC revised edition, 1938 (without amendment)


 SUMMARY: THE HERITAGE IMPORTANCE OF THE NORTHERN EXTENSION TO THE WESTERN GOODS SHED

ARCHITECTURE AND FABRIC

The design of the northern extension is strictly functional. It is a relatively uncommon example of a timber-framed and weatherboarded industrial-scale building to be found in inner London.

Its utilitarian style and the use of lightweight cladding reflects the probable wartime construction date of the northern six bays, reviving an earlier tradition.

SETTING

The extension is part of the Western Goods Shed functional group.

The weatherboarding harmonises with that appearing elsewhere in the Western Goods Shed. The northern ends of the Eastern Coal Drops and the Western Coal Drops also originally had timber-covered north gables.

The curve on plan of the extension, to the north-east, reflects the alignment of the tracks that once fanned out across the whole Goods Yard from the GNR main line south of the Copenhagen Tunnels.

SIGNIFICANCE RELATED TO TYPE

The use of timber framing and weatherboard cladding is uncommon in a goods station built in the 20th century.

SIGNIFICANCE RELATED TO INTANGIBLES

The use of timber here came near the end of a long tradition of its use in railway buildings. These elements were widely used at an earlier period in other industrial and rural contexts, and were again used more widely during the First World War as an economical form of construction which minimised the use of steel.
APPENDIX G

List of policies in
Camden UDP Chapter 13
List of policies in Camden UDP Chapter 13

**Strategic Policies**

<table>
<thead>
<tr>
<th>SKC1 – Sustainable Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Council seeks the sustainable development of the King’s Cross Opportunity Area, which achieves its full potential:</td>
</tr>
<tr>
<td>• to support and develop London’s role as a world business, commercial and cultural centre;</td>
</tr>
<tr>
<td>• to achieve economic, social, and physical integration with surrounding communities;</td>
</tr>
<tr>
<td>• to contribute positively to meeting the full range of housing, social and healthcare needs in Camden and so contribute to meeting London’s needs;</td>
</tr>
<tr>
<td>• to create employment and training opportunities both generally and for local people;</td>
</tr>
<tr>
<td>• to maximise opportunities for walking and cycling and the use of existing and proposed public transport facilities, thereby minimising dependence on private car use and traffic generation;</td>
</tr>
<tr>
<td>• to minimise any adverse impacts on the environment arising from the development and to secure positive environmental gains;</td>
</tr>
<tr>
<td>• to enhance opportunities for biodiversity; and</td>
</tr>
<tr>
<td>• for community regeneration through innovative processes of community involvement in the planning, design and management of the new development and services.</td>
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</tbody>
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<thead>
<tr>
<th>SKC2 – Mixed-use Development</th>
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<tbody>
<tr>
<td>The Council seeks the development of the King’s Cross Opportunity Area as a genuinely mixed-use development that is well integrated with surrounding areas, with development densities and supporting facilities and uses appropriate to the high accessibility and urban characteristics of the Area and its environs.</td>
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</tbody>
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<table>
<thead>
<tr>
<th>SKC3 – Comprehensive, Integrated and Phased Development</th>
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<tbody>
<tr>
<td>The Council seeks a comprehensive, integrated and phased development of the King’s Cross Opportunity Area.</td>
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</table>

<table>
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<tr>
<th>SKC4 – Design</th>
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<tbody>
<tr>
<td>The Council will require a very high standard of design, architecture, townscape, layout, landscape and open spaces throughout the King’s Cross Opportunity Area.</td>
</tr>
</tbody>
</table>

**Local Policies**

<table>
<thead>
<tr>
<th>KC1 – Mixed Use Development</th>
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</thead>
<tbody>
<tr>
<td>The Council will grant planning permission for development proposals for the mixed-use development of the King’s Cross Opportunity Area that:</td>
</tr>
<tr>
<td>• include a range of economic activities that create a wide variety of employment opportunities;</td>
</tr>
<tr>
<td>• provide an appropriate quantity, variety and mix of different housing types;</td>
</tr>
<tr>
<td>• include appropriate levels of supporting community, cultural, social, educational, healthcare, leisure and retail activities and varied open spaces, with benefits to adjoining areas;</td>
</tr>
<tr>
<td>• include other appropriate economic activities, such as tourism, leisure or education facilities;</td>
</tr>
<tr>
<td>• avoid large areas of single use development, which will generally be resisted;</td>
</tr>
<tr>
<td>and which accord with the policies set out below.</td>
</tr>
</tbody>
</table>
KC2 – Prioritisation

The Council will grant planning permission for development proposals for the King’s Cross Opportunity Area that afford priority to the provision of a range of employment floor space and new housing accommodation, including affordable housing.

KC3 – Economic Activities

The Council will grant planning permission for development proposals for the King’s Cross Opportunity Area that include a range of business uses (within Use Classes B1 and also B2). Proposals should include:

- a range of different sized units, including smaller and ‘start up’ units
- and workshops; and
- units that have flexible physical design and layout.

KC4 – Housing

The Council will grant planning permission for development proposals for the King’s Cross Opportunity Area that meet the following criteria:

- a net increase of at least 1000 housing units. 50% of the first 1,000 housing units should be for affordable housing apportioned as 35% social housing for rent and 15% for essential workers and other intermediate occupiers;
- in considering proposals over and above the initial 1000 units (net), the Council has a target of 50% social rented and intermediate housing, again apportioned as 35% as social housing for rent and 15% for essential workers and other intermediate occupiers. The Council will take into account the London Plan, prevailing UDP policies, other relevant policies, local and/or London-wide housing needs, the wider regeneration needs of the King’s Cross area, economic circumstances and other material considerations;
- all housing proposals should include a mixture of types, sizes and appropriate densities to meet local and/or London-wide housing needs including the need for larger, family housing units. High density development will be appropriate, subject to high quality design and sustainable residential quality; and
- the early provision of social and intermediate and other housing should be a significant element of each major development phase.

KC5 – Transport

The Council will grant planning permission for development proposals for the King’s Cross Opportunity Area which improve public transport interchange and services and provide a safe and accessible environment for all users of existing and proposed public transport systems. Where appropriate developers will be expected to contribute to improvements to transport infrastructure.

KC6 – Transport

Planning permission will be granted for development proposals for the King’s Cross Opportunity Area that provide high levels of accessibility, facilities and safety for pedestrians, cyclists and people with disabilities.

KC7 – Transport

The Council will grant planning permission for development proposals for the King’s Cross Opportunity Area where proposed car usage and car parking provision is at minimum levels necessary and where the provision of car-free housing is maximised.
**KC8 – Design**

The Council will grant planning permission for development proposals in the King’s Cross Opportunity Area with a very high standard of design that capitalises on the remaining high quality architectural and engineering works and:

- protect the strategic views across the Opportunity Area to St Paul’s Cathedral and, where appropriate, views to and from important local landmarks;
- achieve an attractive, safe, legible and stimulating environment for resident, worker and visitor alike;
- achieve a high degree of physical integration with the surrounding area; and
- promote sustainable design principles and also maximise opportunities for improved energy efficiency to limit greenhouse gas emissions.

**KC9 – Design**

The Council will promote a unified approach to the design, appearance and location of the various surface and sub-surface transport services and features, in order to achieve a townscape solution of the highest urban quality.

**KC10 – Open Space**

The Council will grant planning permission for development proposals for the King’s Cross Opportunity Area that include well managed and maintained, high quality open spaces that:

- provide recreation areas accessible to where people live and work;
- incorporate a network of linkages for pedestrian and cycle ways through the site;
- protect and enhance Camley Street Natural Park and the Regent’s Canal; and
- complement and separate groups of buildings and other features.

**KC11 – Heritage**

The Council will grant planning permission for development proposals for the King’s Cross Opportunity Area that:

- preserve listed buildings or structures and their setting;
- preserve or enhance buildings, structures and other features of character and historic interest, and their setting, within the Conservation Areas; and
- preserve remains of significant archaeological importance and their settings.

**KC12 – Integration, Regeneration and Community Development**

The Council will grant planning permission for development proposals for the King’s Cross Opportunity Area, which seek to ensure that:

(a) the benefits of and impacts from the development take account of the needs of local communities, employees and other visitors;

(b) local communities and businesses in the surrounding area are able to engage constructively in the development process and the design and content of the scheme; and

(c) effective links with wider regeneration initiatives in surrounding areas are established.

* The strategic policies are not named in the Camden UDP – suitable titles have been inferred for ease of reference.
APPENDIX H

Method Statement and schedule of works for the refurbishment and re-erection of the Gas Holder No.8 guide frame
Argent St George

King's Cross Central Masterplan

Gasholder No 8 Guide Frame Re-location

April 2004
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INTRODUCTION

As part of the King’s Cross Central Masterplan it is proposed to dismantle the Guide Frame for Gasholder Number 8 and to relocate it to a site north west of its present position. It is intended that the Guide Frame would define an area of public open space. It is not intended that the bell/crown plating and tank be recreated in the proposed new location1.

As in their present state the relocated Guide Frame will be a freestanding structure.

The frame will be carefully inspected/surveyed (for the purpose of dismantling), dismantled (with all pieces uniquely tagged and listed), each piece will be subject to thorough inspection, any remedial works will be carried out and the frames re-erected on new foundations.

This report sets out an initial method statement and schedule of works.

For completeness a section has been included summarising the precedents for re-erecting historic iron structures. Michael Bussell of International Heritage and Conservation Management has written that section.

Pending detail inspection/survey the nature and form of No 8 Guide Frame has been derived from the previous work in dismantling and storing the Triplet Guides Frames. This outline method statement should be reviewed on receipt of the inspection/survey data.

The English Heritage Inventory of the King’s Cross Site describes No 8 Guide Frame as having cast iron columns with classical capitals, one tier lower than the Triplet Guides Frames and bearing the date 1883 at the base of one column. It also records that a manual pump with cast iron crank wheel is located at the base of the guide frame.

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1 This report does not consider the removal of the existing bell/crown plating and tank or the site remediation.
2. PRECEDENTS FOR RE-ERECTION OF IRON STRUCTURES

2.1 Introduction
Iron-framed structures, being an assembly of components, are more readily dismantled and re-assembled than are masonry structures, even when built with no intention that they should subsequently be re-erected at some future time. This is a characteristic they share with timber-framed structures, both of which comprise discrete elements connected together by fixings such as bolts, rivets, spikes, or nails.

Cast iron structures, in particular, were usually connected by bolts, which can readily be removed to allow dismantling. Wrought iron elements, usually connected with rivets or bolts, can also be dismantled with appropriate skill. The successful dismantling of the gasholder ‘triplet’ frames at St Pancras attests to this.

Timber and iron structures can be surveyed before dismantling, and all the parts scheduled and labelled, so that they can be re-assembled in the same layout as originally. To a large extent, the dismantling involves the ‘running backwards’ of the film of its assembly, so that the connections used to join its component parts together are removed in, broadly, the reverse sequence to that used in the original assembly. Re-erection then involves running the film forwards again, although inevitably in both processes of dismantling and re-assembly there will be necessary variations to the original approach.

This section illustrates a number of examples of dismantling and re-erection, beginning with a brief note on the more widely established case of timber structures and then considering iron structures. Notable precedents include the Crystal Palace, shipbuilding slip roofs, and purpose-designed ‘portable’ prefabricated buildings. More recent examples have usually been necessitated to save the structure itself from destruction, to relocate it to a more sympathetic context, or to allow repair and the application of corrosion protection for a future assured life. The triplet gasholder frames can arguably be seen as falling into all three categories.

2.2 Re-erected Timber Structures
There are many precedents for the re-erection of timber structures. The motivation has usually been to preserve a structure that would otherwise be destroyed or lost if it remained in situ, either by commercial redevelopment of its site (particularly in a town or city centre), or by the construction of, for example, a reservoir, a motorway - or indeed a high-speed rail link.

Following the lead established in Scandinavia, numerous timber buildings have been ‘saved’ in recent decades in the UK by dismantling and re-erection in open-air museums such as the Weald and Downland Museum at Singleton, West Sussex, and the Avoncroft Museum of Buildings at Bromsgrove, Worcestershire. Several timber buildings have been dismantled and re-located nearby so as to continue in use, for example Alderham Farmhouse, Warwickshire (removed from the route of the M42, ref Arup Journal) and a Farmhouse in Kent, which originally stood on the alignment of the Channel Tunnel Rail Link.

2.3 19th Century Re-used Iron Structures
There are fewer examples of re-erected and re-located iron-framed structures, but one at least from the 19th century is outstanding, and at least two others are notable.

The Crystal Palace, Paxton’s remarkable design, was fabricated by Fox, Henderson in cast and wrought iron, timber, and glass, and erected in six months for the Great Exhibition of 1851 in Hyde Park, London. Barely a further six months after the exhibition closed, the structure was sold, dismantled and re-erected in Sydenham, southeast London. Here it served as what would
now be called an exhibition and leisure centre until destroyed by fire in 1936, having given its name to the surrounding area. (Refs Crystal Palace: Joseph Paxton and Charles Fox, John McKean, Phaidon, 1994; The Crystal Palace, Patrick Beaver, Phillimore, 1986.)

Less well-known but substantial examples of 19th century re-erected iron frames are two structures in cast and wrought iron, also by Fox, Henderson. These were originally put up at Woolwich Naval Dockyard c.1845-7 as roofs over shipbuilding slips, to protect timber ships under construction from rain and consequent risk of rotting during what were often protracted construction periods. They were dismantled and moved downstream to Chatham Naval Dockyard after Woolwich was closed in 1869, and re-erected there by convict labour.

The buildings stood, listed but out of use, to the north of the Historic Dockyard after Chatham was closed in 1984, but are now in process of being adapted as a retail mall and science centre as part of the Chatham Maritime Development led by English Partnerships. The Machine Shop has a clear central span of 22 m, the Boiler Shop a span of 24 m. A third slip roof originally from Woolwich survived at Chatham until c.1990 when it was demolished to allow construction of the Medway immersed tube road tunnel. (Ref Shipbuilding and the Long-span Roof, R J M Sutherland, Newcomen Society Transactions, 1988-9, 60, pp. 107-126).

2.4 19th Century Purpose-designed Re-usable Iron Structures

There were many examples of 19th century timber and iron structures being prefabricated for dispatch in ‘kit’ form to often distant destinations where they could be erected and, as necessary, taken down and re-erected elsewhere as need dictated. A notable example was Brunel’s Crimean War hospital, a series of standard timber and iron huts shipped out and erected at Renkioi. Many were subsequently returned to the UK. Some survive, although the original chapel, re-erected at Aldershot, was destroyed by fire in the 1980s. (Ref: Arup Journal, S. Toppin).

More numerous were the various prefabricated ‘standard’ buildings offered by larger iron-founders and others, that could be used on railway or reservoir construction sites, at mines, and in other remote locations where buildings were needed for offices, canteens, dormitories, and other functions, for longer or shorter periods. A notable genre of this type was the ‘tin tabernacle’ - typically a timber- or iron-framed structure with sides and pitched roof clad in corrugated iron. Many of these were exported in ships’ holds to Australia, South Africa, and other parts of the British Empire in the later part of the 19th century where no doubt some still survive. The home market was also served.

2.5 Recently Dismantled Iron Structures

Three motives have driven the dismantling of iron structures in recent decades, and will doubtless continue to do so in the foreseeable future.

The first motive, as for timber structures, has been the preservation of a structure that would otherwise be destroyed or lost if it remained in situ. In conservation terms this must generally be the preferable alternative to demolition (or, in certain cases, vandalism).

The second motive is to re-locate a structure in a more appropriate context, when the original context has been, or will be, irreparably compromised. This may be more controversial, as international conservation charters quite properly regard this as a ‘last resort’ rather than ‘the easy option’. The justification for re-location will have to be closely argued.

The third motive is to facilitate the repair and future protection of the structure, typically following corrosion damage, and to limit further damage.

Examples of all three circumstances are instanced below. In the case of the ‘triplet’ gasholder frames, it is the first motive that has led to their dismantling, but it provides the opportunity to
examine, repair, and protect the structure while dismantled and before re-erection, so that
these tasks can be carried out under optimum conditions for access and treatment in,
effectively, a workshop environment.

### 2.6 Re-location as an Alternative to Demolition

The unlisted iron roof structure of the Smithery at Woolwich Dockyard (a site already
mentioned above) consisted of a series of cast iron open-lattice trussed arches and secondary
wrought iron elements, carried on circular cast iron columns. The Smithery building had
continued in alternative use after the Dockyard had closed in 1869, but in 1973-4 the site was
being cleared for housing redevelopment. The roof structure design of c.1818 was attributed
to John Rennie, bearing a close resemblance to the roof structure of his surviving Custom
House Dock Warehouse in Dublin of the same period. An approach was made to the fledgling
Ironbridge Gorge Museum in Shropshire, which subsequently acquired the roof structure and
columns. These were re-erected at the Blists Hill site where, very appropriately, the structure
now houses the rolling mills salvaged from Walmsleys of Bolton, where the last wrought iron
in Britain was made in 1973. (Ref *Structural Engineer*, August 1974, 8 (12), 293-4.) (Cost not
known.)

The engine shop of shipbuilders Alexander Stephen & Sons was built in 1872 for its
Clydeside Linthouse works at Govan, near Glasgow. It had three rows of distinctive large I-
section cast iron columns with formed openings in their webs to save weight, timber tie
beams, timber roof trusses, and (later) steel crane rails. Threatened with demolition, the
structure was dismantled in 1990-1. 400 separately labelled structural components were
moved to the site of the Scottish Maritime Museum in Irvine. The columns were re-erected on
new foundations. The 18 m high structure has become the principal covered display space for
the Museum. The overall cost of the scheme, including fit-out, was reported at £6M. Most of
the structural repair work was concentrated on the timber roof trusses. (Ref *New Civil
Engineer*, 21 March 1991, p. 24-26.)

### 2.7 Re-location to a More Appropriate Context

The former London & North Western Railway station in Oxford opened in 1851 alongside the
Great Western Railway station. It had been intended in particular to provide a competing route
for travellers from Oxford to the Great Exhibition in Hyde Park, and much of the ironwork -
supplied by Fox, Henderson - was remarkably similar, if not identical, to their work on the
Crystal Palace. The original structure comprised cast iron columns and cast and wrought iron
trusses. Cladding was of timber. Later wrought iron columns and trusses were added when the
pitched roof was reconstructed. The station closed to passengers in 1951, and then went
through various uses, finally as a car hire depot. Meanwhile the tracks had been lifted, most of
the platform canopy had been demolished, and the remainder of the former railway site had
been resurfaced and was in use as a car park for the adjoining mainline station.

The site was purchased by Oxford University for the construction of the Said Business
School. The station building, by now listed Grade II*, could not readily be accommodated
within the planning of the school, which would in any event have enveloped it. Listed
Building Consent was eventually granted for the dismantling of the building and its re-
erection at the preserved Quainton Road Station, the home of the Buckinghamshire Railway
Centre. Heritage Lottery Funding contributed £1.25M towards the cost of dismantling and re-
location, with further financial assistance coming from the University. (Refs Oxford
Archaeological Unit study; Arup feasibility study for relocation; article in *New Steel
Construction* on the actual move by Gifford.)
2.8 Dismantling to Allow Repair and Protection Against Future Corrosion

A number of 19th century botanical conservatories and similar structures have been the subject of major restoration schemes in the last two decades. Typically these comprise large, glazed, vaulted or domed structures, with glazing bars at quite close centres that also serve as the secondary and, sometimes, the primary structural elements. Wrought iron was the commonest material for the structure, supplemented by cast iron and/or timber depending on the design. By the nature of their function, which creates a high level of internal humidity, and the difficulty of regular access for inspection and for maintenance (especially of the external weather sealing), such structures may be found to have suffered quite serious corrosion when eventually surveyed.

Published studies of such work emphasise the need for a systematic approach to the survey of elements, recording condition and identifying the measures needed to repair and safeguard them for future service. Because of the difficulty of future access for maintenance, timber and wrought iron has often been replaced with aluminium extrusions, stainless steel, or cast iron, all of which have superior resistance to corrosion compared with the original materials. This is intended to yield a long future service life before significant maintenance is required. Heritage authorities have been sympathetic to such a material substitution, provided that the original section profiles are essentially maintained.

Specialist sub-contractors with the appropriate experience are needed to deal with ‘old’ materials such as wrought and cast iron. Partial and phased dismantling of the structure is generally preferred to complete dismantling, as this reduces temporary works and re-erection costs. An exception to this was the porte-cochere at Marylebone station in London, where removal of the cast iron and steel composite main trusses was necessary to allow repair of corroded key elements, leading to the complete dismantling of the roof, and its subsequent re-erection.

The numerous and successful instances of such glazed roof restorations provide valuable precedents, although the elements and the repair and treatment techniques used do not necessarily relate directly to the gasholder frames with their more massive column sections. Notable examples are:

The Temperate House, Kew (Ref Proc ICE, Part 1, 1988, 84 (12), pp. 1109-1143)
The Palm House, Kew (Ref Proc ICE, Part 1, 1988, 84 (12), pp. 1145-1191)
National Botanic Gardens, Dublin (Ref McGuckin and Duffy, paper to IEI, 8 February 1992)
Syon House, West London and Bicton, Devon (Ref architects’ journal, 29 April 1987)
Lily House, Kew and Porte-cochère, Marylebone station, London (Ref Construction Repair, Nov/Dec 1993, pp. 2-5)

One further and notable example of dismantling to allow repair and treatment completes this review.

Clevedon Pier was built in 1869 to serve this small Somerset town southwest of Bristol, primarily as a promenade and as a pier for the passenger steamers that plied between the resorts on both sides of the Severn estuary. Its engineers chose the relatively unusual arched form to support the pier deck, in preference to the more common arrangement of cast iron columns and wrought-iron trusses. Like many seaside piers, Clevedon barely paid its way in the 20th century and little was spent on maintenance.

In 1970, a routine load test of two adjacent deck spans by the local council engineers led to the collapse of these spans. The Grade II-listed pier stood derelict for some time, despite the
efforts of a Pier Trust to raise support for its restoration. In 1979, Listed Building Consent for its demolition was refused, and over the next few years various negotiations resulted in funding being assembled for the necessary restoration work, with contributions from (among others) the Historic Buildings Council and the National Heritage Memorial Fund. It was a pleasing irony that Woodspring District Council, which had previously earmarked £170,000 to pay for the pier’s proposed demolition, contributed this amount towards the £1.8M restoration cost.

Work began in 1985 with John Howard as the contractor. The decision was made to dismantle the pier, and take it upstream to the nearby Portishead Dock where the sections could be laid out for inspection, repair, and application of a corrosion protection scheme. The contractor went into liquidation in 1986, but the work was resumed in due course and completed, by Ernest Ireland and Christiani & Nielsen. The pier was re-erected on its original site using a 400 tonne jack-up barge, which had to cope with a tidal range of 15 m. The largest elements to be reinstated weighed about 7 tonnes - comparable with the St Pancras gasholder frame column sections. The pier re-opened to the public in May 1989. (Refs New Civil Engineer 18 July 1985, pp. 14-15, 4 August 1988 p. 11, 18 August 1988 pp. 18-20.)

2.9 Summary Conclusions

The following conclusions can be drawn from reading the various studies of the cases described above:

There are numerous successful precedents for the dismantling, repair and re-erection of dismantled iron structures.

This leads to a growing body of published information and experience to assist future schemes.

Careful and thorough pre-planning, including devising of dismantling, repair and treatment techniques and detailed scheduling of the works, are essential ingredients.

Re-erection can be achieved using bolts for the connections, including dome-headed bolts to simulate the original rivets.

Repair and treatment of dismantled components (as at St Pancras) gives closer control over the work and is preferable to work in situ when costs permit.

Specialists with experience of the materials and techniques should be involved.
3. STRUCTURAL PERFORMANCE

There is no record of how the original guide frame was structurally designed. At the time the frame was constructed the gas industry was an important part of the economic environment with large sums invested in plant and distribution networks. A considerable body of engineering theory and practice arose from this sector of the industrial economy. The frame was erected during 1880s, a time when the effects of frame action between the columns and girders would have been understood. Good data on wind speeds at that time was not available and started to be considered from 1882 (prompted by the Tay Bridge disaster, 1879, and the finding of the Court of Inquiry).

It is likely that the guide frame was designed for a lower wind load than we would now have to consider.

Structural modelling\(^2\) suggests that the stresses in the cast iron columns are likely to be higher than currently acceptable permissible values but below the likely ultimate strength. This would explain why the Guide Frame appears to show no obvious signs of failure; it is not possible however to estimate the factor of safety.

If external support is not desirable or possible some form of column strengthening will be required. Two possible routes to a solution are:

- Pre-stress the cast iron columns by anchoring a tendon into the foundations, running it up the full height of the column and jacking against an anchor plate at the column head. This would probably be the least intrusive solution but is highly dependant on the detail survey of the cast iron columns (wall thickness and its dimensional variation) and a detailed structural analysis.

- Insert a fabricated steel column inside each of the cast iron columns (probably only for the lower lift). This is likely to be the solution adopted.

\(^2\) Detailed structural modelling has been carried out for a study to re-erect the Triplet Guide Frames that are similar to the Number 8 Guide Frame. It is from this modelling that preliminary opinions have been derived for Guide Frame Number 8
4. **THE COMPONENTS**

4.1 **Cast iron columns**

Each column comprises two lifts and each lift is made up of a number of castings bolted together internally.

- Base
- 2 tube sections
- Capital section/joint covers
- Beam connecting box

The column lifts are likely to be connected together by six external bolts and two internal (secret) bolts. It is envisaged that core holes in the tube walls will be required to release these internal bolts and facilitate the re-erection. Special tools and suitable capping plates will be designed.

The tube sections are likely to be connected by internal flanges bolted together.

4.2 **Wrought iron lattice beams**

Top and bottom flanges are composite sections of plates and angles riveted together. It is expected that these lattice beams are connected to the beam-connecting box by six bolts, in three rows of two bolts, with two additional through bolts, tying the beams together passing through the beam-connecting box using cranked wrought iron ties.

At each column location it is expected that the top chord of adjacent lattice beams will be connected across the internal angle by wrought iron knee ties. These ties are likely to be made from plate, possibly with a stiffening upstand flange, and riveted to the beam chords.

4.3 **Attached items**

- Cast iron decorative capitals/joint covers
- Column top/drip tray
- Guide rails

4.4 **Secondary items**

- Access ladders and rest platforms.
- Guide rollers
- Miscellaneous valves and pumps
- Inspection access cover plates

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3 Descriptions are based on a visual inspection from ground level and the knowledge gained from the dismantling of the contemporary Triplet Guide Frames. The use of the term “it is likely” reflects the fact that reasonable assumptions have been made, in the light of the detailed work carried out and recorded for the Triplet Guide Frames.
5. SCOPE OF WORK AND SEQUENCE

5.1 Introduction

The work falls into four main stages:

• Detail inspection and survey.
• Dismantle and store.
• Processing the existing components and the fabrication/procurement of replacements for irreparable or missing pieces.
• Re-erection.

5.1.1 Tagging and identification

A key requirement throughout all these activities will be to ensure that each piece is uniquely identified, listed and tagged at the point of dismantling and continuously tagged throughout the other stages.

5.1.2 Method Statements

Before each of the four stages detailed method statements will be prepared and agreed with Camden and English Heritage.

5.1.3 Temporary Storage

There will be a need for temporary storage of the pieces prior to re-erection.

5.2 Detail inspection and survey

The purpose of this stage is:

• To establish the dimensions of the Guide Frame as a complete structure and its elements.
• To confirm the construction details.
• Identify and catalogue the individual elements.
• Establish the condition of the elements, some aspects of which will only be capable of definition during the dismantling stage and subsequent processing of the pieces.
• Create an “as found” record in a form and format to be agreed with Camden and English Heritage.
• Provide technical data for a detailed structural appraisal.
• Inform the dismantling method statement.

Engineers, with appropriate qualifications and experience, shall carry out the element identification/cataloguing and condition survey.

Element identification/cataloguing and condition shall be recorded on schedules fully cross-referenced to the dimensional survey drawings. A photographic record will also be required. The piece marks used for element identification shall be the ones used throughout the re-location works. The design of the element identification system shall be such that at least two independent means are applied to each piece so that if the primary tagging is lost a simple method exists to re-create the tags.
5.3 **Dismantle and store**

The dismantling principles have been derived from the successful exercise carried out for the Triplet Guide Frames as part of the CTRL Project at King’s Cross/St Pancras.

This work is specialist and only suitably qualified and experienced Contractors will be appointed. A suitable short list will be agreed with Camden and English Heritage.

The fundamental requirements of the working methods, both overall and in detail, are firstly to ensure the safety of the work force and secondly to ensure the integrity/protection of the Guide Frame elements.

It is presumed that the bell/crown plating will be removed and the tank infilled prior to the Guide Frame dismantling.

The dismantling principle will be as follows:

- Release column tops and lift out.
- Progressively release top-tier lattice beams (by releasing the bolts connecting the beams to the columns and removing the knee ties) and lift out.
- Release column capitals/joint covers and lift out.
- Release upper lift column base connections from the beam connecting boxes attached to the lower lift columns and lift out complete upper lift columns.
- Progressively release middle-tier lattice beams and lift out.
- Release lower lift column base connections from the base plates and lift out complete lower lift columns.

It is expected that the connection of the upper lift column bases to the beam connecting boxes will incorporate some secret, internal, bolts. To release these small diameter cores will have to be cut in the walls of the column tubes.

It is also expected that the knee ties will be riveted to the top chords of the lattice beams and that shearing of those rivets in-situ may not prove to be safely feasible. It should be anticipated, therefore, that the knee ties would be cut away from the lattice beams. These will be the only major elements purposefully lost as the result of dismantling.

Each of the columns will be lifted in just two pieces, each piece comprising four individual castings bolted together (base, two tube sections and a beam connecting box). In this configuration it is unlikely that the column assemblies will be able to be lifted without additional temporary support. As the columns will be stored and processed horizontally the temporary frame is also required to support the cast iron assemblies as they are turned from the vertical to the horizontal. Once horizontal the columns can be lifted and manoeuvred using a simple lifting beam and slings. It is estimated (subject to survey and condition) that the column assemblies will require support at approximately 2 m centres.

The generic arrangement for the dismantling may be defined by setting out the process for a single column and its connected lattice beams.

A temporary bolted steel support frame will be erected around the full height of the column. It could be detailed so that a modular pre-fabricated three-sided “U” is lifted into place with the fourth side formed by on-site erection of individual members. There will be a modular set for each of the two column lifts. Each frame will have circular collars at nominally 2 m spacing vertically to support the column with working platforms at collar levels and beam connecting box level. Initially the collars will only be lightly tightened so that they act as guides not clamps.

Support frames will also be erected around the columns adjacent to the one being removed.
Having lined, levelled and secured the support frames the lattice beams will be restrained to the support frames using cargo straps or the like. This is to ensure that whilst the lattice beam to column connecting bolts are released the beams or not able to slip if any unforeseen movements occur. It is expected that the lattice beams bear onto a narrow cast iron corbel integrally cast with the columns. Once free the lattice beams will be lifted clear and placed on a trailer to be taken to store. The lattice beams will be slung on both their bottom and top chords to avoid over-straining the chords and diagonal lattices. The adjacent and now partially released lattice beams will continue to be temporarily secured to the support frames until the dismantling process moves around to the next columns.

With the lattice beam removed the capital/joint cover will be released and lifted to the ground for storage.

The column support collars will be tightened in a controlled fashion so that just sufficient friction force is capable of being mobilised to stop the column slipping from the support frame when it is lifted.

The guide rails and any access ladders and rest platforms will be released and lifted clear.

The column to beam connecting box bolts will be released. It should be anticipated that given the age of the Guide Frames it may be difficult to break the column to beam connecting box bearing surfaces (irrespective of the presence or otherwise of any joint bedding compound). It is envisaged, therefore, that the careful application of hydraulic flange splitters will be likely.

Once it is sure that the column base joint is released the column, in its support frame, will be lifted clear, turned through 90° and lowered to the ground. Two cranes will be required to effect the turning operation. Once on the ground the fourth side of the support frame, facing upwards, will be disassembled and set aside for the next column. The collars will be removed and the cast iron column lifted out of the frame using cargo slings at 2 m centres from a lifting beam.

This procedure will be repeated for the middle level lattice beams and the lower column lift, the whole process being progressively repeated at each column position until all the Guide Frame has been dismantled.

The Engineers who carried out the initial inspection and survey shall have a watching brief so that before each lift the condition of the pieces may be reviewed.

The Contractor shall appoint a Temporary Works Co-ordinator who will liaise with the Engineers and operate a permit to lift procedure.

5.4 Processing the components

5.4.1 Overall sequence of activities

- Pick up pieces from the storage site and transport to the workshop.
- Remove the existing paint from all of the wrought iron elements. The full extent of paint removal from the cast iron elements to be agreed following detailed survey.
- Transfer piece to inspection bench.
- Inspect each piece and draw up remedial works schedule.
- Transfer to repair shop or paint shop.
- Apply primer coat to areas not requiring repair as soon as possible after inspection.
- Carry out remedial works.
• Complete primer coat and apply base coats to columns and finish coat to girders. Final coatings are likely to be applied in-situ after re-erection.
• Transfer to stockpile.
• Fabricate/procure replacement pieces.

In terms of processing the components the most time consuming pieces are likely to be the wrought iron lattice girders. In the light of this it is considered advantageous to process most of the girders first, before moving onto the cast iron columns. The girders are lighter and inherently more robust than the cast iron columns and are therefore more easily handled and stored than the column sections.

The programme for the procurement of replacement pieces will need to be carefully considered. Some pieces will be able to be defined and procured in advance of the processing works, and especially where re-casting is envisaged long lead-in times should be anticipated. Other pieces, for example the “knee ties” for the wrought iron girders, will only be able to be defined after inspection of the associated original components.

Handling the heavy column pieces during the workshop process can be by simple lifting beam and slings, as the columns will only be moved about in their horizontal position.

5.4.2 Paint removal

5.4.2.1 Introduction

There are many coats of paint, applied over the years, so it should be expected that a significant amount of lead based paint would be present. The removal methods in these circumstances are well understood and suitable techniques are readily available.

• Special measures to protect operatives
  o Training and briefing
  o Overalls, masks and respirators.
  o Decontamination facilities.
  o Regular blood tests

• Special measures to protect others in proximity
  o Dust suppression
  o Shielding/enclosure
  o Limit access

• Disposal of contaminated waste.

5.4.2.2 Why remove the paint?

A great deal of paint is flaking off or loose and would have to be removed for satisfactory over coating. For the cast iron columns there is a worthy debate to be held about the extent to which all the existing paint needs to be removed. Some of the existing coatings may be quite resilient and take up a significant amount of time to remove. It is reasonably straightforward to find a paint system that will overcoat existing paints, particularly when the latter are well adhered to the metal. Any lead based paint would be encapsulated within the new coating but future maintenance would still have to acknowledge its presence.

Certainly for the wrought iron lattice beams and possibly for the cast iron columns there is a need to inspect the base metal for defects and to establish the actual residual metal thickness.
All the wrought iron elements will have their original paint layers removed to bare metal. The full extent of paint removal for the cast iron elements, principally the columns, will be determined following detailed inspection and agreement with Camden/English Heritage.

5.4.2.3 How to remove the paint?

Initial advice from F A Clover & Sons Ltd (July 2002).

- For the cast iron – water pressure jetting.
  - No dust.
  - Does not remove the sand cast surface – important for corrosion protection.
  - Need to capture the water, filter out and collect the paint particles. Water to drain.

- For the wrought iron – combined wet/dry grit blasting.
  - Limited dust.
  - Capture grit and dispose of.
  - Grit recycling unlikely to be cost effective.

- Site based – workshop.

- Trials will need to be carried out to refine the detail of working methods and select the appropriate grits and the like.

- Chemical removal of paint not recommended as residues can be left on the bare metal surface, ever after thorough cleaning, that could cause deleterious reactions with the applied paint systems.

5.4.3 Remedial works and fabrication/procurement of replacements for irreparable or missing pieces

5.4.3.1 Introduction

Structural repairs will be necessary.

Decorative repairs could be optional.

Repair objectives: -

- To ensure structural performance with lowest reasonable maintenance requirement.

- Starting point is that methods should be reversible, although this may not always be possible to achieve to its fullest extent.

- Sympathetic to the historical context.

- Aesthetically pleasing or neutral.

- Best value.

5.4.3.2 Cast iron elements

Cast iron cannot be welded and the options for repair may be summarised as follows.

- Re-cast whole elements using existing as mould former/template.

- Cold stitching, using spring metal and epoxy resins. Additional structural elements added as necessary for structural repairs (for example hoop straps around columns).
• Fabricate facsimiles from steel.

5.4.3.3 Wrought iron elements

Because wrought iron corrodes there is potential for all the lattice girders to need some degree of repair. The knee ties are likely riveted to the girders and be cut off to effect dismantling, so at the least the rivets will have to be drilled out to make connections for the replacement ties.

It should be expected that some end and web lattice plates will need to be replaced, although the amount of repair will only be capable of being defined after the girders have been cleaned of paint and corrosion products.

The manufacturing process for wrought iron created material with a “grain” of slag inclusions. So, whilst the metal of wrought iron is capable of being welded the inclusions can cause lamella failure if fillet welds are use. Butt-welding can be effective in certain circumstances and in any event material testing is required to determine the appropriate weld design and electrode selection.

Wrought iron is no longer manufactured in the UK; some salvaged material is available. New mild steel plate and rolled sections are likely to be the most appropriate substitute.

Riveting skills have to all intents and purposes been lost, certainly for the scope of work possible for the guide frames. Rivets give similar structural performance as friction grip bolts so this type of connection would be a suitable alternative. A particular form of friction grip bolt is a tension-controlled bolt; these have a rivet like head at one end and could provide an acceptable visual replacement.

Remedial works are, therefore, likely to be based on replacement of wrought iron and rivets with mild steel and friction grip bolts.

5.4.3.4 Bolts, shims and packs

Bolts will be new and selected to be as close as possible to the original diameters.

Shims and packs that are required to transmit significant loads or the weight of elements will be mild steel with suitable corrosion protection.

In the original guide frame assembly there are likely to be timber packs between the lattice girder end plates and the cast iron beam connecting boxes of the columns. This appears to be a deliberate response to eliminating the undesirable possibility of creating bearing stress concentrations in the cast iron when the girder bolts were tightened or as the result of frame action between beam and column. It is proposed to replace these packs with synthetic rubber rather than timber.

5.5 Re-erection

Superficially the re-erection procedure could be regarded as playing the dismantling sequence backwards. Some of the characteristics of that sequence apply equally to the re-erection; the need to give access to the column heads to enable the pieces to be connected and the need to support the column sections and turn them from the horizontal to the vertical position. For the column support frames it will be necessary to allow the cast iron columns to protrude below the frames so that the columns may be directly located on the foundations or columns below without being blocked by the frame.

There are, however, some important differences between the detail of the dismantling and the re-erection.

For the dismantling the bolts connecting the girders to the columns will be cut or burnt off. In order to re-connect them it will be necessary, unless a special captive connection is designed,
to maintain access to the inside of the column heads until the girders are bolted up. Under this condition the erection sequence must be one complete ring of column lift at a time, all the lowest columns and the first ring of girders then the second lift of columns and so on.

It is envisaged that the column support frames for the re-erection will be adapted from the system used for the dismantling. These frames add wind area to the columns. During re-erection, therefore, the support frames will need to be bolted together and to the foundations to be self-supporting in the wind. Coupled with the need to allow the columns to be connected together this suggests that the feet of the support frames sections will have to be adjustable.

The column support frames will be relatively expensive. If the logic of the lift-by-lift sequence is followed strictly the implication is that there would be a set of support frames for all the columns. However, an erection sequence can be considered that greatly reduces the number of support frames by introducing a special captive girder to column connection on one lift of connections only.
6. **CONCLUSION**

There are many precedents for the dismantling, repair and re-erection of historic structures. A particular precedent exists at King’s Cross/St Pancras in regard to gasholder guide frames – the Triplet Guide Frames.

The particulars of these structures at King’s Cross/St Pancras are well understood and recorded. It is, therefore, with a high degree of confidence that proposals to dismantle and re-erect the Number 8 Guide Frame are presented.

This report sets out an outline method statement and attempts to do so in a manner that demonstrates a full appreciation of the historical, conservation and technical issues.