Supporting Statement for Listed Building Consent

Gas Holder Triplets

King's Cross Central General Partner Ltd

October 2014

King's Cross

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Planning. Design. Economics.

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Appendices

1.0 Introduction

The Applicant

1.1 The Listed Building Consent application covered by this Supporting Statement is made by the King's Cross Central General Partner Limited (KCCGPL). KCCGPL brings together the project investors who made the original King's Cross Central (KXC) outline planning application, namely Argent (King's Cross) Limited, Exel Plc and London and Continental Railways Limited.

The Proposals and Applications

1.2 This Supporting Statement has been produced by Nathaniel Lichfield & Partners (NLP) on behalf of KCCGPL to explain and justify a Listed Building Consent application for the re-erection of the Grade II listed Gas Holder Triplets guide frames, which form part of a residential development, and lighting proposals for the guide frames. The Gas Holders were originally constructed between 1879 and 1880 by the Imperial Gas Company, and were located on the west side of Goods Way. The guide frames were dismantled in 2001 as part of the Channel Tunnel Rail Link (CTRL) works following a legal agreement with English Heritage. The proposed re-erection of these listed structures, as part of a residential development, is part of the ongoing implementation of the wider King's Cross Central (KXC) development, granted Outline Planning Permission in December 2006 (ref. 2004/2307/P).

1.3 The application accompanies a submission for approval of Reserved Matters for the Gas Holder Triplets residential led scheme pursuant to the Outline Planning Permission. That submission also includes details of a new public park which will be located between the Gas Holder Triplets buildings and the Regent's Canal to the south, referred to as Gas Holder Gardens.

1.4 The Gas Holder Triplet guide frames are currently stored in South Yorkshire and are under refurbishment by Shepley Engineers Ltd. It is proposed that following the completion of the repair and refurbishment works, the Gas Holder Triplet guide frames will be re-erected in a new location within Development Zone N in the northern part of the KXC development adjacent to the Regent's Canal. This is in accordance with Parameter Plan KXC 020 'Gas Holder Triplet Development Zone N' of the Outline Planning Permission. Development Zone N sits partly within the Regent's Canal Conservation Area, occupying a prominent location fronting onto the Regent's Canal with the Granary complex to the east.

1.5 Gas Holder No. 8, which has been re-erected to the west of the proposed location for the Gas Holder Triplets, is also part of Development Zone N. A Reserved Matters submission for new public realm within and surrounding the re-erected Gas Holder No. 8 guide frame (Gas Holder Park) and Canal Reach (South) (ref. 2014/3681/P) was approved by LB Camden on 28th August 2014.

1.6 The proposed Gas Holder Triplets development sits within the context of the emerging KXC development, in particular Development Zone P (Plots P1 and P2) to the north for which Reserved Matters approval for Plot P1 was granted in December 2012 (ref. 2012/4741/P) and subsequent minor amendments were granted in March 2014 (ref. 2014/0691/P). The approved development now under construction is for the erection of a 14 storey development comprising 255 residential units, a new primary school, a new nursery school, new premises for the Frank Barnes School, a small retail unit and community meeting facilities. Works on site have commenced and completion is anticipated at the end of 2015. Plot P2 is currently vacant, although a cultural building and hotel scheme will be submitted for approval in due course, following discussions with LB Camden. The railway lines and Development Zone T are located to the north west. Reserved Matters approval for Plot T1 was originally granted in April 2009 (ref. 2009/0415/P) for the erection of a 9-14 storey building comprising a new energy centre, multi storey car park, MUGA, 102 residential units and retail/café/bar uses (Use Classes A1-A4). The site wide energy centre was implemented under this approval but revised Reserved Matters were approved in March 2013 (ref. 2013/0405/P) for a building including a multi-storey car park, MUGA, 129 residential units, A1-A4 uses and included the existing energy centre. Minor amendments to Plot T1 were granted in September 2014 (ref: 2014/4605/P) - these primarily relate to the treatment of façades and do not alter the scheme concept. The works are anticipated to be completed in early 2016. To the east of Development Zone N is Development Zone M (Coal Drops) for which a scheme is currently being prepared and is at pre-application stage. Development Zone N is bound to the south by the Regent's Canal.

1.7 A full description of the proposals is provided in Section 3.0. The proposals are examined against the principal works and refurbishment parameters set out in the Initial Conservation Plan (ICP) which was submitted alongside the KXC outline planning application in 2004.The ICP provided context to those works by explaining the building's history and the assessment of significance, while looking to the future by setting out the objectives and aspirations for the building as part of the wider KXC development.

1.8 The proposals are also considered against current national and local planning policy and guidance in Section 4.

1.9 Accompanying this application and the associated Reserved Matters submission are a series of drawings and reports to provide more information, some of which are required to meet the conditions of the KXC Outline Planning Permission. These documents include:

1 An Access and Inclusivity Statement;

2 An Environmental Sustainability Plan;

3 A Daylight and Sunlight Report;

4 A Planning Compliance Report;

5 Method Statement for Re-Erection of Gas Holder Guide Frames;

6 An Urban Design Report; and

7 Architectural and Landscape Drawing Packages.

1.10 It should be noted that the Method Statement for Re-Erection of Gas Holder Guide Frames and the Drawing Packages (which includes the proposed plans, sections and elevations – including plans relevant to the guide frame light fittings) are required and submitted for approval in relation to both the Gas Holder Triplets Reserved Matters submission and this Listed Building Consent application.

2.0 Site History

King's Cross Central Planning History

2.1 There has been a planning policy impetus for large-scale redevelopment on a strategic basis on the King's Cross Railway Lands for over 40 years. Despite this, major development and regeneration at King's Cross failed to happen prior to 2006, in part for economic reasons but also because of uncertainty over the alignment and delivery of transport projects in the immediate area.

2.2 British Rail first submitted a scheme in the 1960's but this was not progressed. In June 1988, the London Regeneration Consortium (LRC) was selected as the approved developer for the railway lands and submitted an outline planning application for redevelopment in April 1989, with a second application following in October 1989. These were eventually both withdrawn in 1994 in the face of the poor economic conditions and a Government decision to promote an alternative scheme for the Channel Tunnel Rail Link (CTRL), with the terminus at a high level at St. Pancras Station. On this revised arrangement, the Channel Tunnel Rail Link Bill entered Parliament in 1994 and LRC won the right to build and operate the new highspeed line. The Channel Tunnel Rail Link Act was passed in 1996.

2.3 Subsequently, the landowners (London and Continental Railways Ltd and Exel Plc) organised a competition to select a development partner and Argent St. George (now Argent (King's Cross) Limited) was selected in that role in 2000. As noted previously, these organisations have subsequently come together to form King's Cross Central General Partner Ltd who is the applicant for the current proposals.

2.4 The realisation of the CTRL project resulted in the decommission of the Gas Holder Triplets in 2000 and the guide frames were subsequently dismantled in 2001-02 as part of the works associated with the Channel Tunnel Rail Link.

2.5 Proposals for the KXC development were drawn up after extensive research and design work, and with widespread consultation, in order to prepare the outline proposals and several Listed Building and Conservation Area Consent applications submitted in May 2004. Revisions to those proposals were submitted in September 2005 following feedback received during the consultation period.

2.6 On 22 December 2006, the London Borough of Camden (LB Camden) granted permission and consent for all of the applications, subject to conditions and a Section 106 Agreement.

2.7 Following the grant of Outline Planning Permission, Enabling Works for the movement and storage of the Gas Holder Triplets (ref. 2008/5665/P) was subsequently granted permission in February 2009 and Listed Building Consent was obtained for works to relocate and store the dismantled Gas Holder Triplet guide frames in April 2009 (ref. 2008/5825/L). A contract for

removal and storage of the guide frames (discharge of Condition 53(d) of the Outline Planning Permission ref. 2011/0713/P), a refurbishment method statement (partial discharge of Condition 54(c) of the Outline Planning Permission ref. 2013/5611/P) and the paint specification (discharge of Condition 54 (c) of the Outline Planning Permission ref. 2013/7079/P) were all approved by LB Camden to enable repair and refurbishment of the Gas Holder Triplet guide frames. An application for Enabling Works for the Gas Holder Triplets site (ref. 2014/4856/P), pursuant to Condition 25 of the Outline Planning Permission (ref. 2014/4763/C) was approved by LB Camden in September 2014. The proposed Enabling Works include site preparation and excavation works and piling to prepare the site for the re-erection of the Gas Holder Triplets guide frames and the associated residential led development. An application to discharge Conditions 2a, 4f and 5 of Conservation Area Consent (ref: 2004/2320/C) in relation to refurbishment works to the Regent's Canal Wall north, adjacent to the Gas Holder Triplets site, was also approved by LB Camden in September 2014.

2.8 The Gas Holder Triplet guide frames are currently stored in South Yorkshire and are under refurbishment by Shepley Engineers Ltd. It is proposed that following the completion of the repair and refurbishment works, the Gas Holder Triplet guide frames will be re-erected within Development Zone N in the northern part of the KXC development adjacent to Regent's Canal, in accordance with Parameter Plan KXC 020.

2.9 Development Zone N sits partly within the Regent's Canal Conservation Area, occupying a prominent location fronting onto the Regent's Canal with the Granary complex to the east. The permitted limits of the Development Zone are shown on Parameter Plan KXC005 (Development Zones).

The King's Cross Central Development

2.10 The KXC development has been designed to establish a new structural framework for the site. This framework sets out to:

1 create new routes and spaces that would help join up the city and integrate KXC with surrounding neighbourhoods and communities;

2 provide a better, more legible, high quality public realm – successful new public spaces and streets that are safe, clean and easy to understand;

3 'embed' retained heritage buildings within the fabric of the 'new city quarter';

4 accommodate current and future transport activities in a safe, clear and efficient manner – the underground, cars, buses, taxis and cycles; and

5 facilitate the redevelopment of this highly accessible site in line with the vision set out in London wide and local planning policy, with high density commercial and other development that optimises the use of land.

2.11 The KXC scheme secures a long-term future for the most important heritage structures on the site, with various defined works to facilitate their

refurbishment and use. Annex E of the Main Site Development Specification defined and described the works or alterations proposed as part of the KXC outline planning application in 2004, to refurbish various retained historic buildings and structures for specified new uses. However, Annex E does not address the Gas Holder Triplets guide frames as these were already dismantled as part of the CTRL works, prior to the granting of the outline planning permission (as set out in the footnote to para. 4.56 of the Revised Development Specification 2005). An Initial Conservation Plan (ICP) was however prepared for the Gas Holder Triplets which sets out the structure's history, assessment of significance and objectives/aspirations for the future use of the guide frames in the context of the wider KXC scheme.

2.12 In the northern part of KXC, where the Gas Holder Triplets are to be re-erected, the approved framework (now emerging) seeks to:

1 Develop a mixed-use district with its own character and sense of place;

2 Achieve a critical mass of development that ensures that a new city quarter is a success;

3 Create a vibrant heart to the development by bringing new life to the Granary Complex, Coal Drops and other historic buildings;

4 Re-erect the listed gas holder frames as a group to provide identify and historic association in a prominent part of the site. These will provide a focal point to draw people to and along the Regent's Canal;

5 Optimise public access to the canal frontage and along the canal corridor;

6 Promote pedestrian accessibility more generally, into and across the site, both north/south and east/west linking and connecting to the existing urban grain; and

7 Introduce a range of housing types, economic, social and cultural activities.

Views of Heritage and Design Consultees

King's Cross Central Proposals

2.13 Previous responses from English Heritage, the Victorian Society and the Commission for Architecture and the Built Environment (CABE) on the King's Cross Central scheme have all been very positive. English Heritage, in particular, were consulted by LB Camden on the KXC outline planning application and by letter dated 28 November 2005, continued to support the proposals and provided further advice on individual buildings.

2.14 In conclusion English Heritage advised Camden that:

"As we advised in our letter of 27 October 2004, English Heritage considers that the proposals represent the best opportunity for the successful regeneration of the King's Cross Railway lands in over a decade. The regeneration of the area would benefit the long-blighted historic buildings, structures and spaces of the Railway Lands and produce substantial benefits for the community locally and across London. This, in turn, means accepting that the character of the area, which has already changed as a result of the CTRL project, will continue to change radically."

The Gas Holder Triplets

2.15 Consultation between the applicant, LB Camden and English Heritage has been undertaken throughout the design process. The project team have met regularly with LB Camden conservation and planning officers and English Heritage. Points raised by officers at those meetings have been fully considered and are addressed either within the design or as part of the submitted information, primarily contained in the Urban Design Report which accompanies the Reserved Matters submission for the Gas Holder Triplets.

2.16 The pre-application process included presentations to the King's Cross Design and Access Forum in May 2014 and a presentation to the King's Cross Development Forum in September 2014. These meetings have been developed as a method of ensuring that there is adequate public input into the design development process. Issues raised at this meeting have been noted and where possible, addressed in the proposals.

3.0 Proposals

Introduction to the Proposals

3.1 The Gas Holder Triplets guide frames are statutorily listed as Grade II. The listing description is provided for reference as Appendix 1.

3.2 The Gas Holder Triplets guide frames are currently dismantled and stored in South Yorkshire and are under refurbishment by Shepley Engineers Ltd. It is proposed that following the completion of the repair and refurbishment works, the Gas Holder Triplet guide frames will be re-erected within Development Zone N in the northern part of the KXC development adjacent to the Regent's Canal, in accordance with Parameter Plan KXC 020 'Gas Holder Triplet Development Zone N' of the Outline Planning Permission.

3.3 The listed Gas Holder Triplet guide frames were formerly located on the west side of Goods Way where it was built as part of Pancras Gasworks between 1879 and 1880. The Gas Holder Triplets are unique as they have a shared and interconnected structure comprising three-way structural linkages where the frames abut, with each guide frame sharing a column with its neighbour – no other co-joined gas holders were developed. The Gas Holder Triplet guide frames are a replacement of the originally built unlinked Gas Holder Nos. 10-12, which were originally erected in 1860-7. The new guide frames were designed to accommodate the recently developed 'telescoping' gas bells that allowed more gas to be stored within the same footprint and depth of reservoir. The guide frames illustrate the mature development of the 'High Victorian' manner of gasholder construction and are the tallest to have ever been built with cast iron columns. The historic setting of the Gas Holder Triplets structure was inextricably linked to the Regent's Canal and the nearby railways, from which it was highly visible.

3.4 Further details of the history of the Gas Holder Triplets can be found in the Urban Design Report which accompanies the Reserved Matters Submission and the extract from the IHCM Heritage Baseline Study of 2004 at Appendix 2.

3.5 The proposals put forward by this application and the related Reserved Matters submission would see the re-erection of the Gas Holder Triplet guide frames as part of a residential development with commercial/food and drink (A1/A3/A4/A5) uses at ground floor level. The proposed development comprises three separate blocks of accommodation (one in each of the three gas holder guide frames) arranged around a circular courtyard designed to show case the unique "Siamese" columns of the guide frames. The buildings are connected at four levels; by a glazed colonnade at ground floor and by three aerial walkways at upper levels (levels 1, 5 and 8) which run around the perimeter of the central courtyard. Each of the three buildings are different heights, (eight, nine and twelve storeys – including ground floor) which reference the original gas holder "bells" and creates a dynamic relationship

with the guide frames that encircle them. The proposals therefore fully reflect the Outline Planning Permission and Parameter Plan KXC 020.

3.6 English Heritage has agreed during pre-application discussions that the proposed new buildings within the free-standing guide frames will not be listed. Therefore, the new buildings have been considered as part of the 'settings' for the guide frames rather than an alteration to the guide frames themselves.

3.7 Listed Building Consent therefore is sought for the method of re-erection and for lighting fixtures to the Gas Holder Triplet guide frames. The Listed Building Consent application responds to Condition 54b of the Outline Planning Permission which requires that "*The re-erection of the Linked Triplet Gas Holder guide frames as hereby permitted shall not take place until …. (b) Listed Building consent has been granted in respect of the scheme shown on drawing KXC020 Rev E for the re-erection and reuse of the Linked Triplet Gas Holder guide frames*".

3.8 In addition, an extensive area of new landscaping will be created around the Gas Holder Triplets development extending to the Regent's Canal in the south, referred to as Gas Holder Gardens. Landscaping details for these spaces and routes form part of the accompanying Reserved Matters submission.

3.9 The design team has worked within the parameters of the Outline Planning Permission to create a high quality development that will not only secure the long term future of the heritage structures, but also allow residents and visitors to interact with and appreciate them. The landmark building will make an important contribution to the character and vibrancy of the adjacent public realm in terms of the views and setting the development will provide. The proposed development represents a modern and innovative approach to utilising heritage assets. The new uses will provide high quality residential accommodation and will enhance the existing public realm provision at King's Cross for local residents, employees and visitors.

3.10 The detailed proposals for the Gas Holder Triplet guide frames are set out in the following sections. Proposals are then tested in Part 4.0 of this Statement against relevant national and local policy and guidance, and also against the principles and parameters within the Initial Conservation Plan (2004).

Related Documents

3.11 A Heritage Baseline Study and Cultural Heritage and Townscape Specialist Report were produced in 2004 by International Heritage Conservation and Management (IHCM) to inform the Environmental Impact Assessment and support the KXC outline planning application.

3.12 The summary sections of the Heritage Baseline Study in so far as it relates to the Gas Holder Triplet guide frames are included in Appendix 2 of this Statement. Much of the background information in this report is also drawn from that study.

3.13 A Written Scheme of Investigation (WSI) prepared by MOLA in relation to the Gas Holder Triplets re-erection site was approved in September 2014 as part of the Enabling Works application for the site (reference 2014/4856/P), pursuant to Condition 25 of the Outline Planning Permission.

3.14 Condition 32 of the Outline Planning Permission requires preparation of a Full Conservation Plan for works to facilitate refurbishment and re-use of retained buildings and structures. Given the scope of the Urban Design Report (UDR) and this Supporting Statement, which considers how the proposal affects the special interest of the guide frames (Section 2.3 of the UDR and Section 4.0 of the Supporting Statement) and Condition 54 (e) of the Outline Planning Permission (which relates to maintenance of the guide frames) it has been agreed during pre-application discussions with Alan Wito (LB Camden Conservation Officer) that it is not necessary to provide a separate Conservation Plan to accompany this Listed Building Consent application.

3.15 In order bring forward detailed proposals for the re-erection of the Gas Holder Triplet guide frames, further survey work has been undertaken as follows:

- **3D surveying and modelling** of the guide frames, prepared by 1st Horizon Surveying and Engineering Ltd (December 2013)
- **Material Tensile Testing**, prepared by Environmental Scientifics Group (January 2014)
- **Wind Modelling**, prepared by BMT Fluid Mechanics (November 2013)

3.16 The above exercises have assisted in proving that the guide frames can be physically re-erected and that they can be free-standing from the buildings. The 3D model will also enable the re-erection of the guide frames to be monitored during the construction process, by comparing the physical on-site setting out against the model.

Design Objectives

3.17 The ICP sets objectives and aspirations and identifies principal works relating to the refurbishment of the structures for a productive new use. These principal works were not applied for at the outline stage but reflected instead a ‘best guess’ of the types of work which might be needed later as part of any detailed scheme to support the uses applied for. Consequently, they suggest a direction of travel and are not prescriptive. The ICP objectives include:

1 To secure the future of the Guide Frames through a long-term viable use;

2 To re-erect the Guide Frame north of the canal;

3 To create a new grouping, with Gas Holder No.8 Guide Frame, next to the canal;

4 To create a landmark residential building within the Guide Frames;

5 To be part of a new public space, opening up the canal and forming a positive relationship between it and the new development; and

6 To act as a marker to encourage and facilitate the flow of pedestrians between Camden and Islington towards and via the canal towpath.

3.18 As detailed in Section 4.0 of this document, the proposed development meets all of the above objectives and aspirations, and the principal works and refurbishment parameters set out in the ICP. Following extensive work it is proposed that the guide frames will not be required to be attached to the new buildings within the guide frames but can be free-standing. This is a substantial design achievement with significant heritage benefits beyond what was envisaged at the outline planning stage and set out in the ICP.

3.19 In keeping with the Outline Planning Permission and KXC Section 106 Agreement, the proposals for the new buildings also demonstrate an integrated and comprehensive approach to sustainability and low-energy design as far as this is possible for a new development contained within circular and linked heritage structures. The design seeks to maximise the opportunities available to celebrate these heritage features and to re-use them within the public realm to give them a new sustainable life as part of the KXC development, whilst delivering a new high-quality residential and retail/food and drink development, and associated functional and amenity facilities.

Assessment of Significance

Significance

3.20 The significance of the listed Gas Holder Triplets guide frames was considered in detail at the outline application stage, forming part of the ICP. Its significance is many-layered and includes the history of the structure, its origins and use; the stylistic or artistic quality of its architecture and the pioneering technologies this utilised.

3.21 The heritage importance of the Gas Holder Triplets (as described in the ICP) can be summarised as follows:

Architecture and Fabric

3.22 The guide frames and ancillary equipment of the triplet group are from the 1880 reconstruction of Gasholders Nos. 10-12, which were originally erected in 1860-7.

3.23 The triplet group is unique in that three columns each served as part of two guide frames where the three gasholders were closest to one another. Further columns, although serving as part of only one guide frame each, were tied together by additional short lattice girders. This shared and interconnected structure has given rise to the term “Siamese triplet”.

3.24 The guide frames of the triplet group, like that of the surviving Gasholder No.8, illustrate 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.

3.25 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.

Setting

3.26 The historic setting of this structure adjacent to the former gasworks was inextricably linked to the Regent's Canal and the nearby railways, from which it was highly visible.

3.27 Reflected in the waters of the canal and seen from other directions in conjunction with the great trainsheds and the towers of St. Pancras Chambers, or softened by the greenery of Camley Street Natural Park (on the site of a coal yard), the gasholders provided a large and unique resource of urban views.

Significance Relating to Type

3.28 The guide frames of the triplet group are unique amongst gasholders for the three-way structural linkages, where the three frames abut.

3.29 They are the tallest to have been built with cast iron columns.

Significance Relating to Intangibles

3.30 The triplet group was recognised and appreciated as an iconic landmark identifying the St. Pancras area, a dramatic skyline feature, and a distinctive silhouette.

Notable Features

3.31 The assessment of significance informed the list of 'notable features' of the Gas Holder Triplets and its history set out in the ICP, specifically:

1 Guide frames of three telescopic gasholders, built in 1880 on the site of three less tall holders of the 1860's;

2 Unique structure resulting from three linked guide frames sharing columns rather than being each freestanding, hence known popularly as the "Siamese triplets" – a consequence of having to accommodate three large gasholders on cramped and fixed site;

3 Erected to a design by John Clark, works engineer of the St. Pancras Gas Works;

4 Guide frames of 16,15 and 13 hollow cylindrical cast iron columns with three levels of wrought iron invented latticed girders and cast iron riveted based on Tuscan and (at top) Corinthian orders;

5 Erected above re-used brick lanes, of exceptional depth (55 feet, now destroyed);

6 Dismantled to provide site for extension of St. Pancras Station, columns and girders are currently in storage around Gasholder No.8, pending re-erection on a site to be chosen *[Note: this was correct when the ICP was written in 2004, the Gas Holder Triplet guide frames are currently in storage in South Yorkshire and undergoing refurbishment];*

7 Various ancillary features were also dismantled and are in storage, including the guide rails and runners, and later access leaders and platforms (the bells were scrapped); and

8 The structural integrity of the guide frame, particularly given the level of decay to some of the components, cannot be justified to modern standards of safety and design. The structure will need to gain structural support from additional possibly external structure *[Note: subsequent work has confirmed that the frames can be re-erected without structural support from the new buildings forming residential apartments. This is considered a better design solution and an improvement on the initial ICP proposals].*

Detailed Description of Proposals

3.32 The proposed drawings related to this Listed Building Consent application are contained in the Drawing Package common to this application and the parallel submission for approval of Reserved Matters. The full scope of works to the listed structures is provided below.

3.33 The proposed works provide for the sensitive re-erection of the Gas Holder Triplet guide frames to enable them to form a focal point on the west side of the KXC development, highly visible from many directions, and create a landmark building which will secure the future use of the guide frames. The design team has worked closely with LB Camden and English Heritage to develop a scheme which is sympathetic to the character and architectural significance of the structure, having regard to the notable features, objectives, principal works and refurbishment parameters and principles set out in the ICP.

Proposed Works to the Listed Guide Frames

3.34 As set out above, the guide frames are currently in storage in South Yorkshire and are undergoing repair and refurbishment to enable their re-erection. The relevant parts of Conditions 53 and 54 of the Outline Planning Permission have been discharged to enable refurbishment of the guide frames (refs. 2008/5665/P, 2011/0713/P and 2013/5611/P) and these refurbishment works have been largely completed.

3.35 Listed Building Consent is therefore sought for the re-erection of the frames in accordance with part (b) of Condition 54:

"The re-erection of the Linked Triplet Gas Holder guide frames as hereby permitted shall not take place until:…… Listed Building Consent has been granted in respect of the scheme shown on drawing KXC020 Rev E for the re-erection and re-use of the Linked Triplet Gas Holder guide frames".

3.36 Listed Building Consent is also sought for light fittings attached to the guide frames, as detailed below. As set out in Section 2.7 of the Urban Design Report, which accompanies the Reserved Matters submission, the illumination of the gas holder guide frames plays a key role in showcasing these heritage assets and will create a vibrant and safe public realm environment after dark. The lighting strategy for the Gas Holder Triplets is similar to that taken for other heritage buildings/structures across KXC. The lighting scheme has been carefully considered and modelled and will highlight the listed structures and create a focal point on the northern bank of Regent's Canal, without comprising the adjacent buildings, or new residential buildings within the structure, in terms of light spill. It has also been considered in conjunction with the lighting strategy for the adjacent Gas Holder No.8 so that the two developments complement each other.

3.37 As set out in the ICP, it was always envisaged that to ensure the structural integrity of the guide frames, particularly given the decay of some of the components, it was likely that they would need to gain structural support from an external structure. Considerable time and effort has however been made by the design team to investigate options for the guide frames to be free-standing. As set out above, a number of studies and models have been undertaken to look at the level of structural integrity and stability of the guide frames following repair and re-erection. Following extensive work it is now proposed that guide frames will not be required to be attached to the new buildings within the guide frames but can be free-standing. This is a substantial design achievement with significant heritage benefits.

3.38 As agreed with English Heritage during the pre-application discussions, Listed Building Consent is not required for the new buildings within the guide frames.

3.39 The impact of the new buildings, in terms of the setting they provide for the listed guide frames, is assessed in the Urban Design Report which accompanies the Reserved Matters submission and is summarised in Section 4 of this Statement.

Scope of Works

3.40 The works to the guide frames comprise the following:

1 **Erection of the guide frames** - the method statement for re-erection of the guide frames is provided as part of this Listed Building Consent application. In terms of how the re-erected guide frames will be secured to the ground, the columns will be bolted down to the ground in the same way they used to be. The guide frame base plates will be bolted down to the new footings (new bolts will be cast into the new concrete footings). The new footings are an approximation of the original and sized to

ensure a good vertical relationship between the trusses and the apartments within and to ensure that the listed, cast iron structures are lifted well away from any standing water to reduce the risk of corrosion (see drawing refs: KX_SM103075_L_N1_4107 Rev 01 and KX_SM103075_L_N1_4106 Rev 01). Full details are provided in the Method Statement for Re-Erection of Gas Holder Guide Frames which accompanies the application.

2 **Installation of light fittings on the guide** frames (see drawing refs: KX_SM103075_L_N1_4107 Rev 01 and KX_SM103075_L_N1_4106 Rev 01) – it is proposed to install IP rated LED up-lights to illuminate the guide frames. As set out above, the lighting scheme for the gas holder guide frames will highlight the listed structures after dark and create a focal point on the northern bank of Regent's Canal, without comprising the adjacent buildings (or the new buildings proposed within the guide frames), in terms of light spill. The proposed lighting strategy is set out in Section 2.7 of the Urban Design Report which accompanies the Reserved Matters submission.

Details of the light fittings are provided below.

3.41 **The location of the light fittings**: for each vertical section of the guide frames, light fittings will be provided at three locations. Light fittings will be attached to the guide frames at the Tier 1 and Tier 2 junctions and light fittings will be provided at ground level, recessed into the new non-historic column footings (i.e. not attached to the guide frames) in order to illuminate every column.

3.42 **Appearance of light fittings** – the bespoke light fittings will comprise triangular metal boxes containing luminaires to sit around the circular guide frame columns. Each column will include lighting to the exterior half of the column (two 'metal boxes') with the exception of the central triplet core courtyard columns which will feature lighting around their full circumference (four 'metal boxes'). The metal boxes will be painted to match the colour of the guide frames and designed to be as discreet as possible. Their design has been discussed and agreed in principle with English Heritage.

3.43 **Power Cabling** - LED drivers are concealed within the base of the guide frame column and are accessible via an existing historic hatch panel at ground level. The drivers will be mounted onto a board and will not be secured to the inner fabric of the guide frame column. Cabling to the lights, to provide power and data supply, will be provided inside the hollow guide frames and will connect to the light fittings via a concealed hole drilled through the guide frame. Typically each 'metal box' light fitting will require one discreet hole in the column to enable cabling. The holes will be obscured from view by the light fitting.

3.44 **Attachment to the guide frames**: The light fittings will be attached to the guide frames via the cabling. Each hole for the cabling will be approximately 28mm and will be fitted with glands to prevent liquid ingress to the column. Each light fitting will be attached to the guide frame to conceal the required

wiring for each luminaire and will have remote dimmable direct current control gear located within the light fitting. As well as being attached by the cabling, each light fitting will have three adjustable mounting feet to keep the fixture in place on the guide frames. The feet will have a rubber protective layer to avoid damaging the paintwork. It is estimated that there will be a total of 188 holes which will be drilled into the guide frames for the light fitting cables.

3.45 **Lighting Levels** - An intelligent control system will be used to control the lighting levels. The lights can be dimmed as required although the lights will have a maximum luminance of 150 lux. The lighting has been specifically designed to reduce any spill onto the residential facades behind.

Gas Holder Triplets Proposed Development

3.46 Details of the proposal are fully set out in detail in the Urban Design Report and Planning Compliance Report which accompany the associated Reserved Matters submission. We summarise below the proposals for the development within the guide frames, to provide context. Please note the following proposals do not require Listed Building Consent:

1 Three separate buildings will be erected within each of the guide frames for predominantly residential development (with ancillary residential uses, e.g. business lounge, gym and spa). The buildings are arranged around the linked 'Siamese' element of the guide frames which will form a central courtyard at ground level with a water feature. The development would provide a total of 144 market housing dwellings. The heights of the buildings within the frames vary to reflect the different heights of the historic gas holder bells. Roof gardens are proposed on top of each residential building.

2 Commercial / Food and Drink development is proposed at ground floor level (Class A1/A3/A4/A5).

3 The existing basement will be utilised and extended to accommodate back of house functions and car/cycle parking beneath the majority of the Gas Holder Triplets.

4 A new public realm area extending to the south and south west of the Gas Holder Triplets, referred to as the Gas Holder Gardens, forms part of the proposed development. This area comprises a high quality landscaped area between the Regent's Canal and the Gas Holder Triplets with winding pathways, places to sit and areas of shrub and lawn planting. The pathways provide level access to the Regent's Canal towpath and will provide an important area of public realm, connected to and accessible from Granary Square.

4.0 Justification for the Proposed Works

Testing Against the KXC Refurbishment Parameters and Principles

4.1 The summary below shows the extent to which the current proposals, set out in detail in Section 3, follow or vary the intentions of the Initial Conservation Plan (ICP) (2004).

Initial Conservation Plan

The ICP had the following proposed objectives and aspirations:

1 To secure the future of the Guide Frames through a long-term viable use;

2 To re-erect the Guide Frame north of the canal;

3 To create a new grouping, with Gas Holder No.8 Guide Frame, next to the canal;

4 To create a landmark residential building within the Guide Frames;

5 To be part of a new public space, opening up the canal and forming a positive relationship between it and the new development; and

6 To act as a marker to encourage and facilitate the flow of pedestrians between Camden and Islington towards and via the canal towpath.

Current Proposals

4.2 The following paragraphs demonstrate that the proposals are in accordance with the proposed objectives and aspirations listed in the ICP. Applying the same numbering as above:

1 The proposed development will secure the long-term future of the Gas Holder Triplet guide frames through providing a permanent high quality development of which the guide frames are a key feature. The building management company (ManCo) will maintain the frames under the terms of residential and other leases to be granted and through the building's service charge. King's Cross Central General Part Limited (KCCGP), as the developer, will be contributing a capital sum to provide for the cleaning and maintenance of the frames over the first 20 years. The proposed development and maintenance proposals will ensure the future of the guide frames.

2 As identified on drawing KX_WEA823_A_N1_9000 Rev P1 the guide frames will be re-erected north of Regent's Canal within Development Zone N.

3 Drawing KX_WEA823_A_N1_9000 Rev P1 shows the location of the re-erected Gas Holder No.8 which is located adjacent to the Gas Holder Triplets site. The four re-erected gas holders guide frames will form a new grouping next to the canal and will be integrated through the

creation of the two new areas of public realm, referred to as Gas Holder Park and Gas Holder Gardens. The new grouping helps to highlight the differences between the two types of gas holder guide frames in terms of how the design of gas holders developed. The heritage value of these guide frames will be augmented when seen as a group and in close proximity to the canal, the railway and other heritage buildings that formed part of the industrial landscape when they were in use. This new grouping will allow the re-erected gas holder guide frames to become part of a sequence of industrial heritage buildings in the Goods Yard that create a strong front to the north bank of the canal; stretching from the Midland Goods Shed on the east side of the KXC development, through to the Granary Building, the Fish and Coal buildings, Coal Drops, to the Gas Holder Triplets and on to Gas Holder No.8. This frontage is book-ended by the two new developments of the Arthouse and Tapestry buildings.

4 As detailed in the Architectural Drawing Package and in the Urban Design Report, the proposed development results in an innovative, high quality landmark building which utilises the heritage structures to create a unique blend of old and new (a driving objective of the approved KXC masterplan). The old guide frames will contrast with the modern insertions. Part of the design intent has been to create buildings which are visually subordinate to the guide frames and does not cause visual clutter, to allow the original structure to be seen clearly and celebrated. The proposed materials and colours of the new buildings have been carefully chosen to reflect the industrial heritage and create a positive relationship and synergy between the new modern buildings and the historic guide frames. For example, the contrast between the guide frames and the background (in this case the residential building) is hugely important to appreciate the intricacy of the heritage structures and in particular the lattice work of the circumference trusses. Following considerable analysis the colour approved (ref.2013/7079/P) for the Gas Holder Triplet guide frames is lighter than the newly re-erected Gas Holder No. 8 guide frames which helps to differentiate them as appropriate, given their history. The colour was also chosen in anticipation of the impact of the residential development. The building façade needs to be partially glazed and the windows, with no special treatment, will look dark during the day. Similarly dark coloured metal cladding panels are proposed to the rest of the façade (between the windows) to ensure that the overall impression is of a dark backdrop to the frames which provides the necessary contrast to highlight the detail of the guide frames. Once re-erected the Gas Holder Triplets guide frames will be visible on the horizon from much of the surrounding areas including Granary Square, Lewis Cubit Square, Coal Drops Yard and from the high speed trains leaving St. Pancras International Station. Returning the distinctive guide frame silhouettes to the London skyline will be extremely evocative and create a dramatic view.

5 As set out on the Landscape Drawings and in the Urban Design Report which accompany the Reserved Matters submission, the development includes a new public park 'Gas Holder Gardens' adjacent to the canal. This area has extensive planting, winding paths and places for people to sit and engage with the heritage features. There is also a level access point to the canal towpath from Gas Holder Gardens. The new landscaping located adjacent to the canal, together with the refurbishment works to the canal wall (which seek to lower and taper the wall), and the new direct access from the canal tow path to the KXC development will successfully open up the canal, link the different levels of the site and draw people from the canal towpath into the wider KXC development.

6 The proposed development will create a landmark building set within a new area of public realm (Gas Holder Gardens) which will attract people to this part of the KXC development. The development is primarily residential which will assist in providing vibrancy to the canal edge and the commercial/food and drink uses (Class A1/A3/A4/A5) at ground floor level will also attract people to the Gas Holder Triplets building. Gas Holder Gardens contains a number of winding pathways to draw pedestrians between Islington and Camden and provide direct level access onto the Regent's Canal towpath, thus facilitating the flow of pedestrians in this area.

Works to Facilitate Future Uses

The guide frames would be refurbished and re-erected on the north side of the canal, around new residential development. To carry out this refurbishment and satisfy modern design codes of its structural integrity, a number of works would be required. The principal works are:

1 *Transportation of the dismantled guide frame components to a workshop for refurbishment;*

2 *Re-erection of the guide frames around new development'*

3 *Refurbishment and re-painting of the guide frames, fabricating or procuring replacement pieces as necessary.*

4.3 The transportation of the dismantled guide frames and their refurbishment (points 1 and 3 have already been undertaken) and do not form part of this Listed Building Consent application.

4.4 The re-erection of the guide frames around the new residential led development form part of the design proposals for the development, described here and in the Reserved Matters submission.

Refurbishment Parameters

1 *The guide frames would be re-erected, in the same basic layout as when they were dismantled, around the new built development;*

2 *A method statement for re-erection would be presented as part of a listed building consent application before any works are carried out;*

3 *Where original components are missing or degraded beyond repair, replacement components would be fabricated;*

4 *The guide frames would be connected to the new development within, from which they would derive structural stability; and*

5 *New built development would fit entirely within the plan external envelope of the guide frames.*

Current Proposals

4.5 Again, the following paragraphs explain how the proposals meet the refurbishment principles set out in the ICP. Taking each parameter in turn:

1 As shown on the Architectural Drawings the guide frames will be re-erected in the same basic layout as historically and around the proposed three new buildings (see drawing ref. KX_WEA823_A_N1_9001 Rev P1).

2 The Method Statement for Re-Erection of Gas Holder Guide Frames prepared by Craddy Pitchers Davidson is submitted for approval as part of this Listed Building Consent application. This Method Statement is also required to discharge Condition 54 (c) of the Outline Planning Permission and is therefore also addressed in the Planning Compliance Report, which accompanies the Reserved Matters submission.

3 Original components have been repaired, or if necessary replacement components have been fabricated, in accordance with the refurbishment strategy approved in relation to Condition 54(c) of the Outline Planning Permission (ref. 2013/5611/P). The original components of the guide frames which were dismantled and kept in storage comprise:

i Bottom Column x41

ii Middle Column x41

iii Top Column x41

iv Top Capital x41

v Middle Joint Cover x41

vi Bottom Joint Cover x41

vii Lattice Beams (Bottom, Middle And Top) x147

viii Stub Lattice Beams x6

ix Top Lattice braces x29

x Middle Lattice Braces x29

xi Bottom Lattice Braces x29

xii Guide Rail Sections including brackets x132

xiii Rollers x45

All of these original components are being refurbished and will be re-used with the exception of the rollers. As listed above, only 45 of the total

rollers were retained when the guide frames were dismantled and inherited by KCCGPL. Due to the nature of the proposed scheme within the gas holder guide frames and, in particular, the positioning of a residential building within each guide frame, this means that the rollers cannot logically be displayed on the floor at the foot of each column, as they are to be displayed on Gas Holder No. 8. The proposed buildings are set further back than the original bells and therefore, it would make no sense to try and attach the historic rollers to a modern building (indeed, as set out above, only 45 rollers have been retained and so a full set does not exist). It has been agreed with English Heritage, during the pre-application discussions, that five pairs of rollers will be included within the central courtyard to reference the historical role the rollers played as part of the gas holders in terms of facilitating the vertical movement of the gas holder bells.

4 As set out above, following the considerable work and effort undertaken by the design team, it is no longer necessary for the guide frames to be attached to the new buildings. The model and survey work undertaken confirms that the repaired and refurbished guide frames will have adequate structural integrity and stability to be free-standing. This has significant heritage benefits and it is an improvement in terms of the works envisaged to these heritage structures as part of the Outline Planning Permission.

5 As shown on the Architectural Drawings the three new buildings fit entirely within (and do not touch) the plan external envelope of the guide frames. As such, the proposed new buildings are circular in form.

Testing Against the Statutory requirements

4.6 Section 66 (1) of the Planning (Listed Buildings and Conservation Areas) Act 1990 requires that, in considering whether to grant planning permission for development which affects a listed building or its setting, the Local Authority shall have special regard to the desirability of preserving or enhancing the building or its setting or any features of special architectural or historic interest which it possesses.

4.7 Section 72 of the Act requires that, in making such decisions which affect Conservation Areas special attention be paid to the desirability of preserving or enhancing the character or appearance of Conservation Areas.

4.8 The historic interest of the Gas Holder Triplet guide frames has been identified in detail via the Heritage Baseline Study and Initial Conservation Plan. The preservation and enhancement of the guide frames and creating an appropriate setting for their re-erection has been a key objective of the Initial Conservation Plan, and has informed the re-erection strategy, the lighting strategy and approach to light fittings.

4.9 The method of re-erection ensures that the frames will be reassembled as originally built, and that the potential for physical harm to the guide frames

during reassembly is minimised. The proposed lighting fixings have been designed to minimise the scale of interventions in the historic fabric of the structure, whilst the lighting strategy has been designed to enhance the visual experience of the guide frames within their setting and the Regent's Canal Conservation Area.

4.10 The importance placed by the legislation on the preservation or enhancement of heritage assets has been fully acknowledged in the development of the proposals. This can therefore lead to a fully informed decision by the Local Planning Authority on the current Listed Building Consent application and Reserved Matters submission.

Testing Against National and Local Policy

4.11 This Section highlights extracts from a range of national, London-wide and LB Camden policy documents that are particularly relevant to the consideration of this Listed Building Consent application and tests the proposed works against the policies set out in those documents.

Testing Against the National Planning Policy Framework

4.12 The National Planning Policy Framework (NPPF) came into force on 27 March 2012 and replaced all previous planning policy statements, including PPS5 on Planning for the Historic Environment.

4.13 The proposed works for the Gas Holder Triplets have been considered against those parts of the NPPF that are relevant to the nature of the proposals. Paragraph 14 of the NPPF confirms that *"at the heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking."*

4.14 As noted in Section 4.2, the proposed works re-erect and utilise a heritage structure to create a landmark building which celebrates and secures the long term future of the guide frames. The residential use of the buildings within the guide frames will assist in bringing people, life and vitality to the canal corridor and a collection of refurbished heritage buildings along it. Therefore the proposal is inherently sustainable.

4.15 The NPPF sets out twelve core planning principles that should underpin decision making (paragraph 17). The relevant core principles would be complied with as follows:

Proactively drive and support sustainable economic development to deliver the homes, business and industrial units, infrastructure and thriving local places that the country needs.(…);

4.16 The proposed works will provide high quality residential accommodation with commercial/food and drink uses at ground level, thus supporting economic development and the provision of new homes, contributing to a thriving local environment in this part of the KXC development site.

Always seek to secure high quality design and a good standard of amenity for all existing and future occupants of land and buildings;

4.17 The proposed development provides a high quality residential and commercial development, including the required ancillary facilities, whilst respecting and celebrating the heritage value and form of the guide frames and meeting the inherent design constraints of building within the circular linked frames.

4.18 The rich industrial heritage of the historic Goods Yard provides inspiration for the façade design of the buildings through the use of heavy metal, patinated cladding panels, moving screens and polished brass mechanisms. The adjacent Gas Holder No. 8 has been highly significant in the design of the building. The colour strategy, of highlighting the light coloured Gas Holder Triplet guide frames against the dark back drop of the residential buildings (as described in more detail in Section 4.2 above), is a direct response to the adjacent black painted Gas Holder No. 8 to highlight the differences of the guide frames.

4.19 The façade design of the buildings seeks to showcase the listed guide frames, augmenting the impression of their immense scale whilst simultaneously offering an approachable, human scale at the building line. Each building is set back from the guide frame to ensure they can be clearly seen and appreciated as distinct from the modern development within.

4.20 The circular nature of the building form means that there is no clear distinction between the north, east, west and south elevations but through the use of a panellised system, the façade is modulated in response to aspect, key views and daylighting. The façade is divided into a tripartite relationship to respond to the guide frames, with the middle portion rotated by a fraction of a bay to create movement in the facade. The facade panels will have some tonal variation within them which will be accentuated by the fact that the cladding is facetted; each panel at any one level is set at a unique angle. Three subtly different colours are proposed, one for each of the buildings, to emphasise the fact that this a building of three distinct parts and to retain the sense of mass and gravitas in each gas holder building.

4.21 The proposed building will be, deliberately, modern to distinguish it from the heritage guide frames and make clear the ethos of successfully pairing ‘old’ and ‘new’ which underpins the KXC development.

4.22 The central courtyard has been created as a principal circulation space to showcase the linked Siamese structure, which all residents will pass through or see on their way to or from their apartments. The water at ground floor level of the courtyard provide a historical reference to the water used within the gas holder bells and will create a feature area in this unique building.

4.23 The proposed re-erection of the Gas Holder Triplet guide frames as part of the residential led development will result in a high quality unique scheme which provides a high quality setting for the listed structures and secures their long term future.

4.24 To ensure a high standard of amenity for future occupiers of the dwellings, wide, recessed balconies are provided along with rooftop gardens and ancillary residential facilities (e.g. business lounge, gym and a spa) at ground and first floor level. The arrangement of the apartments within the guide frames have been developed in response to the layout and orientation of the guide frames so as to maximise daylighting, mitigate heat gain and optimise available views. All residential units are well sized. Further, the surrounding public realm (Gas Holder Gardens) comprises high quality landscaping providing open space with planting, winding pathways, benches and access to the Regent's Canal towpath.

Support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change, and encourage the reuse of existing resources, including conversion of existing buildings, and encourage the use of renewable resources (for example, by the development of renewable energy)

4.25 The design approach to sustainability has been to minimise the production of carbon dioxide and use of energy wherever possible to create highly efficient buildings. In line with this approach, the design has sought to maximise daylight, for example, through the creation of the naturally lit central atrium and maximising windows and balconies for all apartments. The highest possible environmental standards have been achieved given the constraints imposed by placing the new buildings within the circular linked guide frames. In addition, the re-use of the existing guide frames takes an existing resource to create a unique and landmark building. Each of the new buildings also have green roofs to encourage biodiversity. Further details on the measures included in the building to enhance its performance are set out in the separate Environmental Sustainability Plan which is submitted in support of the related Reserved Matters submission.

Conserve heritage assets in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of this and future generation.

4.26 The significance of the Gas Holder Triplet guide frames was assessed at the outline planning stage. The conclusion of this assessment is reproduced in Section 3 of this Statement. The proposed works reflect a balance between the conservation and celebration of the guide frames which reflects their significance, and the desire to achieve a viable future use.

4.27 The re-use and re-erection of the guide frames has required detailed surveys to ensure that all component parts are understood in terms of location and orientation in the finished assembly. A 3D computer model has been created to test how the different components fit together and establish the actual height and diameter of the completed frames – this process has been critical as no survey information was carried out while the frames were still erected and the only existing survey information was of the holding down bolts. All of the columns were 3D scanned whilst in their current racks to establish their verticality and the emerging 3D model has been verified by trying to fit it back onto the survey of the original holding down bolts. Through this iterative

process it has become apparent that the individual gas holders are not perfectly circular, are different sizes and the columns were not perfectly evenly spaced around each gas holder.

4.28 A rigorous and careful survey process has therefore been undertaken in line with the significance of the gas holder guide frames to ensure the heritage asset is conserved and its future integrity preserved once re-erected.

4.29 The re-erected guide frames will be in a highly visible location, including from the railway lines which are to the north west of the site, and surrounded by extensive public realm areas (Gas Holder Gardens and Gas Holder Park). This prominent location will enable them to be viewed and enjoyed by the public. They will also provide a fantastic backdrop to the areas of public realm, form part of the outlook for residents in the buildings and result in a landmark building to be enjoyed by generations to come.

4.30 As regards meeting the challenges of climate change, the NPPF states at paragraph 95:

"To support the move to a low carbon future, local planning authorities should:… actively support energy efficiency improvements to existing buildings."

4.31 As noted above, the design approach for the residential buildings within the guide frames has been to achieve highly efficient buildings which minimise the production of energy and carbon dioxide, within the inherent constraints of building circular buildings within linked historic structures. Further details on the measures included in the building to enhance its performance are set out in the separate Environmental Sustainability Plan which is submitted in support of the related Reserved Matters submission.

4.32 Specifically on applications relating to heritage assets, paragraph 131 of the NPPF states the following:

"In determining planning applications, local planning authorities should take account of:

the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;

the positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality; and

the desirability of new development making a positive contribution to local character and distinctiveness."

4.33 The desirability of sustaining the Gas Holder Triplet guide frames as a significant heritage asset and their re-use as part of a high quality residential development to secure a viable long term use was established by the Outline Planning Permission. The re-erected guide frames within Development Zone N, adjacent to Regent's Canal, was approved as part of the Outline Planning Permission.

4.34 The ICP for the Gas Holder Triplets seeks to re-use the Gas Holder Triplets to create a landmark development in this part of the KXC site. The proposed residential buildings, as set out in the Urban Design Report, have been designed to celebrate the heritage structures yet provide a modern high quality building which meets tenant and residential requirements. This unique development, adjacent to the canal, the re-erected Gas Holder No. 8 and the new public park landscaping, will make a positive contribution to the local character and will become a distinctive local landmark.

4.35 The residential and commercial/food and drink uses proposed as part of the development will assist in drawing people into the KXC development from the canal towpath and help animate and provide vibrancy to this part of the site.

4.36 As regards designated heritage assets in particular, paragraph 132 of the NPPF sets out the following:

"When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. The more important the asset, the greater the weight should be. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. As heritage assets are irreplaceable, any harm or loss should require clear and convincing justification. Substantial harm to or loss of a grade II listed building, park or garden should be exceptional."

4.37 The proposed re-erection and works to the Gas Holder Triplet guide frames are not considered to cause substantial harm to the significance of the asset or its setting for the reasons set out below.

4.38 The proposed method of re-erection will ensure that the historic fabric of the columns are not damaged during the re-assembly, and that the guide frames are reassembled in the same form and layout as originally constructed. The cast-iron structures that comprise the individual columns are weak if placed under any tensional load. This has been a particular consideration in the re-erection strategy when moving them from their horizontal position to their final vertical placement. Temporary support is required for the columns and a clear working space is required to be maintained at all times.

4.39 As explained in Section 3, minimal works are proposed to the listed guide frames as part of this Listed Building Consent, only light fittings. The proposed lighting has been sensitively designed to ensure the lighting fixings are discrete: the bespoke units are painted the same colour as the guide frames, and, are located on the column bases. The physical interventions to the fabric of the guide frames to attach the light fittings are limited to concealed 28mm holes for each light fitting. This allows the cabling to be accommodated within the columns to remove any potential for visual clutter. The principle of inserting these holes into the guide frames has been agreed with English Heritage during the pre-application meetings. The guide frames will be attached to the ground via the bolt holes in the existing guide frames. No additional permanent works to the guide frames will be required to re-erect the structures.

4.40 At night the lighting will reveal and enhance the architectural and aesthetic value of the guide frames. The location of the lights has been designed to match the rhythm of the columns and lateral frames. The lighting will illuminate the heritage features at night to create a fantastic backdrop for the public realm and impressive silhouette on the skyline. The lighting scheme complements the lighting for Gas Holder No. 8 to show the difference between the two structures. The Gas Holder Triplets development will be lit on all three tiers whereas Gas Holder No. 8 will only be lit at and from ground level to reflect the gas holder in its 'lowered' position.

4.41 As set out earlier in this Statement, the Gas Holder Triplets were dismantled in 2001-2 and are currently being refurbished in South Yorkshire. Therefore, they have been removed from their original setting adjacent to the former gasworks which was inextricably linked to the Regent's Canal and the nearby railways, from which the Gas Holder Triplets were highly visible. As set out in the Urban Design Report, the prominent location in Development Zone N was chosen so to ensure that the Gas Holder Triplets would be highly visible from the wider KXC development and beyond and would act as a landmark, destination and connector. The location for the re-erected guide frames, alongside the re-erected Gas Holder No. 8, therefore provides a suitable setting, adjacent to the canal and visible from the railway, to echo the original setting and enhance the KXC masterplan as a whole.

4.42 Paragraph 134 of the NPPF also addresses 'less than substantial harm':

"Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use."

4.43 As demonstrated in Section 3 and above, the proposal to re-erect the guide frames with light fittings will have significant public and heritage benefits. The physical works proposed to the guide frames are minimal (holes for the light fitting cabling). These minimal works are considered to be justified by bringing the guide frames into beneficial and viable use and the activating the public realm. In addition, it was always envisaged as part of the Outline Planning Permission that the re-erected guide frames may need some external support. Given the design work undertaken this is no longer required and the frames can be re-erected as free-standing structures, which has a significant heritage benefit.

Testing Against the London Plan (2011)

4.44 The London Plan includes the following relevant policies:

Policy 7.8

Heritage Assets and Archaeology

Planning Decisions

C Development should identify, value, conserve, restore, reuse and incorporate heritage assets, where appropriate.

4.45 The Gas Holder Triplet guide frames were assessed and their significance identified at the outline planning stage of the KXC development, resulting in the ICP document. This assessment has formed the basis for the Gas Holder Triplets proposal which once completed will have conserved, refurbished and re-used the guide frames as part of a new high quality development. Notable features (as set out in Section 3) have been retained and the works to facilitate the re-erection and re-use of the guide frames are set out in Section 4 in the assessment against the parameters and principles for refurbishment in the ICP.

4.46 The proposed methods of re-erection and light fixtures to the guide frames which form part of this Listed Building Consent application conserve and enhance the historic significance of the heritage assets.

Policy 7.9

Heritage-led regeneration

Strategic

A Regeneration schemes should identify and make use of heritage assets and reinforce the qualities that make them significant so they can help stimulate environmental, economic and community regeneration. This includes buildings, landscape features, views, Blue Ribbon Network and public realm.

Planning Decisions

B The significance of heritage assets should be assessed when development is proposed and schemes designed so that the heritage significance is recognised both in their own right and as catalysts for regeneration. Wherever possible heritage assets (including buildings at risk) should be repaired, restored and put to a suitable and viable use that is consistent with their conservation and the establishment and maintenance of sustainable communities and economic vitality.

4.47 Opportunities for the refurbishment and reuse of the Gas Holder Triplet guide frames were assessed as part of the KXC outline planning application. As demonstrated earlier in this section, the proposals accord with the parameters and principles set out for the guide frames, at that stage, in the ICP. The proposal will utilise the heritage structures to create a landmark building which will draw people to this part of the KXC development and secure the long term future of the guide frames.

4.48 The refurbishment of the Gas Holder Triplet guide frames forms part of a wider set of works which will see other heritage buildings within the KXC site, and the King's Cross/St. Pancras Conservation Area, put back into a beneficial use. The Grade II listed Granary Building to the north of the Regent's Canal is the first of these heritage assets to be refurbished and opened as a new campus for Central St. Martins School of Art and Design in September 2011. The adjacent Western Transit Shed is similarly complete and the first office tenants moved in at the beginning of 2012. Although unlisted, Regeneration House to the east of the Granary Building has been refurbished and it is now occupied by The Art Fund and House of Illustration. The most recent heritage buildings within the KXC site to secure Listed Building Consent and Reserved Matters approval to be refurbished are the German Gymnasium, for which Listed Building Consent and Reserved Matters approval were granted for in May 2014 (Refs: 2014/1455/P and 2014/1493/L), and the Midland Goods Shed and Handyside Canopies which were granted Reserved Matters approval and Listed Building Consent (refs. 2014/1436/L and 2014/1433/P) in June 2014.

4.49 Together, these buildings are helping to define the character of the KXC development, and contribute to the establishment of a sustainable community and economic vitality in the area.

Testing Against LB Camden's Local Development Framework (2011)

4.50 The London Borough of Camden Replacement Unitary Development Plan (UDP), adopted in June 2006, was replaced in November 2011 by the Local Development Framework (LDF). The Camden Core Strategy 2010-2025 sets out the key elements of the vision for the Borough and is a central part of the LDF. The Core Strategy is supported in terms of detailed development management by the Camden Development Policies 2010-2025 document (DPD) adopted at the same time.

4.51 Both the Core Strategy and DPD contain specific policies relating to conservation.

4.52 Policy CS5 of the Core Strategy deals with 'managing the impact of growth and development' and includes among the factors which must be given particular consideration *'d) protecting and enhancing our environment and heritage and the amenity and quality of life of local communities'*. This factor is considered in more detail in Policy CS14 of the same document ('promoting high quality places and conserving our heritage'), which sets out the Council's strategic objective to preserve and enhance Camden's rich and diverse heritage:

"The Council will ensure that Camden's places and buildings are attractive, safe and easy to use by:

a) requiring development of the highest standard of design that respects local context and character;

b) preserving and enhancing Camden's rich and diverse heritage assets and their settings, including conservation areas, listed buildings, archaeological remains, scheduled ancient monuments and historic parks and gardens;

c) promoting high quality landscaping and works to streets and public spaces;

d) seeking the highest standards of access in all buildings and places and requiring schemes to be designed to be inclusive and accessible;…"

4.53 The proposed works to and within the Gas Holder Triplets guide frames, set out in Section 3, represent a sympathetic and considered response to the significance of the structures as assessed at the outline planning stage, drawing on their character and previously identified architectural features. As noted above in relation to the NPPF, the re-erection and re-use of the guide frames will bring them back into use as they are currently dismantled and in storage, thereby enhancing the heritage asset itself and securing its long term future.

4.54 The new setting for the re-erected Gas Holder Triplet guide frames, within Development Zone N adjacent to Regent's Canal and next to the re-erected Gas Holder No. 8, was approved under the Outline Planning Permission. As set out in Section 4.2 above, the new grouping will augment the heritage value of the guide frames and enhance the setting of the listed structure and the overall appearance of the Conservation Area.

4.55 New public realm is proposed as part of the related Reserved Matters submission and includes the creation of Gas Holder Gardens along the Regent's Canal frontage with new access directly onto the canal towpath. The proposed public realm will enhance the new setting of the Gas Holder Triplet guide frames and establish the development as a landmark building, as envisaged by the ICP.

4.56 Policy DP25 (Conserving Camden's Heritage) within the DPD provides further guidance on the more strategic policies in the Core Strategy in relation to Conservation Areas and Listed Buildings:

Conservation Areas

"In order to maintain the character of Camden's conservation areas, the Council will:

…

b) only permit development within conservation areas that preserves and enhances the character and appearance of the area;

…

Listed Buildings

To preserve or enhance the borough's listed buildings, the Council will:

...

e) prevent the total or substantial demolition of a listed building unless exceptional circumstances are shown that outweigh the case for retention;

f) only grant consent for a change of use or alterations and extensions to a listed building where it considers this would not cause harm to the special interest of the building; and

g) not permit development that it considers would cause harm to the setting of a listed building."

4.57 The proposed re-erection of the Gas Holder Triplet guide frames and their incorporation into the residential led development will enhance the character and appearance of the Conservation Area which the site is located partly within. The existing site currently comprises a cleared piece of land which contributes little value to the character and appearance of the Conservation Area. In their new position the architectural and aesthetic value of the linked guide frames will be revealed and enhanced, and new direct visual relationships between them and other historic industrial structures within the area will be created (including Gas Holder No. 8 and Regent's Canal).

4.58 The minor impacts to the fabric of the listed guide frames, through the installation of light fittings, are considered to be minor and will not impact on the special interest of the guide frames. These minor impacts are considered to be outweighed by the benefits associated with the creation of a high quality landmark building which activates the surrounding public realm and secures the long term future of the heritage structures.

4.59 As set out in above in paras 4.17-4.24, the new buildings within the guide frames have been carefully considered and have been designed to showcase the listed guide frames, augmenting the impression of their immense scale whilst simultaneously offering an approachable human scale at the building line, through the set back at ground floor level. The central courtyard provides a unique opportunity for residents and their visitors to view the Siamese linked structure with a water feature below making a historic reference to the gas holder bells.

4.60 The proposed development is in accordance with the parameters and objectives/aspirations set out in the ICP at the outline planning stage and have been carefully considered against the significance of the building assessed at that time. They are not considered to cause harm to its special interest.

Testing Against the Regent's Canal Conservation Area Appraisal and Management Strategy (2008)

4.61 The Gas Holder Triplets development sits partly within the Regent's Canal Conservation Area which is covered by the Regent's Canal Conservation Area Appraisal and Management Strategy. This was adopted following the granting of Outline Planning Permission in 2006 for the KXC redevelopment.

4.62 The special character of the area is stated to largely derive from the almost hidden nature of the canal as the surrounding townscape largely turns it back

on the canal. Page 12 acknowledges, *"The gas industry dominated the canalside landscape north of King's Cross and the intended re-erection within the conservation area of four of the gasholder guide frames should restore some of this character."*

4.63 In order to provide a clear description of the distinct qualities of the area, the Statement divides the Conservation Area into three sub-areas. The Gas Holder Triplets development falls within sub-area 3, King's Cross. The Kings Cross redevelopment is identified as an opportunity site and the re-erection of the Gas Holder Triplet guide frames, next to Gas Holder 8, on the north bank of the canal is recognised.

4.64 The Management Strategy for the conservation area states that the historic details, which are an essential part of the special architectural character of Regent's Canal Conservation Area, should be preserved, repaired and reinstated where appropriate. New development should complement the appearance, character and setting of the existing buildings and structures, the canal, and the environment as a whole. The enclosure or openness of particular sections of the canal should be respected as this character contributes significantly to its varying character. Building heights should not interfere with view to local landmarks.

4.65 As identified in the Conservation Area Appraisal the re-erection of the Gas Holder Triplet guide frames on the north bank of the canal will re-instate the industrial heritage of the canal, restoring structures which formed a key part of the historic gas industry in this location. The new buildings within the guide frames have been carefully designed to enhance the prominence of the guide frames in terms of the selection of materials and colours and circular form of the buildings. The proposed public realm, Gas Holder Gardens, along the canal frontage will contribute to enhancing the canal as a green chain providing, green space and pedestrian routes which link to the canal towpath. The height of the Gas Holder Triplets varies, the tallest being Gas Holder 11 which is below the constraint height at the nearest point in the strategic view corridor.

4.66 Therefore, the new buildings and surrounding public realm will complement and enhance the appearance and setting of the guide frames and the conservation area.

Testing Against Other Guidance

4.67 The London Boroughs' of Camden and Islington adopted a joint brief for the King's Cross Opportunity Area and Triangle Site in December 2003 and January 2004 as Supplementary Planning Guidance (SPG) which informed the KXC outline planning application. In line with other policy documents, the Brief places an emphasis on the need for major development and regeneration.

4.68 Paragraph 3.3.27 deals specifically with the Gas Holder Triplets. It states 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 seen 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; and*
- *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."*

4.69 Notwithstanding that this SPG was drafted in a different policy context (PPG15, for example, was subsequently replaced by PPS5 which was itself revoked when the NPPF was adopted), it is considered that the objectives of the Brief are successfully achieved by proposals, with the exception of the fourth bullet. This part of the brief stated that interior development should not project above the level of the lower part of the uppermost lattice girder and that it should vary in height across the Gas Holder Triplets by a minimum of 10m. However, the Outline Planning Permission (which has greater weight in planning terms than the above Supplementary Planning Guidance) permitted a more dynamic approach to the heights of the new buildings within the gas holder guide frames. The differing heights reference the original gas holder "bells" and create a dynamic relationship with the guide frames that encircle the new buildings, with one of the buildings exceeding the guide frame. The proposed buildings within the guide frames are in accordance with the heights on Parameter Plan KXC 014 which form part of the Outline Planning Permission.

4.70 The justification required by this section was provided at the outline planning stage, which set the principles and parameters for the re-erection and re-use of the Gas Holder Triplet guide frames through the Parameter Plans and ICP. As demonstrated by the preceding paragraphs, the works proposed are in accordance with those documents.

5.0 Conclusions

5.1 The proposals will result in the re-erection of the heritage assets as part of a high quality modern landmark building. The proposals will secure the viable, long-term future of the guide frames and their new location next to the re-erected Gas Holder No. 8, Regent's Canal and the proposed Gas Holder Gardens landscaping will enhance the setting of listed structure and the overall appearance of the Conservation Area.

5.2 The lighting proposals for the guide frames have been designed to minimise any impacts on the historic fabric whilst ensuring that the heritage structures are highlighted during hours of darkness, consistent with the strategy for other heritage structures at KXC. The proposed lighting is located to sit discretely within the components of the frame, and to match the architectural rhythm and proportions of the guide frames. At night the lighting will reveal and enhance the heritage asset and activate the surrounding public realm within this western part of the KXC development site.

5.3 Overall, the significant economic, social and environmental benefits realised by the proposals are considered to outweigh any perceived harm and therefore accord with the policies and guidance set out in this section.

Appendix 1 Listing Description

The Gas Holder Triplets Listing Description

Listing Entry Summary

Name: Three linked gas holders

List entry Number: 1413657

Location

Three Linked Gas Holders, Goods Way

The building may lie within the boundary of more than one authority.

County: Greater London Authority

District: Camden

District Type: London Borough

Parish:

National Park: Not applicable to this List entry.

Grade: II

Date first listed: 01-Oct-1986

Asset Groupings

This list entry does not comprise part of an Asset Grouping. Asset Groupings are not part of the official record but are added later for information.

List Entry Description

Summary

Formerly three linked gas holders.

History

The three linked gas holders were erected in 1864 and telescoped in 1880. The eastern gas holder was erected in 1867 and telescoped in 1880. The northern one was erected in 1866 and also telescoped in 1880. They were demolished 2002-03 as part of the CTRL project and extension of St Pancras Station.

Details

CAMDEN

TQ2983SE GOODS WAY 798-1/84/588 (West side) 01/10/86 Three linked gas holders

GVII

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.

Listing NGR: TQ2996783325

Please note: this citation and historical note were written when the Gas Holders were first listed in 1986. Some statements are debatable; in particular, recent architectural paint research (noted above) indicates that the current red and black colour scheme is not original. The linked gas holders were dismantled in 2001-2 and are currently under refurbishment in South Yorkshire.

Appendix 2 Heritage Baseline Study (2004) – Gas Holder Triplets Extract

17 ‘SIAMESE TRIPLET’ GASHOLDER GUIDE FRAMES (DISMANTLED)

BUILDING NAME

'SIAMESE TRIPLET' GASHOLDER GUIDE FRAMES (DISMANTLED)

LOCATION

In store immediately north of Gasholder No. 8, on south side of Goods Way (Gasholders Nos. 10, 11, and 12, originally standing on north-west side of former alignment of Goods Way, west of Camley Street)

CLIENT REF.	EH INVENTORY REF.	IHCM REF.	LINKED EH REFS.
17	N1	N1, N2	N2

NATIONAL GRID REF.	REPORT BY	DATE
TQ 3006 8332 (present location of frames)	MTT, MNB	April 2004

Listed Grade II

Subject to Channel Tunnel Rail Link Act 1996 and English Heritage/CTRL agreement of February 1996

Formerly in Regent's Canal Conservation Area, now within King's Cross Conservation Area

1 DESCRIPTIVE SUMMARY

1.1 The dismantled guide frames of three gasholders, Nos. 10, 11, and 12, known as the 'Siamese triplets' because, uniquely, their frames shared some columns rather than being entirely freestanding. Gasholders originally constructed 1860-7 with single-lift bells; enlarged 1879-80 with new, interconnected, guide frames and two-lift telescopic bells.

1.2 Highly decorative structure, including three tiers of hollow cylindrical cast iron columns, cast iron column capitals, three tiers of wrought iron riveted lattice girders, and guide wheels and their carriages.

1.3 Gasholders decommissioned in 2000 and purged of gas. Guide frames and ancillary elements dismantled in 2001-2 and put into store next to Gasholder No. 8, on south side of Goods Way, for possible re-erection. Gasholder bells and brick tanks of Nos. 10-12 demolished, together with adjacent gasholders Nos. 13 and 14 in their entirety. Site cleared and excavated to accommodate the extended platforms and concourse being built at St Pancras Station for the Channel Tunnel Rail Link (CTRL).

2 HISTORICAL AND FUNCTIONAL SUMMARY

The outline history and development of Pancras Gasworks is described in the assessment of the still-standing Gasholder No. 8 (qv, N2) which should be referred to. It is not repeated here.

2.1 The triplet group was originally built in the 1860s to expand storage capacity after the gasworks had acquired additional land to the west of its original site. A single holder of a very large capacity had been considered, but was rejected because of various difficulties. Work started in 1860, and No. 11 was completed in 1861. Subsequent construction was phased, and the last of the three gasholders was not completed until six years later.

2.2 No. 11 was the northernmost of the three, and the largest. Its brick tank was 145 feet (44.2 m) in diameter and 55 feet (16.8 m) deep - an exceptional depth. This holder entered service in 1861. No. 10, south of No. 11, had a tank of 134 feet (40.8 m) in diameter and of the same very substantial depth, built at the same time, while its ironwork was constructed in 1864. It came into service in 1864. No. 12, located very close to and on the east side of the first two, was the smallest of the three, with a tank of the same depth but 106 feet (32.3 m) in diameter. It entered service in 1867.

2.3 All three gasholders as originally built had single-lift bells, as their designer, David Methven, distrusted the telescoping principle for its potential unreliability. This explained their very deep tanks. Whereas, with telescoping bells, the tank depth could be reduced, as the bell lifts fitted inside one another when the bell was empty, in a single-lift bell the tank had to be as deep as the overall height of the bell.

2.4 These original holders had “stretched” Tuscan columns supporting a single tier of hog-backed cast iron girders with open-work webs. As in the later structure, described below, the three guide frames coincided at three points, at which they shared a column. (This is shown clearly in a Midland Railway photograph of c.1867 [NRM: 104/98], contradicting the first edition 1:2500 Ordnance Survey plan made in 1871, which shows separate columns.)

2.5 The late 1870s’ continuing demand for increased gas storage capacity, on a gasworks site that could not be expanded, led John Clark (Methven’s successor as the engineer at Pancras Gasworks) to design new guide frames for the three gasholders, of double the previous height to accommodate telescopic bells of two lifts.

2.6 Work on the enlargement of the gasholders began in 1879. The existing frames and bells were dismantled and sold for scrap. The new frames were built in turn, on the previous column positions, on top of the existing brick tanks. These and the new two-lift bells were completed by the contractors Westwood and Wrights during 1880.

2.7 Pancras Gasworks ceased to make gas in 1904, but the gasholders continued in use, storing town gas piped from other gasworks. Nos. 10-12 were decommissioned in 2000, and were dismantled in 2001-2 to make way for the extension to St Pancras Station, the new Channel Tunnel Rail Link terminal. The bells were scrapped but the frames, guide rails, and guides were carefully dismantled, and are in store adjoining Gasholder No. 8, awaiting possible re-erection.

3 DESCRIPTION

(This description concentrates on the dismantled guide frames as currently in store,

and does not detail those parts of the gasholders now demolished. The corresponding section in the assessment of Gasholder No. 8 should be referred to for a description of this gasholder as it still stands (qv); it is of very similar construction to Nos. 10-12, although differing in height and proportions. A notable difference between that gasholder and the triplet group, of course, is that the triplet guide frames had structural linkages between them where they abutted, as noted in 2.4 and as described below.)

3.1 The storage capacities of the three enlarged gasholders Nos. 10, 11, and 12 were respectively 1.4, 1.7, and 0.9 million ft³ (approximately 40000, 48000, and 25000 m³). Although modest for the time, being restricted by the available site, such capacity was a far cry from the 1000 ft³ (28 m³) of the earliest holders. However it would be dwarfed only a few years later by the enormous No. 2 holder at East Greenwich gasworks, with a capacity of 12 million ft³ (about 340000 m³).

3.2 The three circular guide frames of Gasholders Nos. 10, 11, and 12 contained respectively 15, 16, and 13 equally spaced hollow cast iron columns, and three tiers of wrought iron riveted lattice girders linking the columns. Each column was divided into three superimposed tiers of “orders”, each made up of a shaft surmounted by an entablature block at the girder connection.

3.3 Uniquely, three columns again each served as part of two guide frames where the gasholders were closest to one another. A further three pairs of columns, and one central group of three, although serving as part of only one guide frame each, were tied together by additional short lattice girders. This shared and interconnected structure has given rise to the modern description ‘Siamese triplet’.

3.4 The classically-modelled circular column shafts have capitals and other details based on the Tuscan, Doric, and (formerly) Corinthian orders at first, second, and top levels respectively. The lowest column shafts have bases in the Tuscan style, of a torus seated on a rectangular plinth with holding-down bolts at the corners. Each base stood directly on a padstone in the top of the tank wall. There was no raised pedestal, unlike the columns of Gasholder No. 8 or earlier holders in this style. In the uppermost column shafts, the acanthus leaves which characterised the Corinthian capitals have since been removed and lost.

3.5 The individual column shafts are stored horizontally in purpose-designed steel cradles. Each shaft represents approximately one-third of the full-height column. The lowest shaft is about 14 m high, the two upper shafts about 10 m high. The 14 m shafts are made up from three shorter castings and the 10 m shafts from two shorter castings, these being butted and joined by ‘secret’ wrought iron bolts through internal flanges.

3.6 An oval cast iron cover plate is or was present near the base of the lowest shaft on all columns, over an opening giving access to the column interior, Presumably this was for small apprentice boys to fasten the internal bolts connecting column sections during the original erection. Some of these plates carry inscriptions of the dates of erection and rebuilding. A typical plate, from Gasholder No. 10, reads “ERECTED 1864 TELESCOPED 1880” (although the 1864 frames were in fact scrapped when the gasholders were enlarged in 1880).

3.7 The shafts were bolted above their capitals to the entablature blocks, which are separate hollow castings of rectangular form, with heavily-modelled cornices around their tops. These also are in store.

3.8 The sides of the entablature blocks are facetted to receive the riveted wrought iron lattice girders butted against them. The girders are bolted both to the hollow blocks,

and to each other by connections passing through the blocks.

3.9 These connections are made up of two bolts, one from either girder end, secured by nuts against the end members of a small open rectangular wrought iron frame. This is cranked at mid-length to allow the girders (which form a polygon on plan) to be secured against the block faces with bolts at 90° to the joint, while at the same time providing a tie connection between the girder ends. This detail provides a robust connection at the column-beam intersections, and appears to be a special feature of these frames and that of Gasholder No. 8.

3.10 The lattice webs of the girders are of relatively-steeply inclined diagonal flat bars, closely-spaced in a triple-Warren configuration which is special to the triplet group and Gasholder No. 8. The girder flanges are of built-up iron plate, riveted together and connected to the lattice web by riveted angles. The intersection points of some web bars (mostly on No. 10 gasholder) have decorative four-pointed rosettes in cast iron.

3.11 The girders have fabricated endplates with bolt-holes for securing the girders to the abutting columns, and also for bolts to the cranked ties passing through the column to link adjacent girders. The tolerance at these joints was taken up by timber packing, still largely present but in poor condition.

3.12 Flat wrought iron plates also tied the flanges of adjacent girders together at column positions, passing inside the column. This was a late design change to add stiffness to these very tall frames. Many if not all of the plates were salvaged during dismantling.

3.13 The lattice girders are stored upright, closely stacked together, so that only a few around the outside of the stack are accessible for inspection.

3.14 The carriages are latticed wrought iron cantilever brackets that were formerly attached to the tops of each lift of the bell. Each has a captive double-flanged or “runner” wheel that rolled up and down the guide rail - a rolled T-section secured to its adjacent column by cast iron brackets. The carriages, guide rails, and brackets are all in store.

3.15 Condition of the cast iron columns and capitals generally appeared good during inspections in 2002 and 2003, although some rust flaking was visible inside the sections. The numerous paint coatings on the columns were in variable condition, some areas remaining intact while others are flaking off to expose the cast iron surface.

3.16 Superficially the wrought ironwork of the lattice girders appeared in poor condition with much flaking paint and patches of bare rust. However, probing with a spike and wire brush revealed that flaking paint - of many layers, up to 3-4 mm thick - had detached from the iron substrate because water had caused surface rusting that had loosened the paint layer. Once the paint was removed, the ironwork beneath was usually sound and apparently of only slightly reduced thickness. The girder flanges appeared generally sound where they could be seen. Some top flanges had ‘bulged’ locally with loss of rivet heads, indicating corrosion expansion between the fabricated iron elements. Some bottom flanges had also lost occasional rivet heads, presumably where rainwater had ponded. Where they remain, the cast iron rosettes at lattice junctions appeared in good condition, apart from where expansive rusting from the wrought iron surface behind had snapped the brittle casting.

3.17 A brief inspection of the few guide rails and runners readily accessible suggested that they are in reasonable condition.

3.18 The frame columns have been painted black, with some details including the Doric

triglyphs picked out in red. The lattice girders are painted red, with the cast iron rosettes at intersections picked out in white.

3.19 A study of the paintwork was commissioned during 2003 by Argent St George, and carried out by architectural paint research specialist Crick Smith Conservation. This identified 31 paint schemes. The majority of these employed a stone colour, initially applied overall but with evidence that later schemes used dark red to pick out elements of column pilaster capitals and base mouldings, and rosettes on the lattice girders. In the three penultimate schemes, the base colour was respectively yellow-green, pale creamy yellow, and warm grey. Only in the final scheme, to be seen today, was black used as the base colour for the columns.

3.20 Dismantled components are stored in the open air. They are tagged, with identifying numbers stamped on wired-on metal plates.

4 ARCHITECTURAL AND HISTORICAL ANALYSIS

4.1 John Clark's father, Joseph Clark, was the engineer at the Imperial Company's other principal works at Shoreditch. He appears to have been the first to design a large guide frame with more than one tier of girders, in 1856, for a gasholder of the then record-breaking height of 80 feet (24 m) at Bethnal Green. For this, he developed the style of superimposed classical peristyles - the form to be seen in the triplet group and in Gasholder No. 8. This gasholder, which was 200 feet (61 m) in diameter and completed in 1858, has been replaced, but a smaller 1866 example at Bethnal Green and several from 1872 onwards at Bromley-by-Bow remain to Joseph Clark's designs. (Clark designed the Bromley holders in collaboration with the Imperial Company's chief engineer, Thomas Kirkham. The set of nine gasholders there was completed well after the retirement of both men.) Their architectural detailing was exceptionally good, and provided the model for the present guide frames at St Pancras.

4.2 John Clark was responsible for building a very early three-tier guide frame at St Pancras in 1871-3, when he enlarged a 120 feet (37 m) diameter gasholder to two lifts. This had the then exceptional height of 90 feet (27 m). Later called No. 9, it was demolished c.1950. Its precise architectural details are uncertain, but aerial photographs show that it was of the same general form as Nos. 10, 11, and 12 individually.

4.3 Perhaps using No. 9 as a basis, John Clark took the architecture of his father's holders and adopted and updated them for the circumstances of St Pancras Gasholders Nos. 10, 11, and 12 in 1879 and, soon after, No. 8 of 1883. Modifications were made in the overall proportions, the design of girders, and the connection details.

4.4 The manufacture and erection of all this "Clark" series of gasholders was entrusted to one firm, Messrs Westwood and Wrights of Dudley. They are known to have sub-contracted the column castings of the earlier holders to the well-respected Derbyshire firm, the Staveley Company. Their expertise in pattern-making and perhaps in the actual detailing doubtless contributed to the acclaimed success of the design.

4.5 Nos. 10, 11, and 12 appear to have been the tallest constructed in Britain with cast iron columns. Their overall height of 108 feet (33 m) established the need for three tiers of girders, while the columns were spaced at the maximum conventional spacing of approximately 30 feet (9.1 m), in the plan arrangement already laid down by David Methven in 1860. (No. 12 appears to have slightly closer-spaced columns, to fit to its circumference.) This produced the visually satisfactory average proportions for the

panels of 1.2:1 in height to width. The overall proportions of the guide frames were tall for their period, but in keeping with the very tall holders of wrought iron construction then starting to appear elsewhere. For example, for No. 10 the diameter was 1.3 times the height, and for No. 12 it was barely 1.0.

4.6 The conjunction of the three holders into an irregular 'Siamese triplet' produced a complex and unique visual experience, analogous to a grove of tall trees, of uniform height but variegated position.

4.7 These holders may be contrasted with those of the 1872 Joseph Clark design (also listed Grade II) at Bromley-by-Bow. There, the column spacing was deliberately narrowed to 23 feet (7 m), in two tiers totalling approximately 75 feet (23 m) high, giving average panel proportions of more than 1.6 to 1. But the Bromley guide frames have diameters of 208 feet (63 m) diameter, or 2.8 times the height, i.e. very wide. So the overall effect is quite different, of a long colonnade.

4.8 The structural strength of cast iron encouraged much slimmer columns than the masonry precedents from which their architectural styling was derived. Indeed, the single-tier, single-order style of guide fame such as Methven had used in 1860 had columns of a height more than 20 times their base diameter. Dividing his columns into two orders to accommodate additional girders, Joseph Clark was able to be more respectful of classical proportions. He set his lower girders slightly above mid-height, to avoid a top-heavy appearance, while raising the shaft off the lower order upon a pedestal to keep it the same length as the upper shaft. The Doric shaft was made slightly broader in base diameter than the more refined, Corinthian, shaft above it, replicating the best classical proportions, and the shafts were wide to taper in a convex curve (entasis), starting from vertical at the bottom, in the essential classical manner.

4.9 John Clark's columns for the triplet group at St Pancras appear slimmer than his father's work, and the lowest shaft is lengthened to eliminate the pedestal. But they seem if anything more suited to an iron frame, while the entasis appears impeccable, in contrast to the straight-tapered or parallel-sided shafts of most of the competing designers who adopted this style of guide frame.

4.10 In the finer architectural detailing, the cast ironwork is superb, except for the loss of the acanthus leaves on the topmost capitals. The bases and capitals of the Doric and Corinthian are finely moulded, including a cavetto moulding below the top edge of the abacus, while the Tuscan order, introduced for the lower tier at St Pancras, is deliberately coarse. Above the capitals are the entablature blocks. The Doric ones have the obligatory triglyphs and guttae hanging below, and the Corinthian ones have a particularly bold cornice. The three triglyphs have been picked out in a light colour paint, which echoes the daylight that shines through five drainage holes between the dentils of the topmost cornice.

4.11 The entablature block (ressaut), in which the frieze and cornice are carried around three sides of a column, was not uncommon in Roman architecture and the Renaissance. Here it provides the structural means of attaching the girders to the sides of the columns, and avoids the architectural obligation to carry a full entablature along the girders between the columns.

4.12 The girders used at Bethnal Green, and later at Bromley-by-Bow, have cast iron filigree webs and angle-iron flanges. But by 1880 structural robustness was seen as a first requirement in gasholders. At St Pancras, this resulted, with particular emphasis, in the triple-Warren lattice webs and fully plated flanges of the girders. At the column

bases, the comfort of knowing that the holding-down bolts were fully tightened, from exposing them externally, replaced the concern for classical propriety that had concealed them inside at Bethnal Green.

4.13 The special bolts that connect the girders together through the columns are a part of this concern for robustness, arising both from experience of past failures of connections and the awareness that Nos. 10, 11, and 12 were stretching the height limit of this type of frame. The cross-connections between the three guide frames were an opportune means of gaining extra stiffness, and the additional ties between girder ends across the columns were perhaps a wise reaction after the fully-erected frames were found to be more lively than expected. What is significantly *not* present at St Pancras is diagonal bracing of the panels, which had become widely adopted elsewhere in the 1870s but was avoided by the Gas Light and Coke Company until the 1890s. This perhaps underlines the confident conservatism of the world's largest gas company.

4.14 St Pancras has not suffered to the extent of other sites in the zealous removal of decorative trim, which came to be regarded in the mid-20th century as unwanted rust traps and potential aerial debris. The entablature blocks appear to be monolithic, unlike parts that have been lost at Bethnal Green and Bromley-by-Bow. No. 10 holder may have been spared the removal of its decorative rosettes by its disuse since World War II.

4.15 The triplet gasholders of 1880 were the climax of a series of gasholders stretching back over a quarter of a century, and representing the best of "High-Victorian" practice in the design of guide frames. Beyond the erection of St Pancras No. 8 in 1883, cast iron columns would continue to be used for a few more years on some sites outside London, but with decorative exuberance replaced by attention to practical matters. By 1880, the Gas Light and Coke Company's rivals, particularly south of the Thames, were already developing new approaches to guide frame design based on the use of wrought iron for the standards and diagonal bracing for greater stiffness, while new mathematical analysis would allow guide frames to be built much more economically, and larger - but quite differently in style. The Gas Light and Coke Company itself moved in that direction with the lattice-framed gasholders it first built at St Pancras in 1886, recently demolished.

5 PHASING ANALYSIS

5.1 The three gasholders were originally constructed in 1860-7.

5.2 The continuing growth in demand for gas led to the reconstruction of the three gasholders in 1879-80 with new interconnected guide frames and two-lift telescopic bells.

5.3 The bell of Gasholder No. 10 was removed in 1950 after war damage and was not replaced, but otherwise the group remained virtually unaltered until decommissioned in 2000. They were given their present paint scheme in the 1980s.

5.4 In 2001-2 the guide frames and ancillary equipment were dismantled and put into store, the bells and tanks were demolished, and the site was cleared and excavated for the CTRL works.

6 FUNCTIONAL AND RELATIONAL ANALYSIS

6.1 Only the components of the guide frames and the carriages from the bells now remain from the gasholder triplet. But, when they are re-erected, the enclosed spaces will recall the volume of gas that they once contained. Although the individual holders were of moderate size, the combined volume of 4 million ft³ (about 110000 m³) was, in 1880, a significant contribution to the gas storage capacity in inner London. They and their companions dominated the townscape of St Pancras.

6.2 The proximity to the canal (and later the railways) that delivered the coal from which the gas was made, ensured the continuation of gas-making at St Pancras from the early days of the industry into the early 20th century. The gasholders attached to the works added to the engine sheds, sidings, coal yards, basins, and canalside industry to make this a supremely “industrial” area, but one that was essential to the servicing of the large city of which it formed part.

6.3 Structurally the dismantled guide frames of the ‘Siamese triplet’ group, like the surviving Gasholder No. 8, illustrate the mature development of the “Victorian” style of gasholder construction. The guide frames employ substantial hollow circular cast iron columns, bolted together in sections, and formerly bolted down into substantial brick tanks. These are coupled with functional but elegant wrought iron lattice girders tying the columns together and providing a degree of overall tubular frame action to what would otherwise be pure cantilever columns.

7 LISTING CITATION

7.1 “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.

7.2 “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 C F 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.”

[Note for information: this citation and historical note were written when the gasholders were listed, in 1986. Some statements are debatable; in particular, recent architectural paint research (noted above) indicates that the current red and black colour scheme is not original.]

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SUMMARY: THE HERITAGE IMPORTANCE OF THE 'SIAMESE TRIPLET' GASHOLDER GUIDE FRAMES

ARCHITECTURE AND FABRIC	The guide frames and ancillary equipment of the triplet group, currently in store next to Gasholder No. 8, are from the 1880 reconstruction of Gasholders Nos. 10-12, which were originally erected in 1860-7. The triplet group is unique in that three columns each served as part of two guide frames where the three gasholders were closest to one another. Further columns, although serving as part of only one guide frame each, were tied together by additional short lattice girders. This shared and interconnected structure has given rise to the term 'Siamese triplet'. The guide frames of the triplet group, like that of the surviving Gasholder No. 8, illustrate 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.
SETTING	The historic setting of this structure adjacent to the former gasworks was inextricably linked to the Regent's Canal and the nearby railways, from which it was highly visible. Reflected in the waters of the canal and seen from other directions in conjunction with the great trainsheds and the towers of St Pancras Chambers, or softened by the greenery of Camley Street Natural Park (on the site of a coal yard), the gasholders provided a large and unique resource of urban views.
SIGNIFICANCE RELATED TO TYPE	The guide frames of the triplet group are unique amongst gasholders for the three-way structural linkages, where the three frames abut. They are the tallest to have been built with cast iron columns.

SIGNIFICANCE RELATED TO INTANGIBLES	The triplet group was recognised and appreciated as an iconic landmark identifying the St Pancras area, a dramatic skyline feature, and a distinctive silhouette.

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